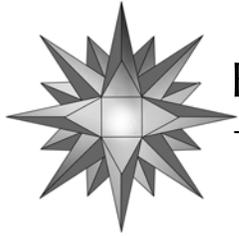




From Multidisciplinary Theory to Multimedia SEL Interventions  
The Conceptual Underpinnings of *Ripple Effects Whole Spectrum Intervention System*

Alice Ray

Ripple Effects, San Francisco



From Multidisciplinary Theory to Multimedia SEL Interventions  
The Conceptual Underpinnings of *Ripple Effects Whole Spectrum Intervention System*

**Alice Ray**

Ripple Effects, San Francisco

**From Multidisciplinary Theory to Multimedia SEL Interventions:  
The Conceptual Underpinnings of *Ripple Effects Whole Spectrum Intervention System***

Published by Ripple Effects, Inc.  
33 New Montgomery, Suite 290  
San Francisco, CA. 94105-4520  
[www.rippleeffects.com](http://www.rippleeffects.com)

© Copyright 2009 Alice Ray and Ripple Effects. All rights reserved.

Cover Design: Athena Guillory

Please send any comments or questions to: [aray@rippleeffects.com](mailto:aray@rippleeffects.com).

Part of the work described in this document was conducted with financial support from U. S. Department of Education, (Small Business Innovative Research (SBIR) Phase I Contract No. RW97076120) and National Institutes of Health, National Institutes on Drug Abuse Grant (NIDA) (SBIR), Fast Track (Phase I and II) Contracts R44 DA13325-01A1 & R44 DA013325-03. A 2006 grant to West Ed from the Lucile Packard Foundation for Children's Health, funded evaluation research on use of Ripple Effects as a universal intervention to promote resiliency. A Safe Schools/Healthy Students (SS/HS) grant awarded to Bibb County, Georgia in 2003, included evaluation of the impact of Ripple Effects as an indicated intervention in discipline settings.

All rights reserved. No part of this book may be translated or reproduced in any form, except brief extracts by a reviewer for the purposes of a review, without the prior written permission of the copyright owners.

Information has been obtained from third party sources, including government sources and peer-reviewed publications believed to be reliable, but the accuracy of that information and the opinions based on it, cannot be guaranteed. Although the author and publisher have made every attempt to ensure that information was correct at press time, they do not assume and hereby disclaim liability to any party for any loss due to unintentional errors or omissions.

Printed in the United States.

For all those children whose life circumstances put them at risk of failure to thrive

# *Table of Contents*

## **Acknowledgements**

### **Chapter 1: Introduction and Overview**

#### **A synthesis of theory from the five directions**

Applied synthesis.....	1.1
Sources of factual data.....	1.2
Theory from five directions.....	1.2
Prevention science.....	1.5
Education.....	1.6
Technology.....	1.6
Business and economics.....	1.6
Humanities.....	1.6
How the pieces fit together.....	1.7
Not design by committee.....	1.7
The driving question.....	1.7
Chapter-by-chapter summary.....	1.8
Missing chapters?.....	1.9
Social-emotional learning (SEL).....	1.9
Social equity and cultural competence.....	1.9
Logic model.....	1.10
About references.....	1.10
Diagram of Ripple Effects Logic Model.....	1.11
Appendix A: List of Ripple Effects program resources.....	1.13

### **Chapter 2: The Context**

#### **Large scale failure of children to thrive**

Incidence of children’s mental health problems.....	2.1
Depression.....	2.1
Anxiety disorders.....	2.1
Post-traumatic stress disorder (PTSD).....	2.2
Phobias.....	2.2
Attention deficit hyperactivity disorder (ADHD).....	2.3
Eating disorders.....	2.3
Manic-depressive illness.....	2.3
Autism and other pervasive developmental disorders.....	2.4
Schizophrenia.....	2.4
Incidence of school failure.....	2.4
Dropout rates.....	2.4
Incidence of juvenile social injury.....	2.6
Juveniles are victims.....	2.6
Juveniles are perpetrators.....	2.6

Social justice a necessary backdrop .....	2.7
Disproportionality.....	2.8
Juvenile justice system.....	2.9
Consequences.....	2.10
Therapeutic sanctions.....	2.10
Probation.....	2.10
Restorative justice.....	2.11
Recidivism and reentry.....	2.11
References.....	2.12

### **Chapter 3: Why is it happening?**

#### **Risk and Protective Factors**

Complex interaction of factors.....	3.1
Impact in multiple areas.....	3.1
Implications for practice.....	3.2
Internal/external - fixed/malleable.....	3.2
Internal (individual) factors.....	3.3
Physical: neuropsychobiology.....	3.3
Mental factors.....	3.5
Emotional factors.....	3.7
Behavioral factors.....	3.8
School problems.....	3.9
Spiritual.....	3.10
External causes.....	3.10
Events.....	3.10
Interpersonal relationships.....	3.11
Circumstance.....	3.13
Policies.....	3.13
Social structures and processes.....	3.14
Media influence.....	3.17
Evidence points to need to address whole spectrum.....	3.17
Most predictive risk factors.....	3.18
Internal protective factors.....	3.18
Tipping the balance toward protection.....	3.20
References.....	3.21

### **Chapter 4: What Works?**

#### **Effective strategies for reducing risk and enhancing protection**

Mitigating individual risk factors.....	4.1
Range of effective strategies.....	4.1
Cognitive .....	4.2
Behavioral.....	4.7
Social skill.....	4.8
Counseling.....	4.9
Parent training.....	4.13

What's missing: affective approaches.....	4.14
SEL: Integrating modalities.....	4.15
No approach “the best” .....	4.16
How race and ethnicity fit.....	4.16
Linking most risk with greatest impact: A leveraged approach.....	4.16
References.....	4.18

## Chapter 5: Education

### The other half of the psycho-educational equation

Educational philosophy.....	5.1
Art or science? .....	5.1
Either/or.....	5.2
Both/and.....	5.2
Ripple Effects <i>Whole Spectrum Philosophy of Education</i> .....	5.2
Learning context.....	5.3
Safety.....	5.5
Connectedness and support.....	5.9
Responsibility.....	5.12
Challenge.....	5.14
Wider equity issues.....	5.16
Knowledge and meaning.....	5.22
Traditional position .....	5.22
Critique of objectivist philosophy of knowledge.....	5.23
Subjectivist position about knowledge.....	5.24
Critique of subjectivist approach to knowledge.....	5.25
Learning process .....	5.29
Traditional model: cognitive and linear.....	5.30
Constructivist learning: whole system, pattern seeking.....	5.33
Social-emotional learning as a specialized form of learning.....	5.41
Instruction.....	5.42
Goals.....	5.42
Roles.....	5.43
Methods.....	5.44
Process: pure discovery.....	5.47
Process: supportive guidance.....	5.49
Instructional differentiation.....	5.50
Structure: universal design for learning (UDL).....	5.53
Classroom management.....	5.55
Classroom orchestration.....	5.55
Classroom management as pedagogy.....	5.55
Ripple Effects tutorials in “ <i>Managing Diverse Learners Unit</i> ”.....	5.57
Assessment.....	5.59
Pre-intervention assessment.....	5.59
Post-intervention assessment.....	5.63
Data analysis.....	5.66

Cultural competence.....	5.67
Professional development.....	5.68
Major report on effective practices.....	5.69
Effective content.....	5.69
Context.....	5.71
Learning process.....	5.73
Frequency and amount.....	5.76
Time and resource distribution.....	5.78
Appendix B: Preconfigured scopes and sequences.....	5.80
References.....	5.81

## Chapter 6: Technology

### What it can and cannot offer social-emotional learning

The challenge.....	6.1
Too much competing knowledge.....	6.1
Complexity of SEL.....	6.1
The possibilities.....	6.1
Differentiation.....	6.1
Domain expertise.....	6.1
Scaling personalized guidance.....	6.2
Solution to thorny political problems.....	6.2
What technology can't do.....	6.2
Can't make up for ineffective school policies.....	6.2
Can't undo socialization and structural injustice.....	6.2
Can't unilaterally undo gross media distortions.....	6.3
Can't replace human interaction.....	6.3
Shift in paradigm.....	6.4
What does the research say?.....	6.4
Platforms and formats not the issue.....	6.4
Information transfer.....	6.4
Assessment.....	6.4
Direct intervention to change behavior.....	6.5
Ripple Effects technology.....	6.8
Expert systems: simulated good judgment.....	6.8
Ripple Effects' knowledge base.....	6.10
RE inference engines.....	6.12
RE Interface design.....	6.17
<i>Whole Spectrum Learning Platform</i> .....	6.20
Appendix C: Index of topics in <i>Ripple Effects for teens</i> (grades 6-11).....	6.44
Appendix D: Index of topics in <i>Ripple Effects for kids</i> (grades 2-5).....	6.53
Appendix E: Index of topics in <i>Ripple Effects for staff</i> .....	6.56
References.....	6.58

## Chapter 7: Implementation Science

### Moving from ivory tower efficacy to real world effectiveness

Major implementation challenges.....	7.2
Process challenges.....	7.2
Program related challenges.....	7.2
Challenges at intersection of process and program.....	7.2
Technology not the whole answer.....	7.3
Models of Implementation.....	7.3
Implementation process <i>components</i> .....	7.4
Components negatively correlated with success.....	7.7
Implementation process <i>stages</i> .....	7.8
Ripple Effects <i>Whole Spectrum Model of Staged Implementation</i> .....	7.9
Implementation process <i>characteristics</i> .....	7.12
Program attrition - non-participation. ....	7.13
Balance between fidelity and adaptation.....	7.14
Summary of Ripple Effects <i>Core Content and Process Components</i> .....	7.18
Levels of implementation: tiered intervention.....	7.20
Primary – Universal Promotion.....	7.20
Secondary – Targeted Prevention.....	7.22
RTI.....	7.23
Tertiary – Individualized, Indicated/Positive Behavioral Intervention.....	7.24
Intensity/Dosage.....	7.25
Speed of implementation.....	7.26
Relevance.....	7.27
Affordability.....	7.27
Initial investment.....	7.27
Net costs after short term return on investment.....	7.29
Long term return on investment.....	7.30
Role of program design elements in implementation success.....	7.30
Differentiation of learning.....	7.30
Data management.....	7.31
Learning from ineffective programs.....	7.31
Lightening the load.....	7.32
Ease of use.....	7.32
Avoiding boredom.....	7.33
"Customer is right" focus.....	7.34
References .....	7.36

### Afterward: Who's behind it?



## *Acknowledgements*

I am deeply grateful to the theoreticians who have developed the key strands of formal theory in the fields of prevention science, education, technology and business/economics that have found their way into Ripple Effects *Whole Spectrum Intervention System*.

I am indebted to the statisticians who have created sophisticated computer models for testing the validity of various hypotheses about risk, protection and program effectiveness, and which have allowed me to hone the theory behind our programs. Many are cited by name in key references. Many more are not cited, because they are wrapped into larger meta-analyses that are referenced.

I'm appreciative of the financial backing of a small group of Angel investors, without whom Ripple Effects would not have been born. I'm also grateful for support from the Small Business Innovative Research Program of the National Institutes of Health, and the US Department of Education, which enabled development and testing of key aspects of the program, and to the Lucille Packard Foundation for Children's Health, which funded West Ed to evaluate the impact of Ripple Effects on resiliency assets.

I am extremely grateful to all the researchers who have included the

testing and analysis of Ripple Effects impact in their work. They have provided key insights to the development of the program.

I am equally indebted to the many practitioners who have the difficult job of applying these insights in the real world and have shared their experiences. Their qualitative evaluations have equal value to me, and their work has also guided our program development.

I am immensely grateful to the extended family that is Ripple Effects. Sarah Berg, who initiated formation of the organization, has been the anchor for research as well as production efforts, and contributed generously to editing this book. Lew Brentano spent hours verifying citations and proof reading, as well as providing unending emotional support. Athena Guillory created the graphics that are a hallmark of the Ripple Effects way. Julianne Enriquez provided administrative support. Kerry Pifer did final proofreading.

Finally, I'm most grateful to and inspired by the children, youth and their teachers who inform, star in, use, critique, and open themselves to be transformed by Ripple Effects software.

Thank you all.



## **Chapter 1: Introduction and Overview**

### **A synthesis of theory from the five directions**

Applied synthesis .....	1
Sources of factual data .....	2
Theory from five directions.....	2
Prevention science.....	5
Education .....	6
Technology.....	6
Business and economics .....	6
Humanities.....	6
How the pieces fit together.....	7
Not design by committee .....	7
The driving question .....	7
Chapter-by-chapter summary .....	8
Missing chapters?.....	9
Social-emotional learning (SEL) .....	9
Social equity and cultural competence .....	9
Logic model.....	10
About references .....	10
Diagram of Ripple Effects Logic Model .....	11
Appendix A List of Ripple Effects program resources.....	13





# Chapter 1: Introduction and Overview

## *A synthesis of theory from the five directions*

For more than a decade, the conceptual framework of Ripple Effect *Whole Spectrum Intervention System (WSIS)* has been largely hidden beneath the intuitive interface of Ripple Effects software, and/or woven directly into the multi-media content. This makes the program simple, engaging and accessible to users. It undoubtedly at least partly accounts for the system being recognized with 29 national and international awards across four industries. But it makes it more difficult for reviewers to evaluate the conceptual and evidence base that it rests on.

Parts of that theoretical base are explicitly included in trainer and implementer manuals, including the rationales for use of specific scope and sequences of the program to achieve specific goals, and/or specific planning processes to ensure implementation success. Those simplified translations of various conceptual underpinnings serve the needs of line workers, who are asked to implement intervention programs with little time or resources to prepare for doing so.



Readers are directed to those manuals (listed in Appendix A) for summaries of the rationale for 60 separate content configurations of Ripple Effects for primary, secondary and tertiary prevention.

In addition, the “Background” sections of various scientific papers have documented the evidence-based sources of components of the system that have particular relevance to specific examined conditions of use and outcomes in each study being reported.



Readers are directed to five volumes of *Evidence of Effectiveness of Ripple Effects Whole Spectrum Intervention System* for those context-specific descriptions.

Prior to now, however, the entire conceptual framework has not been systematically described in a single document, nor have all these concepts been mapped directly to specific components of the system.

The purpose of this monograph is to document the conceptual framework that underpins the development, design, implementation, support and evaluation of the Ripple Effects *Whole Spectrum Intervention System (WSIS)* as an integrated set of technology enabled, stepped, Social-Emotional Learning (SEL) interventions for primary, secondary and tertiary prevention of delinquent behavior, school failure, and child and adolescent poor health and mental health outcomes.

### **APPLIED SYNTHESIS**

Ripple Effects’ theory base represents the synthesis of more than a thousand theoretical insights, deductively and inductively constructed from basic principles and empirical evidence, across dozens of disciplines, and hundreds of sub disciplines. The *Whole Spectrum Intervention System for SEL* represents new applications of those varied theoretical constructs within a single, cohesive technology-based system, with a very large, continuously updated, information base.

The development of this system has not been guided by intellectual loyalties to any

single school of thought, tradition or strategy. It has been guided by a rigorous commitment to three things:

- Accuracy of information
- Integrity of evidence
- Real-world applicability

### Sources of factual data

Ripple Effects *WSIS* draws information from many credible sources. Information on prevalence and trends in substance abuse, social behavior, illness and injury comes mostly from the National Institutes of Health (NIH), Substance Abuse and Mental Health Services Administration (SAMHSA), National Institute on Drug Abuse (NIDA) and Centers for Disease Control (CDC). Personal and public safety information comes from various arms of the Justice Department, especially the Federal Bureau of Investigation (FBI) and the Office of Juvenile Justice and Delinquency Prevention (OJJDP). Educational statistics and research findings come from the U.S. Department of Education (ED), Office of Safe and Drug-Free Schools (OSDFS), Office of Special Education Programs (OSEP), Office of Institute of Education Sciences (IES), Education Resources Information Center (ERIC), What Works Clearinghouse (WWC), National Center for Education Research (NCER), as well as two major pieces of education legislation: No Child Left Behind (NCLB) and Individuals with Disabilities Education Act (IDEA). A substantial amount of information about the specialized field of social-emotional learning has come from publications of the non profit Collaborative for Academic, Social and Emotional Learning (CASEL) and the American Institutes of Research (AIR).

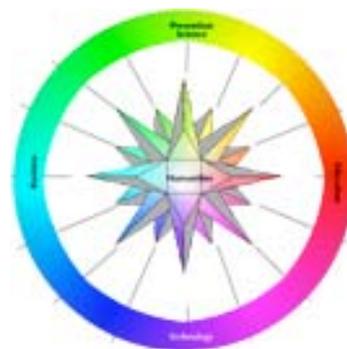
Ripple Effects *WSIS* also draws theory directly from many academic disciplines

and traditions. Sources of these insights, strategies and processes are more disparate. They cross disciplines, cross cultures, cross boundaries of time and space. The sheer scope of this distributed knowledge requires some system for organizing it.

### THEORY FROM FIVE DIRECTIONS

The theoretical underpinnings of Ripple Effects' technology-driven system can be mapped to a theoretical compass rose with five directions.

- Prevention science
- Education
- Technology
- Business and economics
- Humanities



The diagram on the next page identifies 20 calibrated orientations, or disciplines, within these five overall domains that are sources of Ripple Effects theory. They include some 335 sub-disciplines. In turn, each of those sub-disciplines contains one or more theoretical constructs *WSIS* draws on directly. Those theories are woven into the text as each applies throughout this book. A very brief summary of the key concepts that Ripple Effects has incorporated from each of the five major directions follows the diagram.

# MULTIDISCIPLINARY THEORY FROM THE FIVE DIRECTIONS

## THE CONCEPTUAL UNDERPINNINGS OF RIPPLE EFFECTS

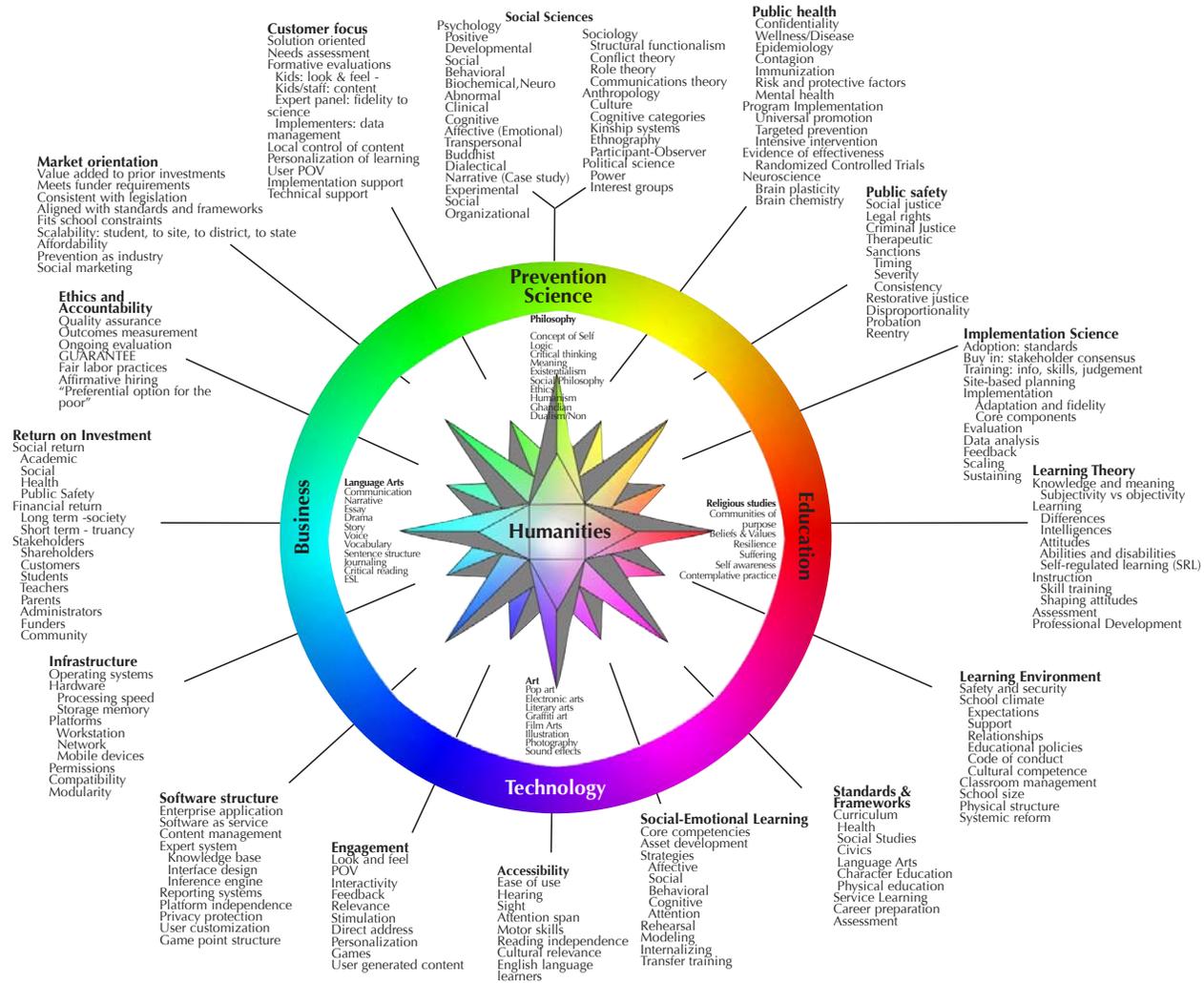


Figure 1.1

## **Prevention science**

The science of prevention is a relatively young field that began coalescing in the 1980's. With cultural antecedents in 19th century efforts to prevent cruelty to animals, it has its roots in social-science theory. Within the social sciences, psychology is its "true north."

17 branches of psychology, as well as sociology, anthropology, and political science contribute theory that finds direct application in the Ripple Effects system.

- From psychology: motivation and attachment theory; developmental, abnormal, and positive models; behavioral, cognitive, social-skill and affective strategies
- From sociology: group dynamics and organizational development principles
- From anthropology: cultural awareness, competence and responsiveness
- From political science: social equity

## ***Public health and public safety***

Public health and public safety have been the main application areas for this prevention theory. From applied research in delinquency prevention, Ripple Effects incorporates theories of:

- Criminality
- Social and restorative justice
- Therapeutic sanctions
- Disproportionality
- Rights of victims and the accused

Delinquency is not solely a public safety issue. It also has serious implication in terms of public health. Substance abuse, domestic violence, child abuse, bullying, and sexual assault are all public health, as well as public safety issues. All are also directly correlated with school attachment

and achievement. All are highly correlated with children's mental health as well. Thus it is not surprising that prevention of juvenile delinquency is tied closely to the prevention of and intervention with substance abuse and mental health problems, and both are tied to programs to prevent academic failure and promote school success.

From public health Ripple Effects incorporates the concepts of:

- Risk and protection
- Triage - tiered intervention
- Epidemiology
- Immunization
- Brain plasticity

## ***Implementation science***

Of the preventive strategies that have been applied to public health and public safety challenges, certain psycho-educational practices, delivered in school settings, have shown evidence of effectiveness in changing children's outcomes. They all work with some children and youth, in some situations. None work with everyone all the time. They all work better when delivered in research settings than when delivered in the real world of routine practice. The emerging field of Implementation Science developed out of the need to address this gap between theory and practice. It is from this field that Ripple Effects incorporates insights about:

- Stakeholders
- Stages in the implementation process
- Fidelity versus adaptation
- Componential analysis
- Scalability and sustainability

## Education

Psycho-educational interventions, whether in the form of affective, cognitive, behavioral or social skill training, and whether delivered in school, health, community, or juvenile justice settings, are still a matter of education. Thus, theory and evidence about what works in education is a critical dimension of Ripple Effects conceptual framework.

From the field of education, Ripple Effects incorporates and applies theory on:

- Climate and context for learning
- Philosophies of knowing and learning
- Pedagogy
- Curriculum and testing
- Professional development

### ***Social-emotional learning (SEL)***

Social-emotional learning forms the bridge between general education and the psycho-social practices that promote good health, responsible behavior and academic success. It includes attention to the diverse methods by which important social constructs, as well as specific social emotional-skills, are effectively transferred.

From the emerging field of SEL, Ripple Effects incorporates:

- Definitions of social/emotional competencies
- Models for developing awareness and management of self and social relations.
- A social-decision-making model

## Technology

Emerging technologies are a force in themselves and a major catalyst for shifting paradigms in all three fields of health, safety and education. From the field of

technology Ripple Effects has incorporated and applied theories about:

- Universal instructional design
- Expert systems
- Data structures
- Security issues
- Platform constraints

The application of technology to the specialized area of SEL is an incipient field with its own body of research on effectiveness. Ripple Effects has a place of leadership in that field.

## Business and Economics

Even if a set of interventions is perfectly matched to strong evidence, delivered with a broad set of effective instructional methods, and maximizes efficiencies of technology, it will not be scalable or sustainable over the long term if it doesn't also make good business sense for the people who pay for it and use it. As a social enterprise with a double bottom line, Ripple Effects has incorporated and applied from business and economics theories of:

- Return on investment (ROI)
- Accountability: warranties & guarantees
- Customer focused social marketing
- Marker-based program development
- Fair labor practices

## Humanities

Theory derived from the humanities also contributes important elements to Ripple Effects system.

From the Visual Arts, the program has incorporated theory about:

- Pop art, including graffiti art
- Photography
- Film

- Artistic bias

From the Literary Arts, Ripple Effects system has incorporated principles about:

- Audience sensibility
- Voice
- Relation between grammar & cognition
- Use of story telling to motivate change

From ancient and modern philosophy, Ripple Effects *WSIS* system has incorporated:

- Aristotelian logic
- An existentialist approach
- Gandhian nonviolence
- Explicit discussions of norms and ethics

From religious studies Ripple Effects has incorporated insights about:

- Concepts of self
- Communities of purpose
- Cultivation of resilience

## HOW THE PIECES FIT TOGETHER

The scope of insights and evidence from these various perspectives clearly demonstrates that when it comes to preventing school failure, delinquency and poor health and mental health outcomes, the biggest problem isn't lack of knowledge or insight. The biggest challenge is finding a way to fit the huge mound of what is known into some usable container or system that can ensure practitioners and children themselves timely, easy access to those parts of it that can be of best use to them, without being overwhelmed with what is not.

Ripple Effects *Whole Spectrum Intervention System* is one arrangement that uses all the pieces and fits them together. Like with the Rubik's cube, it is

not the only possible workable solution, but it is one of a limited number that can incorporate all the important elements.

To understand how theory and evidence from twenty disciplines underpins Ripple Effects *Whole Spectrum Intervention System* for SEL, it's necessary to understand the system itself.



A full description can be found in the accompanying monograph, entitled *Ripple Effects Whole Spectrum Intervention System*. Specific elements of the system are identified in the context of the theory that supports them, throughout this volume.

## NOT DESIGN BY COMMITTEE

Although Ripple Effects draws theory from many directions, the Ripple Effects *Whole Spectrum Intervention System* was not designed by systematically gleaning insights from each discipline and then trying to put them together. That is a recipe for failure in product development. Rather, Ripple Effects' multi-disciplinary approach has been an evolving, organic and iterative process, in which intuition has played as big a role as information, in which theory and practice have consistently been tested against each other, and in which there has been no hierarchy of one domain of understanding over another. The process has been driven by a set of real world, driving questions. It is those questions, not a 360 degree walk around the points on the theoretical compass rose, that provide the structure of inquiry for this book, and the logic model for *the Whole Spectrum Intervention System*.

## THE DRIVING QUESTION

*How can we use emerging technologies to foster in every child a heart of justice, an*

*inquiring mind, a state of physical and emotional health?*

This is the meta question that has driven the development of Ripple Effects. Attempting to answer it has required first asking and answering a more concrete set of practical questions:

- What is the empirical context for addressing child and adolescent failure to thrive? What is the actual incidence of school failure? Poor mental health outcomes? Delinquent behavior? How are these negative outcomes distributed?
- What are the causes and risk factors of school failure, delinquency and children's poor health outcomes? How are they linked? Which can be impacted at the individual level?
- What individual-level strategies have been proven effective in reducing risk and enhancing protective factors that are under personal control of students and the adults charged with their care?
- What instructional methods for delivering those interventions have the most evidence of effectiveness?
- What is the potential - and what are the limitations - of technology to match the most effective strategies with the most effective instructional methods, in order to address the particular strengths, risk factors, and learning style of each child?
- How can fidelity to science, cultural competence, and local control be maintained in a scalable, sustainable process of implementing technology-enabled programs?

Each chapter in this book, addresses one of these questions.

## CHAPTER-BY-CHAPTER SUMMARY

Chapter 2 provides a brief overview of the incidence and distribution of children's mental health problems and school failure. It provides a more detailed description of the disturbing and persistently high rates of direct injury *to* children and youth, and *by* them. In each case, how Ripple Effects explicitly addresses each of these content areas is described.

Much of the research about school failure, children's mental health problems, and anti-social behavior - has focused on identifying specific risk factors that increase vulnerability to negative outcomes. The same risk factors may affect one, two or all three of these areas. Failure in any one area increases the risk of failure in both of the others. These risk factors - and a parallel set of protective factors that are their opposite twins - exist in multiple domains: individual, family, peers, school, community, social structures and processes. Chapter 3 describes which risk and protective factors Ripple Effects' *WSIS* addresses, why, and where in the program to find them.

Researchers across disciplines have helped separate the numerous interventions developed to mitigate key risk factors into groups that are effective, and those that are not. Ripple Effects includes five of the most effective kinds of psycho-educational interventions, and applies them to several hundred specific areas of learner interest and concern. The effective strategies are discussed in Chapter 4; the application areas are listed in Chapter 6.

Chapter 5 addresses the education side of the psycho-educational equation. It describes how Ripple Effects applies both classical and reformist educational theory, with a focus on learning context, learning differentiation, professional development

and specific methodologies to enhance social-emotional learning.

Technology increasingly offers the capacity to match the most effective delivery methods for the most appropriate subset of effective interventions, to address the most relevant risk factors, for each child. Multi-media technology, data base structures, expert systems and security protocols, all have important roles. Ripple Effects' use of each, and their combination in the *Whole Spectrum Learning Platform* is explained in Chapter 6.

Implementation issues have consistently hampered the effective transfer from science to service of best practices in prevention science, education and technology. How Ripple Effects is specifically designed to address those issues, is the subject of Chapter 7.

## MISSING CHAPTERS?

### Social-emotional learning (SEL)

Ripple Effects *Whole Spectrum* model is an *SEL Intervention System*, in each of its parts, and in all of its parts taken together. Social-emotional learning has developed as its own field of inquiry and research; yet it is not given a separate chapter in this book. Why? It is woven into every chapter, because it affects every subject of every chapter. Social-emotional deficits are key risk factors for poor mental health outcomes, school failure, and delinquent behavior. Social emotional skill-building techniques are proven effective strategies to mediate those risks. The important role of social-emotional factors in the learning and teaching process is increasingly demonstrated through brain science and practical research. Social-emotional (as well as practical and political) needs of implementers and other stakeholders are factors in implementation success or

failure. Even with technology, addressing social-emotional needs of learners is an essential part of the design of learning systems, and greatly influences the degree of personal engagement in that process.

### Social equity and cultural competence

The linked issues of social equity and cultural competence have also developed as independent areas of inquiry and research, but neither has a separate chapter. Like SEL, both are also woven throughout this monograph. Social inequities are major risk factors for poor mental health outcomes, school failure, and delinquent behavior. Cultural competence is a necessary ingredient in strategies that address those inequities and that can effectively mediate those risks. It is increasingly recognized as an important part of effective educational practices. Cultural relevance is a key factor in implementation success or failure. It is one of the most important, and most often overlooked aspects of technology development. Thus, it too belongs in every chapter.

Because SEL, social equity, and cultural competence affect each of the subjects of these chapters with similar patterns, discussion of the role of these elements in each area is unavoidably repetitive. This potential redundancy may be an appropriate counterbalance to the persistent and far too common tendency to discount or minimize the impact of all three of these elements.

## LOGIC MODEL

Ripple Effects has developed a logic model for change that incorporates the full body of evidence and theory that is outlined above and developed in each chapter, as well as the social-emotional

learning theory that is woven between them. For the benefit of those readers who learn best by first seeing the big picture and then examining detail, a visual representation of that Logic Model is provided before the first chapter, rather than after the last one.

## ABOUT REFERENCES

The theory base that will be more fully described herein is a mosaic built of pieces from several thousand sources. To reference in this print document each specific study that supports every strategy that is presented in the software or accompanying print manuals, and to reference each piece of work that supports the decisions that are implicit in the expert system design, would invite both reader fatigue and ecological waste. To not document those references invites criticism for lack of rigor.

Thus, this four-part compromise: In terms of general theory, only pioneers who are credited with original formulation, or thought leaders who are most associated with a theoretical construct directly used in Ripple Effects system are cited.

In terms of effectiveness research, in most cases citations are limited to meta-analyses of vetted studies. There are two exceptions: In emerging fields, such as the study of mindfulness, where the body of well designed research is not yet large enough to generate true meta analyses; and in cases where Ripple Effects intervention itself was studied directly, individual studies are cited.

In terms of general factual information, documentation of sources for easily verified facts is generally not included in the program, but documentation of the rationale for including specific information

is. For instance, that a genetic component for shyness has been identified is a fact included in the tutorial on “shyness.” Documentation of research that support that fact is located at Ripple Effects offices, in print and electronic files that fill a room. What is included here is a brief, referenced description of the personality theory that is sometimes cited to explain internal risk factors for victimization, and which provides the rationale for including “shyness” as a topic at all.



Finally, *scopes and sequences for each of 60 separate configurations of Ripple Effects system for primary, secondary, and tertiary interventions to meet specific goals, has already been documented separately in implementer manuals for each of those areas.* Readers are directed to the original guides to see a summary of the rationale for specific configurations. A complete index and organized table of contents for each software program can be found at the end of Chapter 6.

### **A note about visual cues**

To clearly indicate how various elements of Ripple Effects *Whole Spectrum Intervention System* for SEL are derived from specific bodies of evidence and/or specific theoretical constructs, discussion of the Ripple Effects application follows presentation of the evidence-based theory, and is placed against a grey background, like this.

For ease of reading, authors name and the dates for selected citations are included in the text. The full citation for those key references is at the end of each chapter. Readers can access a more extensive bibliography by contacting [info@rippleeffects.com](mailto:info@rippleeffects.com).

# Logic Model

Impacting mediators of delinquency and school failure through use of technology to match most relevant best practices to individual need

## Ripple Effects Whole Spectrum SEL Intervention System

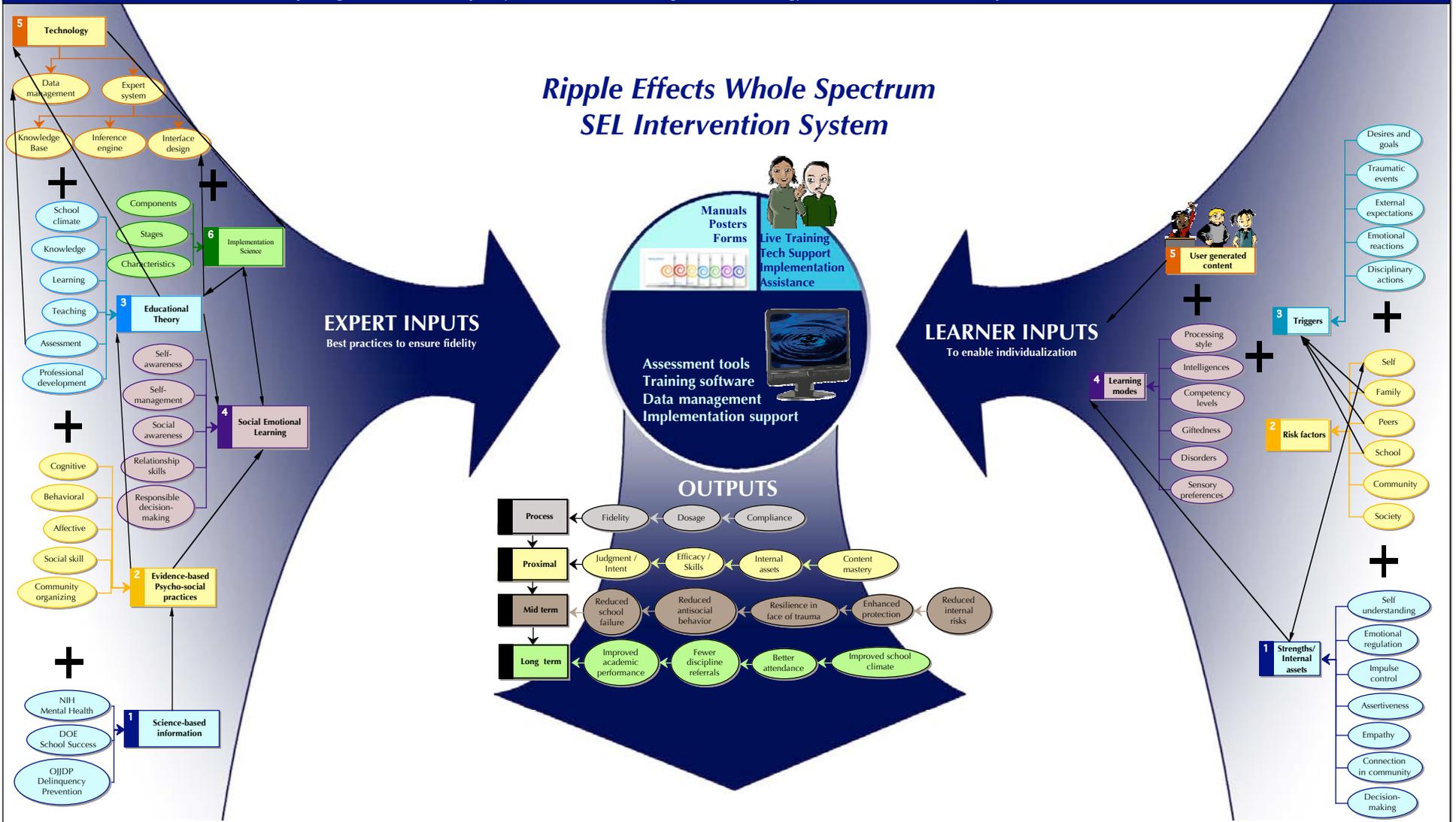


Figure 1.2

## APPENDIX A: LIST OF RIPPLE EFFECTS PROGRAM RESOURCES

### Product Software

- *Ripple Effects Coach for Kids (Grades 2-5)*
- *Ripple Effects Coach for Teens (Grades 6-10)*
- *Ripple Effects Coach for Staff (Implementers)*

### Needs assessment tools

- *Ripple Effects School Safety Group Profiler*
- *Ripple Effects Respect for Person's Group Profiler*
- *Ripple Effects Individual Assessment Surveys (Resiliency, Norms, Self-efficacy)*

### Product user guides

- *Ripple Effects Coach for Kids User guide*
- *Ripple Effects Coach for Teens User guide*
- *Ripple Effects Coach for Staff User Guide*

### Manuals and guides

- *Ripple Effects Whole Spectrum SEL Intervention System*
- *Ripple Effects Planning Guide*
- *Ripple Effects Universal Promotion: Sample Scope and Sequences*
- *Ripple Effects Targeted prevention: Risk Reduction*
- *Creating a Plan for RTI and EIS: Individualized Behavior Interventions*
- *Ripple Effects Positive Behavioral Intervention guide: Sample Individual Treatment Plans*
- *Using Ripple Effects in Juvenile Justice Settings*
- *Ripple Effects Personal Trainer for Parents*
- *Ripple Effects Technology Guide*
- *Ripple Effects Trainer's Resources Guide*

### Additional resources

- Classroom posters for elementary and middle/high school
- Certificates of completion of training for 7 key skills
- Social behavior observation form
- *Eagle Eye* postcards

### Video presentation resources

- Overview (program overview)
- ABC news report on student outcomes
- Use of Ripple Effects as suspension alternative
- *Whole Spectrum Learning System*

### Evidence of Effectiveness

- Vol. I *Tertiary Prevention Outcomes (3 articles)*
- Vol. II *Secondary Prevention Outcomes (7 articles)*
- Vol. III *Primary Prevention Outcomes (2 articles)*
- Vol. IV *Implementation Process Outcomes (2 articles)*
- Vol. V *Multi-Study Summary Analyses (4 articles)*
- *Overview: Effectiveness Studies Summary- Methods and Results*
- *Qualitative - Case studies - Describe real world use in various settings*
- Research bibliography



**Chapter 2: The Context**  
**Large scale failure of children to thrive**

Incidence of children’s mental health problems ..... 1

    Depression ..... 1

    Anxiety disorders ..... 1

        Obsessive-compulsive disorder (OCD)..... 2

        Panic disorder ..... 2

    Post-traumatic stress disorder (PTSD) ..... 2

    Phobias ..... 2

    Attention deficit hyperactivity disorder (ADHD)..... 3

    Eating disorders ..... 3

    Manic-depressive illness ..... 3

    Autism and other pervasive developmental disorders ..... 4

    Schizophrenia..... 4

Incidence of school failure ..... 4

    Dropout rates..... 4

        Overall rates..... 5

        Correlations with income..... 5

        Correlations with ethnicity ..... 5

        Correlations with disabilities..... 5

        Correlations with attendance ..... 5

        Correlations with crime ..... 5

Incidence of juvenile social injury ..... 6

    Juveniles are victims ..... 6

        Personal/public safety issues ..... 6

    Juveniles are perpetrators ..... 6

Social justice a necessary backdrop ..... 7

Disproportionality ..... 8

Juvenile justice system..... 9

    Consequences ..... 10

Therapeutic sanctions .....	10
Probation.....	10
Restorative justice .....	11
Recidivism and reentry.....	11
References .....	12



## Chapter 2: The Context

### *Large scale failure of children to thrive*

Children's delinquency, mental health problems and school failure are so intertwined that it is often difficult to tease them apart. The main focus of this monograph is delineating the theory that underpins RE technology-based program for preventing physical and social injury by and against children. To do that, it's necessary not only to understand the incidence of that social injury, but also to be aware of the incidence of the interlocking problems of children's compromised mental health and school failure.

### **INCIDENCE OF CHILDREN'S MENTAL HEALTH PROBLEMS**

According to the National Institutes of Mental Health (NIMH) large scale, 1992 study, entitled "Methods for the Epidemiology of Child and Adolescent Mental Disorders" (MECA):

- 1 in 10 children suffer from mental health problems that interfere with normal development and functioning
- In any given year, fewer than 20% of those children will receive needed treatment.

By 2020, childhood psychiatric disorders will rise proportionately by more than 50% (Estimate is based on evidence from the World Health Organization).

Seven major illnesses and disorders account for almost all of children's disabling or disruptive mental health problems. They are: depression, anxiety disorders, ADHD, eating disorders, manic depressive illness, autism spectrum disorders, and schizophrenia.

### **Depression**

- Up to 3% of children and 8% of teens suffer from depression
- Depression in children and adolescents is associated with an increased risk of suicidal behaviors
- Since 1964 the suicide rate among adolescents and young adults has doubled
- In 1996 (last year for which data is available) suicide was the 3<sup>rd</sup> leading cause of death among 15-24 year olds
- In 1996, suicide was the fourth leading cause among 10-14 year olds.

*Ripple Effects for Teens includes tutorials on "depression," "suicide," "loss," "death," "managing feelings" (of "sadness" and "anger," as well as cognitive behavioral skill training to manage self-talk and reduce depressive symptoms.*



*A Los Angeles study of the impact of Ripple Effects as a school-based, psycho-educational intervention for five cohorts of urban teens who were involved in, or at high risk for involvement in gang activity, showed significant decreases in their scores on the Beck depression inventory, from pre to post intervention (Koffman, et al, 2009).*

### **Anxiety Disorders**

Anxiety disorders are the most common mental health problems among children and youth. One large-scale study of 9-17 years olds indicated as many as 13 percent of young people had an anxiety disorder in

a year. Anxiety disorder can take the form of generalized, exaggerated worry over everyday events. Anxiety disorders also can take more specific forms described below.

### ***Obsessive-compulsive disorder (OCD)***

OCD is a pattern of unwanted, unstoppable, repetitive thoughts and rituals.

Ripple Effects includes a tutorial on OCD, with science-based information on the nature of the disorder and cognitive-behavioral training in strategies for stopping and reframing persistent negative thoughts, as well as relaxation techniques, and strategies for breaking habits. It encourages teens to talk to their school nurse, counselor or other trusted adults if they have these symptoms. It also has specific tutorials on tics (nervous habits) and “pulling out your hair.”

### ***Panic disorder***

Panic disorder is characterized by feelings of fear and dread, especially fear of death or going crazy, accompanied by intense, frightening physical sensations, such as chest pain, a pounding heart, and shortness of breath.

Ripple Effects includes a tutorial on panic attacks, with science-based information on the nature of panic disorder, cognitive-behavioral training in strategies for stopping and reframing thoughts that reinforce the sense of doom, information about the availability of prescription medication when symptoms are disabling, and encouragement for students who have these symptoms to talk to a school nurse, counselor or other trusted adult.

### **Post-traumatic stress disorder (PTSD)**

PTSD is a condition that occurs after exposure to a terrifying event, including family and community violence. Violence affects everyone, but it affects urban, poor, minority populations more than others. A randomized trial testing a mental health intervention for children exposed to violence, in a Los Angeles middle school, located in a low income, disorganized neighborhood, indicated that 17% of the 733 students who were tested had elevated Child PTSD Scale (CPSS) scores. The mean number of violent events directly experienced by each of those students in the previous year was 2.8; the mean number of violent events witnessed by each student was 5.6. 76% of that violence involved knives or guns.

PTSD symptoms can include frightening, intrusive flashbacks, which wrest attention away from schoolwork, and can bring on hypervigilance, emotional deadening, and a foreshortened sense of future. A growing body of evidence directly links PTSD to both academic and behavioral problems at school (Saigh et al, 1997).

Ripple Effects includes specific tutorials on PTSD and trauma (“hard things”), as well as tutorials on family and community violence, and cognitive behavioral strategies, including training in “relaxation techniques,” “understanding feelings,” controlling thought (“self-talk”), coping with “fear,” (managing) “stress,” and social problem solving, all components of effective live interventions for children with PTSD (Stein et al, 2003).

### **Phobias**

Social phobias are excessive fears of being unsafe or embarrassed in social situations. Other phobias may be about

specific situations, objects, animals, or conditions, from shyness to claustrophobia.

Ripple Effects includes a tutorial on phobias, as well as the related tutorials, “shyness” and “embarrassment”.

### **Attention deficit hyperactivity disorder (ADHD)**

ADHD is the most commonly diagnosed disorder of childhood, affecting from 3-5 percent of school-aged children. Its main symptoms are attention and concentration patterns that are developmentally lower than would be expected, paired with impulsivity. ADHD has been specifically linked to both academic and behavior problems at school and in the workplace. Medication and behavior training have been shown to be the two most effective modalities for students with ADHD.

Ripple Effects includes tutorials on ADHD, with science-based information on the nature of the disorder and why medication is sometimes used to address it. It also includes cognitive and behavioral training on “paying attention,” mindfulness techniques, and tutorials on normal learning differences. It includes a tutorial on prescribed and unprescribed use of Ritalin by children and adolescents. Staff and student programs both include interactive profiles that can be used for first pass screening for ADHD. The staff program includes instructional and behavioral strategies that teachers can use to extend students’ attentional capacities.

### **Eating disorders**

Eating disorders include anorexia, bulimia nervosa, and binge eating without purging. NIMH estimates of eating disorders among adolescent and young adult women are: one half of one percent

are anorexic, 1 to 3 percent are bulimic, and .7 to 4 percent have binge eating disorders. There is insufficient data to make estimates for males, though many practitioners believe male eating disorders are greatly underreported. The causes of eating disorders are not clear, and interventions vary, depending on the kind of disorder and other factors in the subject’s life.

Ripple Effects includes a topic on “eating disorders”, which addresses anorexia and bulimia. Anorexia is one of the *life threat* topics, in which students are strongly urged to seek medical help for their problem. The eating disorders tutorials also include training in emotional regulation, and encourage students to explore topics that they think might be linked to their condition, including “control.”

### **Manic-depressive illness**

Manic-depressive illness usually appears in late adolescence or early adulthood. It is a serious mental illness for which medication is essential, with mood stabilizers, such as lithium, being the most common.

Because of its later onset than other mental health problems that affect children and adolescents, and because it must be treated with medication, not solely psycho-educational training, manic depressive illness is not separately covered as a topic in Ripple Effects. However, involuntary hospitalization (“5051”) related to mental illness (for which manic depressive illness may be the referring condition) is covered in the program, and leads to training on dealing with feelings of shame, and loss of control. In addition, normal mood swings are addressed in the tutorials, “changing feelings” and “PMS”.

## Autism and other pervasive developmental disorders

A spectrum of pervasive, developmental, brain disorders are covered under the umbrella term *autism spectrum disorder*. Signs of autism usually develop by preschool. Symptoms and deficits have a very wide range, from mild communicative deficits, to serious language difficulty. Social skill training has been shown to be an effective intervention with children with mild to moderate autism spectrum disorders, including mild Asperger's syndrome.

*Ripple Effects Coach for Staff* includes training on how to recognize and respond to communicative disorders. Ripple Effects' child and teen programs do not have a tutorial called autism spectrum, but do have a series of tutorials named to correspond to children's own perception of these deficits and the desires that are thwarted by them. For instance there are tutorials on "not invited", and on "making friends," "having a conversation," (not) "interrupting," and (understanding) "eye contact." Ripple Effects' child and teen programs are used in dozens of special education programs across the country to promote social skill development with children and youth who show symptoms of mild autism spectrum disorder.

## Schizophrenia

Schizophrenia is a disabling adults' disease marked by delusions and hallucinations. Some signs of these cognitive and social impairments may appear early in childhood, but there is no way to tell when they will develop into the serious illness that affects about 1% of the population.

Ripple Effects does not include any direct intervention for schizophrenia.

Whether the universal, social-emotional capacity building for children that the program offers can be protective later in life, for individuals who are predisposed to the illness is an area of exploratory research.

All of the mental-health problems described above have disabling and disruptive effects on children's lives. More often than not, those disruptive effects include negative impacts on school performance. How big of a problem is school failure? Who does it affect? How is it linked to delinquency?

## INCIDENCE OF SCHOOL FAILURE

### Dropout rates

Metrics for defining school failure are hotly debated. The most definitive indicator of school failure is student dropout rates, but there is little consensus about how to define dropping out. Some scientists use dropout "events" each year. Others believe that number greatly understates the cumulative dropout effect. They use instead the inverse of the graduation rate. It stands to reason that if only 10.7% of students from low-income families dropped out, then almost 90% would have graduated. But if 10% dropped out every year starting at sixth grade, the graduation rate would be just 40%, closer to what it actually is for American Indian and Latino students. The National Dropout Prevention Center/Network (NDPC/N) drawing on more than 20 years of funded research and analysis, has developed a set of statistics that provides some startling pictures of the school dropout situation in the United States. The following are all taken from a summary report published by NDPC/N (Reimer & Smink, 2005)

**Overall rates**

- Overall 30% of US students fail to graduate
- The rates at which students disappear between grades nine and ten has tripled over the last 30 years
- One high school student drops out every nine seconds

A Ripple Effects tutorial directly addresses the issue of dropping out, in the context of social decision making. As importantly, tutorials address a range of issues correlated with increased risk of dropping out, from teen pregnancy to family background.

**Correlations with income**

At 5.4%, students from middle income families have more than triple the dropout rate *each year* as students from high income families (1.7%). Students from low income families have twice the dropout rate (10.7%) *each year* of those from middle income families.

**Correlations with ethnicity**

Only 51% of Black students, 52% of Hispanic students and 54% of American Indian students nationwide graduate, compared to 72% of white students and 79% of Asian students. These rates are established by dividing the number of students in a cohort who graduate with a regular diploma, by the number of students in the cohort who should have graduated. Some from each group who don't graduate, have moved to where they are not being counted. Some do not drop out but cannot pass the standardized tests needed to get a diploma. The already disproportionate representation of Black and Hispanic students nationally among those who do

not graduate is dwarfed by the even much higher dropout rates for these groups of students in large urban high schools. In some urban centers, an African American male student has less than 10% chance of graduating with his class.

**Correlations with disabilities**

- Across demographic groups the drop out rate for students with disabilities was 52%
- *In every group, students with social and emotional and behavioral disabilities drop out at twice the rate of the rest of their demographic group*

A Ripple Effects tutorial directly addresses some of the issues, including "stigma" and "bullying," that make school more difficult for students with disabilities.

**Correlations with attendance**

Truancy rates are strong predictors of drop out rates. Six variables are most associated with truancy: dislike of school, problems with parents, learning problems, family conflict, and feeling socially incompetent.

Ripple Effects student training software has tutorials on "truancy," "dropping out," and each of the six variables most associated with poor attendance.

**Correlations with crime**

- 75% of American's state prisons inmates are high school drop outs
- 59% of Federal inmates are high school drop outs
- High school drop outs are 3.5 times more likely than high school graduates to be arrested in their life time

- A 1% increase in high school graduation rates would save approximately \$1.4 billion in incarceration costs
- A one year increase in average education levels would reduce arrest rates by 11%

## INCIDENCE OF JUVENILE SOCIAL INJURY

### Juveniles are victims

According to the Office of Juvenile Justice and Delinquency Prevention's (OJJDP) *Juvenile Offenders and Victims: 2006 National Report*:

- One of every four violent crime victims known to law enforcement is a juvenile, most of them are female
- More than one-third of juvenile victims of violent crime known to law enforcement are under age 12
- Estimates of the number of youth who are bullied each year by their peers ranges from 7 to 18 million
- Between 400,000 and 2,000,000 youth are victims of sexual exploitation each year
- In 2003, child protective services agencies received an estimated 2.9 million referrals for 5.5 million children alleging that children were abused or neglected. Law enforcement/justice system personnel accounted for substantial proportions of reports for neglect (26%), sexual abuse (26%), and psychological maltreatment (30%) (Snyder & Sickmund, 2006)

### *Personal/public safety issues*

The concept of public safety includes protection from threats of harm in public places, including schools, and within one's

own home. For children, the younger they are, the more likely that the most serious threats to their safety are within their own home, with schools being a close second. More than half of all juvenile property and violent crime victimization occurs in schools (Harris et al, 2000).

Because being victimized as a child is a key risk factor for victimizing others as an adolescent or adult, reducing the incidence, duration and long-term effects of early victimization is a key part of delinquency prevention.

Ripple Effects content includes personal safety training for children, teens and adults working with youth to prevent and intervene in child victimization.

Training for elementary age children includes tutorials in "personal safety" "touch", physical abuse ("beaten", "bullying" and "fighting". Training for teens includes physical and sexual abuse by adults, and peer exploitation, including "bullying," "cyber-bullying," "dating abuse" and "rape." All tutorials encourage children to disclose victimization and related mental health issues to a trusted adult, and include training in "assertiveness," "asking for help," and "managing feelings," such as "anger" and "shame." Training for adults include "handling disclosure" (of abuse or suicidal impulses).



For comprehensive coverage of the theory and content for use of Ripple Effects for personal safety and violence prevention, see the Ripple Effects guide *Targeted Prevention: Risk Reduction*.

### Juveniles are perpetrators

Children and youth, especially adolescents, are not only disproportionately victims of crime and

injury, too often they are also perpetrators, who pose serious threats to public safety. Many times these groups overlap, with juveniles being victims in one setting and perpetrators in another. Juveniles and young adults account for a disproportionate amount of all criminal activity. That includes:

- Crimes against persons: assault, battery, bias crimes, domestic or dating violence, and sexual offenses
- Crimes against property: shoplifting, theft, vandalism, graffiti, fire setting
- Drug and alcohol related crimes: drunk driving and drug dealing
- Status crimes: truancy and “possession” offenses, including illegal possession of alcohol, prescription drugs, some weapons

*Ripple Effects for Teens* training software includes tutorials for therapeutic intervention with youth charged with “assault,” “battery,” “bias crimes,” “domestic (or dating) violence”, sexual offenses, including “rape”, “sexual harassment”, as well as “shoplifting,” “theft,” “vandalism,” “graffiti,” “fire setting,” drug and alcohol related crimes including “drunk driving” and “drug dealing,” status crimes such as “truancy”, and “possession” offenses, including illegal possession of alcohol and prescription drugs.

In 2006, OJJDP reported results of a 2003 survey of high school students about their behavior over the previous 30-day period:

- Six percent of high school students said they carried a weapon onto school property; three times that many carried a weapon, when off school property

- One third reported having property stolen or damaged at school
- Half of high school seniors said they had tried illicit drugs at least once
- Twenty-eight percent of seniors, 22% of 10th graders, and 12% of 8th graders reported recent heavy drinking
- Thirty percent said that in the past month they had ridden in a vehicle with a driver who had been drinking; 12% admitted to having driven after drinking; 30% of high school students said they were offered, sold, or given drugs at school in the past year (Snyder et al., 2006)

*Ripple Effects for Teens* training software includes tutorials on “weapons,” “stealing,” “property destruction,” “drinking” and “substance abuse.” All tutorials include training in one or more core social-emotional abilities. They encourage disclosure of underlying trauma, including previous victimization, and related mental health issues.



For a fuller description see the guide: *Uses in Juvenile Justice Settings*.

## **SOCIAL JUSTICE A NECESSARY BACKDROP**

Increasingly, experts agree that the backdrop of all discussion of juvenile behavior problems, crime, and threats to public safety must be social justice. Every major research association now has at least one special interest group to address this issue. Social justice is fairness writ large. It is the most essential prerequisite for long-term public safety. At its most basic, it is understood to guarantee the right to life, work, food, clothing and shelter without fear of injury or exploitation.

Ripple Effects tutorials for both staff and students explicitly address social justice issues, including economic justice (“money”), gender equity, racial justice and reasonable accommodation for disabilities. The programs include tutorials on non-violent methods to gain redress of social injustice, up to and including as a last resort, non-violent civil disobedience.

## DISPROPORTIONALITY

Despite its nomenclature, juvenile justice may be anything but just. Disproportionality is the phenomenon whereby some classes of people are overrepresented in the juvenile justice system. African American, Latino and Native American youth are overrepresented at every level of the system, compared to their proportion in the general population (Hsia, Bridges & McHale, 2004). They are punished more arbitrarily and more severely than Caucasian counterparts (Conley, 1994; Hartney, 2008; Huizinga et al., 2007; Mauer, 1997).

Many researchers suggest that students with disabilities, especially social-emotional disorders, (who are covered by the Americans with Disability Act (IDEA), are not only overrepresented in juvenile justice settings, but are denied services to which they have a legal right once they become involved with the system. There is so little documentation of what happens in justice settings to young people who have been identified in other settings as having special needs, as to make it impossible to quantify this allegation. However, there is no evidence to suggest that disproportionate rates of discipline against students with social-emotional disorders, which is well documented in schools, suddenly reverse themselves as behavior and sanctions are escalated within the

juvenile justice system (National Council on Disability (NCD), 2003). Some studies suggest that pressure on schools to raise academic performance propels efforts to push youth with disabilities into alternative education settings and the juvenile justice system (Osher et al. 2002).

Disproportionately high contact rates for students with social-emotional disabilities and for African American, Native American and Latino students, and the disproportionate overlap between the two groups, along with the overlap with overrepresentation of young people who come from economically stressed backgrounds, provide compelling evidence that, for a complex combination of reasons, the standard of fairness and social justice as necessary preconditions for public safety are not being met. While the evidence base for reducing disproportionality is less developed than for other areas, a number of strategies, on multiple levels, show promising effects (Hsia, 2006; Hsia, et al., 2004). Some research indicates that minority discrimination may “operate through a series of incremental steps through the stages of the juvenile justice system that collectively result in the aggregate differences observed at later stages of processing” (NCD, 2003; citing Pope and Feyerherm 1995; Sampson and Lauritsen 1997).

Ripple Effects’ *Whole Spectrum Intervention System* addresses the social justice issues of discrimination based on either ethnicity or social-emotional disorder, or both, through individual skill training for both children and adults.

Software for teens provides training in how to “make a complaint”, “resolve conflict” with teachers and other adult authorities, and constructively “confront injustice,” including “ethnic bias”, wherever they encounter it. It includes

specific tutorials on ‘bias offenses’ from both target and perpetrator points of view.

The software is used extensively within Response to Intervention (RTI) and Positive Behavior Interventions and Supports (PBIS) frameworks, to reduce disproportionate over-identification of African American, Native American and Latino students identified as having social-emotional disorders, and over-representation of students with social-emotional disorders in discipline proceedings.

Training software for adults provides ongoing coaching in effective methods for deconstructing race-based attitudes, and constructively managing problematic behavior at its earliest occurrence. As with children, the adult training programs uses this evidence based practice and: starts with people’s strengths (Brendtro & Shahbazian, 2004), address diversity issues explicitly (not by innuendo); avoid censure for honest reactions; model positive alternatives; operate in a restorative, not punitive context; and allow participants to save face (Wachtel & McCold, 2000).

## JUVENILE JUSTICE SYSTEM

It is important to look at therapeutic interventions in terms of how they fit within the conceptual frameworks of an evolving system of juvenile justice. Many children who are victims of injury and exploitation have no contact with the juvenile justice system, and most perpetrators of juvenile crime are never formally arrested. Many juveniles who are involved in crime at 15 or 16, are no longer involved in crime by 18 or 19. Nonetheless, early contact with the juvenile justice system is one of the strongest predictors of later criminality and aggression (Lipsey & Derzon, 1998).

Only a fraction of all crimes perpetrated by juveniles is referred to the

juvenile justice system. Of those, close to half of all juvenile court referrals are handled informally (Mears & Kelly 1999). Those that remain are subject to any or all of the following five components of the juvenile justice system. At each of the first four stages, the disproportionality identified above is a factor.

- Accusation (arrest and charging)
- Judgment (trial or judiciary hearing)
- Imposition of consequences (sentencing or disposition)
- Fulfilling the consequences (probation, community service, fines, jail, prison)
- Facilitating reentry into the community

While the terms and processes differ between juveniles and adults, the basic components are the same.

Ripple Effects’ delinquency prevention training can be implemented at all stages in the juvenile justice process to reduce recidivism, and increase success for justice-involved youth. It embeds evidence-based practices in the software, ensuring fidelity to proven strategies, regardless of the facilitator or adaptation of usage.

Ripple Effects’ teen program includes tutorials on “arrest,” “police,” “probation,” “jail,” and “consequences.” It includes specific tutorials on chargeable offenses including “shoplifting,” “assault,” “theft,” “graffiti,” “prostitution,” “weapons possession,” illicit drug use by drug category, and “drug dealing.”

Its modular, database structure allows for the continuous enrollment process that characterizes many juvenile justice settings. It addresses reentry through strengthening skills that deepen ties to the community. Supplemental computer-based training is available for implementers in juvenile justice settings.



For comprehensive coverage of Ripple Effects for Juvenile Justice, see the guide *Ripple Effects: Uses in Juvenile Justice Settings*.

## Consequences

There is little disagreement about the fact that young people need to be subjected to some consequences for illegal and antisocial behavior. There is more disagreement about what those consequences should be. Timing, severity and consistency are three factors that have repeatedly been shown to be tied to the effects of consequences. Immediate sanctions are more effective than delayed ones. Less severe, consistent consequences are much more effective than more severe, inconsistent ones (Howell, 1995; Howell & Lipsey, 2004).

The use of Ripple Effects student training software at the moment of disciplinary infractions provides immediate, matter-of-fact, measurable, and consistent delivery of consequences that are logically linked to the behavior that precipitated them. Hundreds of tutorials cover all of the most common infractions, and most of the less common ones, increasing the likelihood of finding training that directly correlates to the problem behavior.

The elementary and teen versions both include tutorials on predicting consequences. This training emphasizes cognitive techniques to develop awareness of cause and effect. It focuses on if/then and why/because sentence construction. In addition, it includes behavioral training to stop impulsive reactions long enough to “buy time” to consider their consequences.

Ripple Effects Professional Development software provides staff training in the rationale for developing a

graduated system of negative consequences when warranted, and standards for creating and imposing effective, therapeutic consequences.

## Therapeutic sanctions

Therapeutic sanctions are consequences for anti-social behavior that have as their purpose “curing” rather than punishing. As with medicinal cures, for every one that is proven to work, many more make claims that cannot be substantiated. Nonetheless, dozens of sanctions have been shown to be effective with some young people in some situations. None is effective with all. There is more evidence for five major categories than for others: behavioral, cognitive, social skill, attention-focusing, and parent skill training. They all show more effects with children who have higher risks (Burns & Hoagwood, 2002; Greenberg et al. 2001; Lipsey & Hawkins, 2007; Ronen & Hoagwood, 2000). These are described at greater length in Chapter Three.

Ripple Effects program includes all five of the most effective approaches in hundreds of tutorials that are context specific for both concrete behavioral infractions and underlying risk factors. (See next chapter for details.)

## Probation

Probation is a period of time when offending youth are (theoretically) placed under increased scrutiny, to reduce the chance that they will re-offend. Conditions of probation sometimes include participation in a treatment program.

Ripple Effects has begun to work with probation departments to provide an option for proactive skill building among youth

who are on probation. The Company provides direction on how to use the training software as part of an electronically supervised diversion program, in which completion of assigned tutorials directly related to the offense, are automatically monitored and certificates of completion are provided.

### Restorative justice

Restorative justice has as its focus the healing of community, rather than the punishment of behavior (Butts & Mears 2001; Howell 1995; Bender, King & Torbet, 1996; Zehr, 1990). It often involves a process whereby the offender encounters the victim, recognizes the personal injury he or she has caused, makes an apology, and if property or medical costs are involved, commits to making restitution for those losses. An important part of that process is acceptance of the apology, and formal re-inclusion of the offender into the community.

Ripple Effects training software includes tutorials for “restorative justice,” “making apologies” and “connecting with community.” Perhaps more importantly, it reinforces the cultivation of “empathy,” and provides step-by-step training for increasing the offender’s ability to understand a victim’s perspective, *before* the offense occurs.

### Recidivism and reentry

Going to jail can be a huge culture shock for a juvenile offender. Once a young person has been incarcerated, reentering the outside world can be equally disorienting. A return to the system is sometimes the path of least resistance. Recidivism rates among juvenile offenders are collected at the state level only, and are

often defined differently between states. As a benchmark, cross-state data indicate that nearly 60% of juveniles are referred to the courts more than once. Re-arrest rates for incarcerated youth range from 12 to 55%. Sanctions that include career preparation elements generally have lower recidivism rates than those that do not. Sanctions enacted in the context of a community of ongoing support also have better effects. The most successful of those supportive programs include educational and health services as well (Snyder & Sickmund, 2006).

Ripple Effects training software includes career preparation tutorials, with an emphasis on training in soft or “21st century” skills that have been identified as success factors in the workplaces of the future. Ripple Effects also includes tutorials on using community resources. Finally, it includes a set of tutorials on mental health issues that are common among young offenders, especially PTSD, depression, and substance abuse. This combination provides practical, skill-based support for successful reentry.



See the guide *Uses in Juvenile Justice Settings* for a full list of tutorials in each area.

### MUST ALSO ADDRESS RISKS

An interruption of the cycle of recurrent delinquent behavior and child victimization requires direct, supportive intervention that is individualized, evidence-based and therapeutic in order to address the presenting behavior problems. However, to have a genuinely preventative effect, that intervention also needs to address the underlying risk factors that give rise to delinquent behavior. Understanding

what those risk factors are is the subject of the next chapter.

## REFERENCES

- Berg, S., Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Brendtro, L., & Shahbazian, M. (2004). *Troubled children and youth: Turning problems into opportunities*. Champaign, IL: Research Press.
- Burns, B. J., & Hoagwood, K. (2002). *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders*. New York: Oxford University Press.
- Butts, J.A. & Mears, D.P. (2001) Reviving Juvenile Justice In A Get-Tough Era. *Youth & Society, Vol. 33, No. 2*, 169-198.
- Bender, V., King, M., Torbet, P. (2006). *Advancing Accountability: Moving Toward Victim Restoration*. Pittsburgh, PA: National Center For Juvenile Justice.
- Conley, D. J. (1994). Adding color to a black and white picture: Using qualitative data to explain racial disproportionality in the juvenile justice system. *Journal of Research in Crime and Delinquency, 31*, 135-148
- Greenberg, M.T., Domitrovich, C.E., & Bumbarger B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment, 4*, Article 1. Retrieved March 1, 2002, from <http://journals.apa.org/prevention/volume4/pre0040001a.html>.
- Harris, P., Middleton, W., & Joiner, R. (2000). The typical student as an in-group member: Eliminating optimistic bias by reducing social distance. *European Journal of Social Psychology, 30*, 235-253.
- Hartney, C. (2008, March). *Native American youth and the juvenile justice system*. Focus: Views from the National Council on Crime and Delinquency. Oakland, CA: National Council on Crime and Delinquency.
- Howell, J.C. & Lipsey, M.W. (2004), *A Practical Approach to Evaluating and Improving Juvenile Justice Programs, Juvenile and Family Court Journal*. National Juvenile and Family Court Judges Association.
- Howell, J.C. 1995. *Guide for Implementing the Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders*. Washington: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Hsia, H. (2006). *Disproportionate minority contact technical assistance manual* (3rd ed.) . Washington, DC: Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice.
- Hsia, H., Bridges, G., & McHale, R. (2004). *Disproportionate confinement: 2002 update*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention. <http://www.ncjrs.gov/App/Publications/abstract.aspx?ID=241537>
- Huizinga, D., Thornberry, T.P., Knight, K.E., Lovegrove, P.J., Loeber, R., Hill, K., et al. (2007). Disproportionate minority contact in the juvenile justice system: A study of differential minority arrest/referral to court in three cities. Report unpublished by the U.S. Department of Justice. Made available by the National Criminal Justice Reference Service.
- Koffman, S., Ray, A., Berg, S., Covington, L., Albarran, N., Vasquez, M. (2009). Impact of comprehensive Whole Child Intervention and Prevention Program among Youths at Risk of Gang Involvement and Other Forms of Delinquency. *Children & Schools, A Journal of the National Association of Social Workers, vol. 31, #4, pp 239- 246*.
- Lipsey, M.W., Hawkins, D. (2007, May) *Prevention Of Antisocial Behavior: The*

- Most Effective Interventions For Changing The Most Predictive Risk Factors. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Lipsey, M.W., & Derzon. J.H. (1998). Predictors of violent or serious delinquency in adolescence and early adulthood: A synthesis of longitudinal research. In R. Loeber & D.P. Farrington (Eds.). *Serious and violent juvenile offenders: Risk factors and successful interventions*. Thousand Oaks, CA: Sage.
- Mauer, M. (1997). Intended and unintended consequences: State racial disparities in imprisonment. Washington, DC: The Sentencing Project.
- Mears, Daniel P., and William R. Kelly. 1999. "Assessments and Intake Processes in Juvenile Justice Processing: Emerging Policy Considerations." *Crime and Delinquency* 45:508-529.
- National Institutes of Mental Health. Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA). 1992.
- Osher, D, Rouse, J, Woodruff, D., Kendziora, K., & Quinn, M. (2002). *Addressing invisible barriers: Improving outcomes for youth with disabilities in the juvenile justice system*. Washington, DC: U.S Department of Education.
- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 - 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.
- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects for Targeted Prevention: Risk Reduction*. Ripple Effects, Inc., San Francisco, CA. 2007
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.
- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Ray, A. *Using Ripple Effects in Juvenile Justice Settings*. Ripple Effects, Inc. San Francisco, CA. 2007.
- Reimer, M. & Smink, J. Information about the School Dropout Issue Selected Facts & Statistics. National Dropout Prevention Center/Network. (2005)
- Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical Child and Family Psychology Review*, 3, 223-241.
- Saigh, P.A., Mroueh M., Brenner, J.D., *Scholastic Impairments among Traumatized Adolescents. Behavior Research and Therapy*. 1997: 35; 429 – 436.
- Snyder, H.N. & Sickmund, M. (March, 2006). *Juvenile Offenders and Victims: 2006: National Report*. Washington, D.C.: National Center for Juvenile Justice, Office of Justice Programs, Partnerships for Safer

Communities, Office of Juvenile Justice and Delinquency Prevention.

- Stein D J, et al. (2003) Fluvoxamine CR in the long-term treatment of social anxiety disorder: the 12- to 24-week extension phase of a multicentre, randomized, placebo-controlled trial. *Int Journal of Neuropsychopharmacology*, 6: 317–323.
- Wachtel, T. & McCold, P. (2000). "Restorative Justice in Everyday Life." In J. Braithwaite & H. Strang (eds.), *Restorative Justice in Civil Society* (pp. 117-125). New York: Cambridge University Press.
- Zehr, H. (1990). *Changing Lenses: A New Focus for Crime and Justice*. Scottsdale, Pa.: Herald Press.

**Chapter 3: Why is it happening?  
Risk and Protective Factors**

Complex interaction of factors..... 1

    Impact in multiple areas..... 1

    Implications for practice..... 2

    Internal/external - fixed/malleable..... 2

Internal (individual) factors..... 3

    Physical: neuropsychobiology..... 3

        Brain states..... 3

        Processing disorders..... 3

        Brain development..... 3

        Gender..... 4

        Race and ethnic identity..... 4

        Alcohol and drugs..... 4

    Mental factors..... 5

        Cognitive impairment..... 5

        Rational choice..... 5

        Impulsivity..... 6

        Cognitive distortions..... 6

            Misreading motives..... 6

            Rationalization..... 7

            Distorted sense of self..... 7

    Emotional factors..... 7

        Inability to feel for others..... 7

        Emotional dysregulation..... 8

    Behavioral factors..... 8

        Social skill deficits..... 8

        Externalizing behavior..... 9

    School problems..... 9

    Spiritual..... 10

Lack of conscience.....	10
External causes.....	10
Events.....	10
Prenatal or perinatal complications.....	10
Trauma.....	11
Interpersonal relationships.....	11
Attachment disorders.....	11
Maltreatment.....	12
Parental style.....	12
Circumstance.....	13
Family structure.....	13
“Bad” neighborhood.....	13
Policies.....	13
School policies.....	13
Juvenile justice policies.....	13
Social structures and processes.....	14
Subcultures of delinquency.....	14
Acculturation process.....	14
Social injustice.....	15
Sexism.....	15
Racism and ethnic bias.....	15
Homophobia.....	16
Class influences.....	16
Social status.....	16
Media influence.....	17
Evidence points to need to address whole spectrum.....	17
Most predictive risk factors.....	18
Internal protective factors.....	18
Resiliency.....	18
Empathy - the hallmark.....	18
Connectedness.....	19
Autonomy.....	19

Problem solving.....	19
Implications for academics.....	20
Tipping the balance toward protection.....	20
References.....	21





## Chapter 3: Risk and Protective Factors

Across cultures, throughout history, there have been efforts to explain why some people – and disproportionately young people – injure others and themselves. In the modern era, psychologists, sociologists, anthropologists, physicians and political scientists have all attempted to turn philosophical debates into empirical ones. Hirschi's Social Control theory (1969), Merton's Strain theory (1949), various theories about Rational Choice, Differential Association (Sutherland, 1924) Social Disorganization (Shaw & McKay, 1929), Culture, Subculture and Biological Determinism, all have some basis in empirical evidence. Many theories encompass more than one factor in their models to explain delinquency, school failure and poor mental health outcomes for children. Many models overlap in factors they identify as of greatest importance.

Today, the most prominent models to explain children's failure to thrive revolve around the theories of risk and protection (Loeber and Farrington 2001, Catalano and Hawkins 1995; Farrington 1998; Howell and Hawkins 1998; McCord et al. 2001). These theoretical models collectively identify more than a hundred risk factors that operate in multiple life domains. Each has been statistically correlated with juvenile delinquency, and/or school failure, and or poor mental health outcomes. Each is an independent risk factor; combined, they compound that risk. Some experts estimate that a 10-year-old exposed to six or more risk factors is 10 times as likely to commit a violent act by age 18 as a 10-year-old exposed to only one risk factor (Herrenkohl et al. 2000).

### Complex interaction of factors

Many of these factors are mediators and moderators of each other: impulsivity and poor peer relationships are independent factors in delinquency and school failure. They are also highly correlated with each other (Hawkins et al. 1998). Similarly attachment disorders and poor social skills are independently linked to delinquency and social-emotional disorders, as well as highly correlated with each other (Allen, J., Marsh, P. McFarland, C., Boykin McElhaney, K., Land, D., 2007). In each case the former is a mediator of the latter, but other factors may be mediators as well.

This fact has increasingly led experts to agree that malfunctioning behavior by the overwhelming majority of youth who become involved in it, cannot be attributed to any single cause, but instead represents in each case, some unique combination of the constellation of possible individual and social, fixed and mutable factors in any or all of multiple domains, that can motivate it. (Hawkins, Jenson, Catalano & Lishner, 1987; Kleinman, 1997).

### Impact in multiple areas

The potential net result of these interacting influences is not only pro-social or delinquent behavior, but also poor or better health outcomes; and school failure or success. The co-occurrence of behavior problems with mental health problems and academic challenges is so common that it is often difficult to tease them apart. Anti-social behavior, school failure, and adolescent health and mental health

problems, such as substance abuse, PTSD and depression, have been shown to be inter-dependent variables that can be linked to each other, as well as to common external risk factors, such as family discipline patterns, parental mental health, poverty, and community violence (Diperna & Elliott, 1999; Feshbach & Feshbach, 1987; Hawkins, Farrington & Catalano, 1998).

### Implications for practice

Thus to effectively reduce risk of delinquency for the whole subset of young people who have higher risks of becoming involved in delinquent behavior requires identifying the whole spectrum of salient risk factors, then finding ways to tailor interventions to address the particular combination of factors which comprises the most relevant set for each individual.

*Ripple Effects Whole Spectrum Intervention System* recognizes that risk factors are multi-variate, multi-determinate, and interactive, and that they operate in multitudinous possible combinations that have idiosyncratic impact on each individual. This is the rationale for including content to address more than 100 specific risk factors in the *Whole Spectrum Intervention System*.

### Internal/external - Fixed/malleable

With evidence and theories for so many risk factors in so many domains, it is easy for program developers, practitioners, and of course, youth themselves, to get overwhelmed. However, it is possible to organize them along just two axes: internal vs. external factors, and fixed vs. mutable factors.

Internal factors include physical, mental, emotional, behavioral and spiritual characteristics of children and youth

themselves. External factors include social relationships (between peers, or between parents and teachers and the children under their care), family circumstance (social, economic, parental substance abuse and mental health), and structural issues, from school policy to unjust social processes and economic policies that weigh against poor and minority young people.

Figure 3: Graph of risk factors



Most of these factors are at least partly malleable, certainly all skill-based factors are. While some factors, such as body chemistry or family circumstance, may be fixed, and out of children's control, children and adolescents have substantial control over how they react to these factors. The nature of those reactions may separate those who thrive despite harsh circumstances, from those who don't (Werner, 1992).

How and why *Ripple Effects* incorporates theory about a very wide range of internal and external risk factors, and how and why it emphasizes a few factors that research has shown are strongly correlated with delinquency and school failure and can be significantly impacted by specific practices is described below.

## INTERNAL (INDIVIDUAL) FACTORS

Among the individual, internal factors that are variously cited as causes, mediators or moderators of delinquency are:

### Physical: Neuropsychobiology

#### **Brain states**

Imaging studies have shown the links between activation of specific regions of the brain, especially the amygdala (Giedd, 2008; McAnarney, 2008) and certain behavior, such as impulsivity, and hyperactivity. Hyperactivity in turn has been identified as an independent, biological factor in risk of delinquency (Hawkins *et al.* 1998).

The content in Ripple Effects' student tutorials includes science-based information about the bio-chemistry of mood and behavior. It has tutorials on "exercise," "puberty," "addiction" and "illness," including some "mental illnesses" such as "depression." Lessons on "hyperactivity" and "impulsivity" include information about possible biological roots for this behavior. Lessons are designed to help students recognize the difference between an explanation for anti-social behavior (there are many valid ones) and an excuse for it (there are almost none).

#### **Processing disorders**

As discussed in Chapter 2, long before contact with Juvenile Justice, children and youth with communicative/processing disorders make up a large and fast growing percentage of students assigned to special needs classes, as well as to disciplinary referrals. The lack of widespread screening for neurological and communicative disorders in Juvenile Justice settings, makes

it impossible to accurately measure the relationship between these processing disorders and risk of delinquency. Nonetheless, according to the National Council of Disabilities what evidence is available strongly suggests that people with sensory integration difficulties, Asperger's Disorder, Autism Spectrum Disorder, and neurological disorders, including attention deficit disorders, all have disproportionate involvement with juvenile justice (NCD, 2009).

Ripple Effects' software program for adolescents has lessons on "hearing disorders," "visual impairments," "attention deficit disorders," "communication problems," and "learning disabilities." The staff training software includes skill training in how to help children mediate the risks associated with these disorders.

Ripple Effects' approach is to assume that, with very rare exceptions, all students can learn pro-social behavior, but that biological factors may affect both the most effective instructional method and the training dosage required for each individual, as well as their possible need for medications.

#### **Brain development**

It has long been known that a huge spurt of brain growth occurs in early childhood. Only recently has it become clear that adolescence represents a second opportunity for major growth, especially emotional growth. It is also a time of "pruning" during which the brain sheds some cells in favor of consolidating others (Society for Neuroscience, [http://www.sfn.org/index.cfm?pagename=brainBriefings\\_Adolescent\\_brain](http://www.sfn.org/index.cfm?pagename=brainBriefings_Adolescent_brain)). Ultimately, like spring pruning, this has the positive value of preparing the brain for a major growth spurt. A short-term consequence is impulse disinhibition and

reduction in ability to predict consequences (Sowell, et al. 2001). This developmental “anomaly” undoubtedly contributes to the disproportionate involvement of adolescents in most forms of crime.

Ripple Effects is responsive to the developmental issues with the adolescent brain by providing intensive training in impulse control and a range of lessons related to impulsive aggression and recklessness.

### **Gender**

Gender is one of the strongest correlates with incidence and severity of reported juvenile delinquency, with males outpacing females on both parameters. Males have higher rates of both impulsivity and aggression. While some of those differences can be attributed to differential socialization patterns, and sexism within the juvenile justice system (Rhodes & Fisher, 1993), brain imaging studies have clearly shown that the prefrontal cortex, the part of the brain involved in reasoning and decision-making is smaller and less active in aggressive males than in any other group (Craig, Harper & Loat, 2004; Nelson & Chiavegatto, 2001).

The role of gender in school failure and mental health outcomes is more complex and cannot be disentangled from social justice issues discussed on page 3.15.

Ripple Effects provides a formal lesson on gender and cites both biology and culture as sources of differing social behavior, with links to those topics. It trains both students and staff to examine their own perceptions of gender-based differences, and reminds them that males and females are in all ways theoretically equal before the law.

### **Race and ethnic identity**

Ethnic identity resides in the self, but is conferred by others. As noted in the previous chapter, it is a major risk factor for societal sanctions for anti-social behavior. African American, Latino and Native American youth are over-represented at every level of educational disciplinary systems, as well as the juvenile justice system, compared to their proportion in the general population (Leone *et al.* 2003; Skiba *et al.* 2002). There is no evidence that any factor intrinsic to ethnic identity accounts for these differences (Huizinga & Elliott, 1987).

Ripple Effects provides lessons on race and ethnicity for both students and staff. The staff program targets and deconstructs adult, race-based stereotypes and expectations.

Student lessons are intended to debunk myths based on racial or ethnic stereotypes and to engender ethnic pride and mutual respect. A lesson on “discrimination” helps students examine their perceptions of unfairness and take constructive – rather than aggressive action – to address inequity when they see it.

### **Alcohol and drugs**

Alcohol and drugs impair cognition and disinhibit physical impulses. They are highly correlated with school failure and poor mental health outcomes, especially depression. They are so highly correlated with juvenile delinquency and adult criminality that substance abuse prevention is an integral part of almost all delinquency prevention programs. In this area, as in so many others, correlation does not equal causation.

Ripple Effects training software begins substance abuse prevention at the

elementary level, and expands it in the adolescent program. The teen program includes science-based information about the chemical base and biological effects of drugs and alcohol in tutorials on “drinking,” “alcoholism,” “marijuana,” “tobacco,” “addiction,” opiates, “club drugs,” “methamphetamines” (under various names), “rohypnal” (the “date rape” drug), “Ritalin” (as a potential treatment for ADHD), and “prescription drugs” such as “Oxycontin”. All lessons integrate relevant proven effective strategies, including decision-making emotional regulation and social skill training, with an emphasis on resisting peer pressure. Scope and sequences for substance abuse prevention and intervention are included in implementer manuals.



One *RCT* of rural *adolescents* indicated the Ripple Effects program had significant, positive effects on attitudes about alcohol. Other studies showed neutral effects (Bass *et al.* 2008; Perry *et al.* 2008).

## Mental factors

Several theories cite thinking patterns as the root of delinquent behavior. They are directly correlated with mental health problems, such as depression and anxiety disorders as well. Faulty thinking may be the result of innate cognitive impairment, or may be a learned or chosen response. It can include faulty reasoning, anti-social norms, self-justifying distortion, or conscious decisions to do the wrong thing.

### **Cognitive impairment**

This theory posits that the individual has reduced capacity for rational choice at the time of the behavior. The incapacity may be the result of innate, mental deficiencies (retardation), or a cognitive

learning disorder that muddles or complicates the decision-making process. Low verbal IQ and delayed language development have both been linked to delinquency, even after controlling for race and class (Moffitt, Lynam, and Silva, 1994; Seguin *et al.* 1995). Attention problems have also been linked to delinquency (Hawkins *et. al.*, 1998).

Ripple Effects includes specific lessons related to cognitive impairment (“mental disabilities,” “dyslexia,” and “attention problems.”) Ripple Effects has broken down the elements of pro-social behavior into a Lego™ like set of tiny modules that are accessible to students with mild to moderate cognitive impairment.

The Ripple Effects program provides intensive training in two language structures which are essential to logical processing: if/then, and both/and.

By structuring the system to allow limitless repetition, students who need higher doses of remedial training can receive it without stigma or teacher fatigue.

### **Rational choice**

By contrast, the theory of rational choice (Bentham, 1748-1832; Cornish and Clarke, 1986), also referred to as “consequentialism” posits that individual choices that violate community norms are self-interested, conscious decisions made with awareness of trade-offs between risk and reward. It emphasizes free will and personal responsibility. Modern prevention theory recognizes both the importance and the limitations of this model (Binder, Geis, Bruce, 1997). Social scientists, health scientists, criminologists and educators all recognize values-based decision-making as a key factor in personal safety, civic

responsibility and school success (Bandura, 1967; Elias & Bruene Butler, 2005).

Ripple Effects identifies conscious decision-making as one of seven key life skills, and explicitly and implicitly teaches it throughout the program. The program treats “consequentialism” (“predicting consequences”) as an independent skill, with focus on developing the cognitive structure of if/then sentences as a necessary precondition for predicting future consequences of immediate actions.

The Ripple Effects approach to decision-making includes awareness that unsafe, illegal and self-destructive decision-making is more often the result of “irrational” choice, rather than conscious weighing of costs and benefits. It also recognizes that norms and values strongly impact those decisions. Moral rightness, according to a student or teacher’s personal code of values, is presented as a criterion for evaluating every decision. There are embedded links to decision-making training in dozens of lessons on substance use, interpersonal relations, and school-related behavior.

Separate lessons treat the topics of “options,” “norms,” “values,” “self-determination” and “responsibility.”

### ***Impulsivity***

Impulsivity as a potential explanation of delinquency is the flip side of the rational choice argument. It posits that the inability to slow reactions (physical impulsivity) and to think through consequences (cognitive impulsivity) long enough to consciously make decisions about them causes risky and anti-social behavior.

As noted earlier, researchers have established a positive relationship between hyperactivity, impulsivity and risk taking and later violent behavior (Hawkins et al 1998). Hyperactivity and impulsivity are

also directly linked to poor school performance. The inability to delay gratification can predict long term social functioning (Eigsti *et al.* 2006; Mischel *et al.* 1988).

Ripple Effects content for both students and staff addresses the issue of impulsivity directly and indirectly. In addition to providing training to implementers on how to control their own impulses, the staff program considers the link between impulsivity and attention deficit disorders in students, and provides training in managing impulsive student behavior.

The student program includes both cognitive and behavioral impulse control training. It provides tutorials for concrete application of impulse control techniques in many areas, including “recklessness,” “sexual impulses,” “aggressive impulses,” and impulses to violate norms, such as “lying” and “cheating”.

### ***Cognitive distortions***

Misattribution of motive, rationalization of personal actions and a distorted sense of self are the most common cognitive distortions that can lead to delinquent behavior.

#### *Misreading motives*

Offenders are more likely than non-offenders to interpret accidental actions as purposeful, and benign intent as aggressive (Hawkins, 1996; Heider, 1958). This misinterpretation can begin at a very young age and is a factor in school-based aggression, long before it becomes delinquent behavior (Hawkins, 1996; Nelson *et al.* 2008).

Ripple Effects devotes an entire lesson in both the elementary and adolescent programs to distinguishing accidental from (“accident”) from purposeful (“on purpose”) behavior.

### *Rationalization*

Many offenders rationalize their crimes, relieving themselves of all responsibility. They tell themselves “she asked for it” (domestic violence), “they won’t miss it” (theft); “they started it” (gang violence); “they like it” (sexual assault); “they deserved it” (abusive discipline); “they are evil” (gay bashing), etc.

Ripple Effects corrects this type of cognitive distortion directly in applicable lessons, such as “rape” and “bias crimes,” as well as indirectly in lessons on “responsibility”. It addresses cognitive distortions generally in the tutorial on internal triggers, also called “self-talk.”

### *Distorted sense of self*

Psychologists have repeatedly tied a distorted sense of self to delinquency and later criminality (Kelley, 1996). Recent research has focused on the tie between an inflated and/or narcissistic sense of self and crime and aggression (Baumeister, Smart & Boden, 1996). A weak sense of self is tied to increased risk of becoming a victim of bullying, violence or exploitation.

Two of the seven key skill-sets in both the staff and student programs are devoted to strengthening a strong, healthy and realistic sense of self. One skill set focuses on self-awareness/understanding (“know yourself”), the other focuses on “assertiveness”.

Exercises to increase self-awareness include 37 interactive self-profiles, and more than 2,000 journal writing exercises. These lessons and interactive profiles develop awareness of body, mind, heart and soul. There are also specific lessons on strengths and weaknesses, and risk and protective factors, as well as self-efficacy-related topics of “goal setting,” “perseverance,” “mindfulness” and “self-

image.” There is a specific lesson on “self esteem,” with the parenthetical title (“not self-centeredness”).

## **Emotional factors**

### *Inability to feel for others*

There is considerable evidence that some people have a greatly reduced ability to feel for others (Feshbach, 1975). Without that initial sensitivity, values based on the concerns of others are meaningless. Strong evidence points to neurological roots of some diminished capacity is associated with autism spectrum disorders (Decety & Meyer, 2008). Evidence shows a strong link between reduced empathy and exposure to traumatic events (Main & George, 1985). But also between reduced emotional competence and lack of parental modeling (Eisenberg, Cumberland, Spinrad, 1998; Main, Hesse & Kaplan, 2005).

Long thought to be innate, a growing body of evidence supports the conclusion that although some people have an innately greater starting aptitude for empathy (Gardener, 1993), it is a learnable skill-set that has affective, cognitive and behavioral components (Bar-On & Parker, 2000; Goleman, 1995; Salovey & Mayer, 1990). It can be systematically developed (Bar-On, Maree & Elias 2006; Elias et al. 1994), and gradually or abruptly extinguished.

Ripple Effects’ instructor-led and electronic staff training includes recognition of the neuro-biological roots of some diminished affective capacity. Severely diminished emotional capacity, regardless of the cause, is beyond this program’s ability to remediate. However, for both adults and children who have *learned* not to feel for others, whether that diminished capacity is the result of exposure to trauma or simply insufficient

skill training, Ripple Effects *WSIS* provides a set of lessons in the affective (“identifying feelings”), cognitive (“perspective taking”) and behavioral (“showing care”) aspects of empathy.

### *Emotional dysregulation*

If some people seem to lack the capacity to feel, others can be so swamped by their feelings that they have little control over them. A growing body of research has linked emotional dysregulation with anti-social behavior, including early-starting conduct problems (Calkins & Howse, 2004; Dishion & Patterson, 2006) and externalizing behavior in school settings. (Gilliom *et al.* 2002). Poor emotional knowledge and skills among children are associated with depression, anxiety, violence, drug and alcohol use, destructive relationships, and poor academic performance (Eisenberg *et al.* 2000; Halberstadt, Denham & Dunsmore, 2001; Rivers, Brackett & Salovey, 2007). These effects don’t disappear at the end of childhood. Lack of self-control has been linked with persistent effects throughout life (Caspi, Henry, McGee, Moffitt & Silva, 1995; Moffitt & Caspi, 2001). The inability to control emotional reactions and behavioral responses due to situational variables is so closely tied to criminality that “crimes of passion” is a legal category recognized in most jurisdictions.

This category, too, is one in which personal change is possible. Research consistently shows that emotional regulation is a learnable skill (Rivers & Brackett, 2007). Standardized, cognitive-behavioral techniques for emotional regulation, including recognizing emotion by physical cues, managing internal triggers (“self-talk”) and external triggers, as well as relaxation training, can improve self-control and result in reduced

aggression in school settings (Brackett & Mayer, 2003; Brackett & Rivers, 2007; Durlak & Weissberg, 2007), and reduced recidivism among offenders (Wilson, Lipsey & Derzon, 2003; Lipsey & Hawkins, 2007).

Ripple Effects offers a full unit on emotional regulation (“managing feelings”) at all three program levels. The set of tutorials includes standardized, cognitive-behavioral strategies, such as managing self-talk, identifying internal and external triggers, and practicing relaxation techniques. The program also offers more than a dozen lessons on controlling specific emotions that fuel crimes of passion, especially anger, fear and jealousy.

### **Behavioral factors**

#### *Social skill deficits*

This theory posits that anti-social behavior is the result of specific social skill deficits, from the inability to resist peer pressure, to the inability to start or stop a conversation. These deficits may be due to: simple ignorance; lack of modeling; a range of learning disorders, most especially communicative disorders, such as Asperger’s syndrome and autism spectrum; cultural variance in what is understood as courteous and respectful; and/or normal differences in temperament that predispose some people to seek more or less contact with others. Regardless of the cause of the deficits, abundant research has shown that social skills are learnable (Elias *et al.* 1997; Zins *et al.* 2004).

Ripple Effects *Whole Spectrum Intervention System* incorporates the theory that some, but by no means all, anti-social behavior, can be attributed to deficits in learnable social skills that enable the formation of constructive relationships.

Adult implementers are trained to assume that the bulk of students' anti-social behavior is related to skill deficits that can be remediated with standardized training protocols, adapted to individual interests and learning styles.

The programs provide developmentally appropriate training in 75 specific social skills from social graces, such as "introducing oneself," "expressing sympathy," and "giving complements," to group participation skills, such as "joining a group or game," "participating in discussion" and "resolving conflict," to skills for resisting peer pressure and responding to aggression by others.

#### *Externalizing behavior*

Aggressive behavior (including fighting, bullying and defying authority) is strongly linked to early delinquency (Tremblay and LeMarquand, 2001). This behavior may arise out of any combination of the factors identified above, or be conditioned by external influences. It is an individual characteristic, but clearly a mutable one.

Ripple Effects content addresses children's aggressive behavior in individual treatment plans for tertiary intervention for the following behavior: "Angry – cold predatory," "Angry – reactive," "Bias activity/hate crimes," "Bullying," "Defiant," "Disrespectful," "Disruptive in class," "Disruptive on playground," "Fighting," "Impulsive," "Poor judgment," "Sexually harassing, Stalking").

Ripple Effects also addresses externalizing behavior in secondary prevention curricula for violence, bullying and sexual harassment. Content for those students' curricula share skill training in "empathy," "impulse control," "management of feelings" and "problem-solving." They each have additional,

developmentally appropriate content specific to the form of aggression being cited.

The professional development software trains educators in how to respond to students' aggressive behavior in non-shaming ways that promote behavioral change.

### **School problems**

Low academic performance, low commitment to school, and low educational aspirations during the elementary and middle school grades are all linked to higher risk for child delinquency (Herrenkohl et al. 2001). As noted in the previous chapter, and discussed in greater detail in Chapter 5, non-academic problems at school can have greater impact on future trajectories than academic ones.

Ripple Effects addresses academic performance, commitment and aspirations, as well as school climate issues, such as peer relations. Available tutorials include topics such as, "goals," "thoughts," "luck," "success-phobia," "future not there," "strengths," "resilience," "effort," "learning styles," "smarts," "study habits," "following instructions," "attention problems," "problem solving," "choosing," "making friends" and "fighting with friends," "getting help," school failure," "people problems," "bullied," "teased," "teacher conflict," "cheating," "cutting class," "discrimination," "talking back," "blurting out," "making a complaint." dropping out," "English language learner," "failing," "grades," "skipping," "late," "hating school," "sleepy," "Special Ed," "suspended," "tests."

## Spiritual

### *Lack of conscience*

Conscience is the ability to discern between perceived moral good and moral evil, coupled with the desire to choose the perceived good. (It does not include the ability to implement those good intentions.) Modern Western medicine defines lack of conscience as a rare medical disorder, a psychopathology, called “conduct disorder” when it occurs in children (DSM IV, 1994, 2000). Experts differ widely in attribution of the sources of lack of conscience. Some attribute it to physical causes, from traumatic brain injury to communicative disorders. Some attribute it to social forces and/or interpersonal trauma (see below). Some attribute it simply to lack of learning.

Building on the work of Piaget (1962), Kohlberg considered the formation of conscience as a normal developmental task that began in early childhood (1981). Many contemporary psychologists believe that social learning, rather than natural moral development, accounts for a stronger or weaker conscience.

Like Kohlberg, the Ripple Effects’ approach recognizes the formation of conscience as a critical and ongoing developmental task. Like social learning theorists, content in Ripple Effects recognizes that normal moral development is heavily influenced by peer and community norms, and by personal religious beliefs, as well as by intra-personal abilities.

Ripple Effects considers the formation of conscience to be largely a parental responsibility, that often has a strong religious component. Thus the program provides skill building in assertiveness techniques that empower individuals to live the values they profess. It does not

promote any explicitly religious values, but neither is it completely value neutral.

To support formation of conscience among children and teens, especially those who are not receiving explicit, values-based parental direction, content in RE includes values clarification lessons, lessons on norms, sensitization toward others, training in specific values that are intrinsic to democracy, such as fairness, and a decision-making framework that includes “rightness” as a criteria in making personal choices. Ripple Effects staff training lesson on behavior problems, recognizes “conduct disorder” as a medical condition that is real, but rare, and almost never the explanation for discipline-worthy behavior in normal classroom settings.

## EXTERNAL CAUSES

Those who explain delinquent behavior in terms of external influences cite events, interpersonal relationships, life circumstances, and social policies and processes in multiple domains as catalysts. Unfortunately, large numbers of educators believe that these conditions of adversity automatically condemn students to underachievement and anti-social behavior.

Ripple Effects content includes and addresses external risk factors because they have social, emotional and cognitive impacts on youth that can be partly mitigated by some combination of skill building and decision-making.

## Events

### ***Prenatal or perinatal complications***

Researchers have identified a link between smoking or excessive drinking during pregnancy, and complications in

delivery, and later aggression and mental health problems in these children (Kandel & Mednick, 1991), though not between those complications and non-violent offenders. (Hawkins *et al.* 1998).

Ripple Effects provides one lesson on pregnancy that teaches youth to avoid tobacco, alcohol and drugs when pregnant, which includes optional lessons - that administrators can delete - on birth control as well as lessons on abstinence and controlling sexual impulses.

### **Trauma**

Research reveals a strong link between traumatic experience in multiple domains, and conduct problems, lower academic performance (Cook *et al.*, 2005; Delaney-Black *et al.* 2002; Greenwald, 2002; Hurt, Malmud, Brodsky & Giannetta, 2001; Kelley, Ko & Siegfried, 2004) and of course, PTSD. Traumatic brain injury, in particular, "frontal lobe" syndrome, is linked to impulsivity and aggression (as well as other symptoms). Impulsivity and aggression are in turn correlated with delinquency (Kraus, 2009).

Not all trauma is physical. Emotional trauma, including exposure to neighborhood violence also has debilitating effects that are correlated with delinquent behavior. School itself is sometimes the locus of trauma (Osher *et al.* 2007).

A frequent symptom of post traumatic stress disorder (PTSD) is a foreshortened sense of future (Schwarz *et al.* 1991; Lavi *et al.* 2005; Evans *et al.* 2001), which reduces motivation to achieve in school, and reduces the relevance of predicting consequences, a key factor in delinquent behavior. Across domains, social-emotional competency has consistently been shown to be a major resiliency factor

in the face of trauma (Werner, 1992; Benard, 2005).

Ripple Effects addresses the generic issue of trauma ("hard things"), including an interactive profile that provides a first-pass screening for PTSD. It provides training and an interactive, self-profile in "resilience," the quality that enables some people to endure traumatic circumstances and events and not just survive, but actually thrive. It offers subsets of tutorials on "managing change" (flexibility). It provides tutorials that address "no future," and ones that promote skills in "asking for help."

The program provides tutorials on coping with specific potentially traumatic experiences " from "loss of a pet," to "parental abuse," including: "dating abuse," "emotional abuse," "being beaten" or "molested," "arrest," "bullied," being "ridiculed" for learning or other "disabilities," the "death of a loved one," "(being subject to) discrimination," "parents' divorce," "domestic violence," "breaking up," "failing a grade," (being placed in a) "foster home," (being exposed to) "gang violence," (being a target of) "gay bashing" or other "hate crimes," "(being) homeless," "being an immigrant," "hospitalized for mental health issues," "going to jail," "(being) left out," "(being) sexually harassed," "stalked," or "raped," "(having) a suicidal friend," "experiencing an act of terrorism" or "natural disaster."

### **Interpersonal Relationships**

#### *Attachment disorders*

Some research indicates that healthy attachment between caretaker and child is a predictor of life long capacity for empathy and healthy social relationships. (Ainsworth *et al.* 1978; Bowlby, 1999).

Ripple Effects lessons recognize the role that relationships with primary caretakers play in children’s ability to affiliate, and the program lets kids in on the secret). However, Ripple Effects does not subscribe to the belief that insecure attachment patterns need be deterministic for life.

The program systematically teaches a set of skills to deepen empathy and promote social bonding. They include: “empathy,” “feelings-names for,” “mixed feelings,” “changing feelings,” “responsibility-for feelings,” “predicting feelings,” “perspective taking,” “understanding motives,” “showing care,” “paraphrasing,” “body language,” “asking questions,” “solidarity-showing”; “communication skills” (“introducing yourself,” “conversations,” “thanking someone,” “expressing sympathy,” “compliments-giving,” “compliments-receiving,” “apologies,” “ignoring”); group skills (“authority-dealing with,” “resolving conflict,” “joining a group,” “sharing,” “making space,” “having discussions,” “supporting dissent,” “appreciating diversity,” “democracy-participating in,” “getting help,” “helping others,” “using mentors,” “using counselors,” “using community resources”); and social values (“courtesy,” “fairness,” “generosity,” “honesty,” “kindness,” “loyalty,” “promises,” “respect-showing,” “responsibility,” “trustworthiness”).

### *Maltreatment*

Abused and neglected children have increased risk of delinquency, mental health problems and school failure. Serious maltreatment as children is correlated with the most violent crime (Kakar's 1996 review of Climent & Ervin, 1972; Blount & Chandler, 1979; Monane et al. 1984). Early victimization is linked to a tendency toward revictimization, especially for

females (Courtois & Watts, 1982; Finkelhor & Browne, 1986; Herman & Hirschman, 1977; Tsai & Wagner, 1978).

Ripple Effects student software provides developmentally appropriate lessons on physical, sexual and emotional maltreatment (abuse), as well as overall personal safety training for younger children. It teaches children and youth to recognize and report maltreatment and sexual exploitation, to resist exploitation when it is safe to do so, and to report maltreatment to a trusted adult.



Analysis of thousands of student records, as well as anecdotal evidence from both students and teachers collected as part of implementation analysis, confirms that students use RE software to get help with issues related to abuse and neglect. The private, non-judging nature of the technology may account for reports of increased rates of disclosure of serious problems such as abuse, following use of the program.

### *Parental style*

Parents’ lack of respectful communication, discipline that is inconsistent, overly harsh, or lacking, and failure to supervise their children are all correlated with negative social, academic and health outcomes for their children (Farrington & Hawkins, 1991; Hawkins et al. 2008).

Ripple Effects addresses lack of parental skills, especially communication skills and discipline patterns in the *Personal Trainer for Parents* guide.

In the student program, separate lessons address “family discipline”, “talking to parents”, and “conflict with parents.” All lessons include an activity designed to help

children reflect on the role that family plays in the topic under consideration.

## Circumstance

### *Family structure*

Parents' substance abuse, and mental health issues, as well as family size, are risk factors for delinquency, with families having more than four children at higher risk (Lipsey & Derzon, 1998; Wasserman & Seracini, 2001).

Ripple Effects program includes lessons on parental substance abuse ("alcoholic parent"), family structure ("family"), sibling conflict ("sibling"), and "divorce".

Recognizing that most family problems are out of the control of most children, and that some parents will not voluntarily seek help in solving them, the Ripple Effects approach is to help children identify family strengths, understand family history, compost family "crap," and report family-based abuse, through having a friends and family application in every lesson.

### *"Bad" neighborhood*

Substantial research points to a connection between school failure, delinquency and child PTSD - and living in a low income, high crime neighborhood (McCord, Widom, and Crowell, 2001), especially one with weak social controls and/or high transience, (Herrenkohl *et al.* 2000). Children cannot control the neighborhood they live in; they can learn to control their reactions to it.

Ripple Effects provides direct training on strategies for living in a difficult neighborhood in the tutorials "neighborhood" and "violence." It includes cognitive-behavioral training for dealing with feelings of shame or embarrassment, links to training in "belonging" and "assertiveness," and

tutorials on "gangs," "guns," and "bullying."

## Policies

### *School policies*

School policies concerning grade retention, suspension, expulsion, and school tracking of juvenile delinquency have been linked to increased delinquent behavior (McCord, Widom & Crowell, 2001). Severe punishment structures are linked to more – not fewer – incidents of students misbehaving (Heal, 1978). There is a strong relationship between rates of out-of-school suspension and juvenile incarceration, and between racial disparities in school discipline and juvenile incarceration (Leone *et al.* 2003; Skiba *et al.* 2003).

Ripple Effects *School Safety Profiler* (a web-based survey tool) assesses perceived school policy and its fair or unfair applications.

Content for both the live trainer-training course and *Coach for Staff* software includes training in how to develop, publicize and implement policies that promote a safe school where every student learns. It includes training in how to use both intangible values and tangible signs to transform school climate into one that supports the success of every student and every staff member.

### *Juvenile justice policies*

Although intended to promote greater respect for the law, as documented in the previous chapter, too often uneven, disproportionate and gender-biased working policies within the juvenile justice system have contributed to the very high rate of repeat minority contact with

juvenile justice systems for delinquent behavior.

Ripple Effects does not directly address juvenile justice policies. However, it does include tutorials on “legal rights” and “arrest” to apprise all young people of their rights, and to help mediate the uneven impact of these policies on poor and minority students who have disproportionate negative experiences with the JJ system.

## **Social structures and processes**

### ***Subcultures of delinquency***

Some researchers, such as Walklate (2003), posit that peer groups, such as gangs, form an actual subculture where criminal behavior is valued in itself and can increase a youth’s status. Others believe this makes too sharp a distinction between what is deviant and what is “normal” (Brown, 1998). Some researchers suggest variance from behavioral norms is less about delinquent subculture, than about valid cultural differences, which are overruled by the dominant European-centric culture (Taylor, 1990; Triandis, 1989). Not all criminal delinquency is violent. Graffiti artists who work in public places present an example of a non-violent, but usually illegal, expression of an alternative subculture.

Ripple Effects software includes a separate lesson on “subcultures.” The program recognizes hip-hop subculture as a valid set of cultural expressions. Young people who adopt the trappings of that subculture may or may not become involved in criminal activity. Ripple Effects adolescent software program has a hip-hop look and feel, with ethnically ambiguous guides. This style was favored by all demographic groups of teens, both those with multiple risk factors and those with

few or none. The electronic guides have body tattoos, an example of an art form that is sometimes associated with criminal activity, but need not be so. It includes a tutorial on “graffiti.” Ripple Effects approach to graffiti is that it is a valid art form, separate from “destruction of property” (“vandalism”), which is clearly identified as illegal and thus wrong.

### ***Acculturation process***

Acculturation is the process through which two cultural groups come in contact, and one overwhelms the other, often destroying the traditional fabric of meaning and support that enabled the original culture to thrive. For individuals in the indigenous culture, it can lead to loss of native cognitive categories. When the acculturation process loosens those cognitive arrangements, a psychological sense of dislocation, a kind of psychic free fall, called “anomie,” occurs (Durkheim, 1897). It can be reflected in a generalized “normlessness,” a condition in which the participant is no longer attached to traditional values and ways of thinking, but does not identify with a new way either.

In the United States, Native Americans are the group that has been most obviously traumatized by the acculturation process, but many immigrant children and their families also experience the disorienting effects of too rapid cultural change.

Ripple Effects recognizes the impact of the acculturation process, through tutorials on “cultural conflict,” “ethnic pride,” “community background,” and “immigrant status.” It also includes training in skills for handling both “normal change” and “unplanned change.” Ripple Effects recognizes the impact of different cognitive categories in tutorials across a range of topics: “time,” “work,” “education,”

“health,” “humor,” “risk,” “effort,” even “eye contact.”

The software includes staff training that develops the ability to recognize and appreciate these kinds of cultural differences as equally valid, diverse framings of fundamental reality. It also examines the implications for school and social success of different cognitive categories.

### ***Social injustice***

Injustice in the school, community and society that form the context for children’s actions, is only recently being recognized as a predictor of juvenile delinquency, school failure and poor mental health outcomes. Racism, sexism, classism, and homophobia all can be independently correlated with increased risk for children.

Ripple Effects has specific tutorials on social justice as a positive concept and on confronting injustice at the level of individuals and institutions. It also has separate lessons on the most common forms of injustice that are tied to increased risk of delinquency, as seen below.

#### *Sexism*

Sexist practices in Juvenile Justice and school settings cut both ways. The arrest rate for male juveniles continues to be much higher than that for females. Apart from biological differences that may partly explain higher incidence of male delinquency, as mediated by boys’ greater impulsivity and aggression, some researchers argue that boys are socialized toward aggression, including sexual aggression, and girls to passivity and increased risk of victimization, in everything from the toys they are given, to differential responses to social behavior, from infancy on (Rhodes & Fisher, 1993).

On the other hand, some scholars have documented consistently unequal, gender-based treatment of juveniles, with girls’ arrest rates growing much faster than boys since 1987, and their sentences harsher than boys for very minor crimes (ABA, 2001; MacDonald & Chesney-Lind, 2001).

Ripple Effects provides a training tutorial that addresses sexism directly, and also addresses related issues such as gender stereotypes, and sexual exploitation. The 5,000 plus hand drawn illustrations in the program are carefully designed to counteract gender-based stereotypes.

#### *Racism and ethnic bias*

As noted in Chapter 1, African American and Latino youth are disproportionately represented at every level of the criminal justice system (Gallagher, 1999; National Council on Crime and Delinquency, 2007). They are punished more arbitrarily and more severely than Caucasian counterparts (Skiba, Michael, Nardo & Peterson, 2000).

Long before these children have formal contact with juvenile justice, they are disproportionately represented in school discipline settings. (Lietz & Gregory, 1997), suspensions (Costenbader & Markson, 1998; Skiba et al 2003), expulsions (Skiba et al. 2000), and corporal punishment (Gregory, 1996). There is a strong relationship between rates of out-of-school suspension and juvenile incarceration, and between racial disparities in school discipline and juvenile incarceration (Skiba et al. 2002; Leone et al. 2003).

Ripple Effects explicitly addresses the issues of racism and diversity appreciation in the software programs for both students and staff.

As described in Chapter 5, the Ripple Effects approach is to place the major burden for correcting racial or ethnic bias

on adults, not children, with specific tutorials for implementers and administrators on deconstructing race-based attitudes, expectations, and behavior. However, it does provide student training in “diversity appreciation” and “connecting in community,” as well as tutorials for constructively dealing with “ethnic conflict,” “prejudice,” “discrimination” and “unfairness.”

### *Homophobia*

Individual fear or hatred of gay identity, in concert with widespread cultural approval for denial of rights based on sexual orientation, is directly correlated with bias crimes, both inside and outside the juvenile justice system (APA, 1998; Franklin, 2000).

For adolescents, having a minority sexual orientation is correlated with depression, and higher risk of substance abuse, a criminal offense for juveniles (Safren & Heimberg, 1999).

It is reasonable to hypothesize, but as yet unverified, that failure to include gay people in the full protection of the law can reduce their allegiance to those laws.

Ripple Effects includes training about homophobia in both staff and adolescent versions of its program. Ripple Effects teen software also includes the topics of “sexual orientation,” “bias crimes,” “making a complaint” and “getting help.” Due to the intense national controversy about this issue, some clients elect to delete those topics from the teen software.

### *Class influences*

Independently of all other factors, family income is directly correlated with poor school outcomes, and with formal contact with the juvenile justice system, as are local labor market opportunities (McNulty & Bellair, 2003). There is no

stage of delinquent behavior and no part of the juvenile justice system in which the rich do not have strong advantages over the poor, from the ability to purchase treatment services at early signs of psychosocial disorder, to the ability to secure private counsel to challenge the system at every turn.

Both absolute and relative economic advantage are correlated with economic crimes, including theft and drug dealing (OJJDP).

Family income level is also strongly, directly and independently correlated with school achievement, which in turn is correlated with delinquency (Comanor & Phillips, 1998).

In the Ripple Effects program, both staff and student training software address the issue of class differences. The kids and teens programs include a separate lesson on “money,” as well as related lessons that range from “economic justice,” to “ashamed about family,” and cognitive behavioral training to deal with those feelings.

The staff training includes sensitivity training about why poor students are frequently unable to take advantage even of “free” extra curricular programs, a factor in school engagement.

### *Social status*

Separate from income, many sociologists believe uneven distributions of social power, often based on educational background, but also including differential respect for some occupations (garbage collector versus software engineer, or small business owner), reduce or expand the horizon within which an individual can imagine a future, and diminish the perceived impact of individual choice because of that (Bandura, 1978; Rosenberg & Pearlin, 1978).

Ripple Effects recognizes social status as a real risk or protective factor for adolescents, and provides lessons that addresses elements that teens say comprise it, such as “appearance” and “athletic ability.” It also offers a tutorial that directly addresses the issue of personal power. Woven throughout the training software are messages about the negative effect of comparisons between people, and encouragement for young people to define themselves in terms of internal qualities.

### Media influence

The average American youth now spends a third of a day using some form of electronic media. The impact of cultural imagery including television, movies, music videos and video games, on aggression, health and mental health outcomes and sexual activity, is heavily debated. At the least, violent imagery has been identified as a factor in both in hyperactivity, and in low-level aggressive behavior that is not illegal, but if exhibited at pre-pubescent ages is correlated with greater risk of delinquency (Bandura *et al.* 1963, 1965; Bushman & Anderson, 2001; Huesmann, & Eron, 1986; Huesmann *et al.* 2003). Other research has found direct correlations between aggressive behavior and violent media consumption (Anderson *et al.* 2003; Anderson, 2009). In general, researchers agree that the impact is partly mediated by the real world context of viewer/participant (Bushman & Anderson, 2001).

In terms of risky health behaviors, researcher claim modest evidence that level of media consumption of any kind (not just violent imagery) is correlated with obesity, modest to strong evidence that it contributes to drinking and smoking, but not evidence that independently links it to early sexual activity (Escobar Cahvez &

Anderson, 2008). In addition, there is strong evidence that media exposure can contribute to fear and anxiety in children.

Impact of media exposure is not all negative. It has been correlated with increases in empathy and altruism (Wilson, 2008) and educational programming has been correlated with increased short term social-emotional awareness. (Wilson, 2008).

Ripple Effects includes an exercise on media analysis in each of the 550 lessons in the elementary and teen software programs. In addition, it has separate lessons on “video games,” and “online courtesy,” “safety,” “bullying,” “harassment” and “hate.”

### EVIDENCE POINTS TO NEED TO ADDRESS WHOLE SPECTRUM

For each of these factors, internal and external, fixed or mutable, there is strong empirical evidence of correlation between the identified factor and subsequent delinquency. Each theory can be said to hold part of the truth. Yet it can equally be said that none contains the whole truth, and the relationships between the parts of what is true are complicated and idiosyncratic to each individual. Some factors may “constitute risks during one stage of development but not another, and factors that predict the onset of violence are not necessarily the same as those that predict the continuation or cessation of violence” (*Youth Violence: a Report of the Surgeon General*, 2001).

Ripple Effects’ psycho-educational software incorporates thousands of empirically derived “components” of the truth, without singling any one out as being more important than all others. Because children act and react in milieu that may include all or any of these factors, the

Ripple Effects library of more than 700 multimedia tutorials for students and staff, in combination with the parent training manual, and primary, secondary and tertiary intervention guides for implementers, together address each and all of these risk factors from the perspective of students, and some from educator and parent perspectives as well.

The goal is not to convince students that they can control many factors that are clearly out of their control, but to train them in constructive ways to interact with these factors. In particular, it is to train them in how they can notice, shape and leverage their reactions to these factors.

### Most predictive risk factors

Like emotions, although all statistically correlated risk factors may be equally valid, they are not all equally predictive of delinquency. In a meta-analysis of hundreds of longitudinal studies, Wilson, Lipsey and Noser (2007) identified the five risk factors at age 10 that are most predictive of anti-social and delinquent behavior at age 16, after controlling for socio-economic status (SES), gender and race/ethnicity. Deficits in some core social-emotional competencies were bundled under the heading “personal characteristics,” deficits in others, such as sociability, were placed in the category “social relations.” Those factors include, in order of correlation strength:

- Prior anti-social behavior, including externalizing behavior (the source of most school based, disciplinary referrals)
- Personal characteristics, such as attention control, emotional regulation, problem solving (all are skill-based characteristics)

- Social relations (sociability, social self-concept); these are dependent both on ones own actions and the actions of others)
- Family factors (parental warmth, discipline style and family functioning)
- School behavior (academic performance, school participation, adjustment)

### Internal protective factors

These risk factors interact not only with each other, but also with their positive twins, protective factors, which operate on the same continuums in each direction.

### *Resiliency*

Many children with higher risks demonstrate an emotional “self-righting tendency” that enables them to weather adversity and even thrive (Werner, 1992). This ability is defined as resilience. A set of social-emotional abilities together comprise the internal components of this characteristic (Benard, 2004). There are external components as well.

Variouly termed assets, competencies, or personal resilience strengths, these key abilities have been found in long-term developmental studies of youth facing multiple risks and adversities to be critical to transforming their lives from risk to resilience (Werner, 1992, Benard, 2004).

A particular grouping of four categories of these human strengths has been associated with greater resilience. Those categories are social competence, autonomy, problem solving, and sense of purpose (Benard, 1991, 2004).

### *Empathy - the hallmark*

Foremost among social competence strengths is that of empathy, sometimes called the “hallmark of resilience.” (Werner

1989, 1992). According to Daniel Goleman, empathy is the fundamental people skill and associated with life long personal and professional positive outcomes (1992).



Ripple Effects' systematic empathy training includes the affective, cognitive and behavioral elements of "identifying with others," "perspective taking," and "responding" and "listening" to others.

### *Connectedness*

Another key social competence strength is "connectedness," the ability to connect and communicate with others. Through this strength, young people are able to form caring relationships, one of the most powerful of environmental protective factors.



Ripple Effects provides separate tutorials for connectedness skills of "joining groups," "participating in conversations," "appreciating diversity," "helping others," "making friends," "showing respect to others," "taking responsibility," and "getting help."

### *Autonomy*

"Autonomy skills" are built on self-awareness, having an understanding of one's own strengths, risk and protective factors, learning style, feelings, and sensations. According to Goleman, self-awareness is the most critical source of emotional intelligence (1992). Other autonomy skills include self-management skills such as impulse control, ability to stop emotional reactions, feeling management, and self-talk. Autonomy also includes having a sense of self-efficacy, a belief in one's power to accomplish what one wants to accomplish (Bandura, 1977,

1986, 1997). Self-efficacy research has clearly established that "confidence, effort, and persistence are more potent factors in life success than innate ability" (Maddux, 2002, p. 285).

Ripple Effects programs include 30 interactive profiles designed to promote self awareness of key social emotional abilities and four profiles designed to increase understanding of one own body ("sports" and "exercise type," "body type," "body image"); mind ("learning style," "intelligences," "giftedness," "learning disorders," "attention," "mindfulness"), heart ("temperament," "identifying and understanding feelings"; and soul ("creative style," "values" and "beliefs"). It also includes specific lessons on "strengths and weaknesses," "risk and protection," "impulse control," "management of feelings," "self-talk" and "self-confidence"

### *Problem solving*

Werner and Smith found that "Among the high risk individuals who succeeded against the odds, there was a significant association between...a nonverbal measure of problem-solving skills at age 10 and successful adaptation in adulthood" (1992, p. 176).

Under the category of "problem solving" skills, Ripple Effects provides separate tutorials for each step in the problem solving process ("brainstorming," "evaluating alternatives," "setting goals," choosing and "testing solutions") as well overall topics for both "problem solving" and "decision-making," and dealing with specific problems such as "bullying," "sexual harassment" and "unfair treatment by a teacher."

Having a sense of purpose includes intrinsic motivation, a sense of future, having goals and a success orientation, exerting effort, and having an optimistic

attitude. A positive and strong future focus has consistently been identified with academic success, a positive self-identity, and fewer health-risk behaviors (Masten & Coatsworth, 1998; Snyder *et al.* 2002).

The Ripple Effects training software includes lessons on motivation and goal setting for both students and staff. In addition, the student programs include lessons on “effort,” “optimism” and “future.”

### *Implications for academics*

These abilities exist in the social-emotional realm, but have implications for the academic realm as well. A meta-analysis of SEL programs by University of Illinois researchers demonstrated that promotion of social-emotional competency is correlated with success in school on three levels: attitudes, behavior, and academic achievement (Durlak & Weissberg, 2007).



Evidence from 11 studies of the effectiveness of Ripple Effects mirrors these results and can be found in Evidence of Effectiveness, Volumes I, II, III, IV, V.

Not only are these factors protective against delinquency, the exploding field of positive psychology provides evidence of strong correlations between these core personal strengths and positive health, social, behavioral, and academic outcomes as well. Although culturally mediated, these core strengths are believed by many experts to transcend cultural boundaries (Eccles & Gootman 2002; Werner & Smith, 1992).

## **Tipping the balance toward protection**

The overall evidence is clear. A wide spectrum of both risk and protective factors mediate and mitigate the probability that

any individual child will fail school, have poor mental health outcomes, and/or become involved in delinquent behavior. Which factors most impact which children is much less clear.

The question becomes “what are the most leveraged ways to tip the scales in favor of protection, over risk, for each child in the unique circumstances of his or her life?”

One logical answer is to provide direct, supportive, developmentally appropriate and culturally competent, personalized intervention for students at risk of substance abuse and/or academic failure, as well as delinquency.

Ideally this would include:

- Immediate, positive behavioral intervention that is personalized, evidence-based, and therapeutic to address presenting behavior problems as they occur
- Personalized guidance to address the underlying risk factors that give rise to problem behavior
- Skill training to build personal strengths that can confer resilience in the face of risk

But how does one do all that? How can it be scaled and sustained? How can it be paid for? The most effective of such interventions are the subject of the next chapter.

## REFERENCES

- Ainsworth, M. D. S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- Allen, J., Marsh, P., McFarland, C., Boykin McElhaney, K., Land, D., 2007. "Attachment and Autonomy as Predictors of the Development of Social Skills and Delinquency During Midadolescence." *Journal of Consulting Clinical Psychologists*. 2002 February; 70(1): 56–66.
- American Psychological Association. (1998). *Answers to your questions about sexual orientation and homosexuality* [Brochure]. Washington, D.C.: Author.
- Anderson, Craig (and other?) "The Influence of Media Violence on Youth," *Psychological Science in the Public Interest* 4 (2003): 81:110.
- Bandura A, Ross D, Ross S. Imitation of film-mediated aggressive models. *Journal of Abnormal Social Psychology*, 66:3–11.
- Bandura, A. (1978). The self-system in reciprocal determinism. *American Psychologist*, 33, 344-358.
- Bar-On, R., & Parker, J.D.A. (2000). *Handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco: Jossey-Bass.
- Bar-On, R., Maree, J.G. & Elias, M.J. (Eds.). (2006) *Educating people to be emotionally intelligent*. Westport, CT: Praeger Publishers.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). *Impact Of Self-Regulated Use Of Computer-Based Social-Emotional Learning On Rural Adolescents At Risk For Alcohol Abuse*. Unpublished manuscript.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). *Impact of Social-Emotional Learning Software on Attitudes About Marijuana and Alcohol Among Urban and Rural Adolescents*. Unpublished manuscript.
- Baumeister, R., Smart, L. & Boden, J. (1996). "Relation of threatened egotism to violence and aggression: The dark side of self-esteem". *Psychological Review*, 103, 5–33.
- Benard, B. (1991). *Fostering resiliency in kids: Protective factors in the family, school, and community*. Portland, OR: Western Center for Drug-Free Schools and Communities.
- Benard, B. (2004). *Resiliency. What we have learned*. San Francisco: WestEd.
- Benard, B., (2005). *Using strengths-based practice to tap the resilience of families*. The Strengths Perspective In Social Work Practice, 2005 - Allyn & Bacon
- Bentham, J. An Introduction to the Principles of Morals and Legislation (London, T. Payne, 1789).
- Berg, S. , Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Binder, A., Geis, G., & Bruce, D. D. (1997). *Juvenile delinquency: Historical, cultural and legal perspectives*. Cincinnati, OH: Anderson Publishing, Co.
- Blount, H.R., Chandler, T.A., (1979). Relationship between childhood abuse and assaultive behavior in adolescent male psychiatric patients. *Psychol Rep*. 1979 Jun;44(3 Pt 2):1126.
- Bowlby, J. (1969, 1982, 1999) *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 29, 1147-1158
- Brackett, M. A., Patti, J., Stern, R., Rivers, S., Elbertson, N., Chisholm, C., Salovey, P. (2008) A Sustainable Skill Based Approach to Developing Emotionally Literate Schools. In *The Handbook for Developing Social and Emotional Intelligence*. pp. 329 - 358.

- Brackett, M.A., & Katulak, N. (in press). The emotionally intelligent classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Improving emotional intelligence: A practitioners guide*. New York: Psychology Press/Taylor & Francis.
- Brown, S. (1998) *Understanding Youth and Crime (Listening to youth?)*, Buckingham: Open University Press.
- Bushman, B.J., & Anderson, C.A. (2001). Media violence and the American public: Scientific facts versus media misinformation. *American Psychologist*, 56, 477-489.
- Calkins & Howse, (2004). Individual differences in self-regulation: Implications for childhood adjustment. In P. Philippot & R. S. Feldman (Eds.), *The regulation of emotion* (pp. 307-332). Mahwah, NJ: Lawrence Erlbaum Associates.
- Caspi, A., Henry, B., McGee, R. O., Moffitt, T. E., and Silva, P. A. (1995). "Temperamental Origins of Child and Adolescent Behavior Problems: From Age Three to Age Fifteen." *Child Development*, 66, 55-68.
- Catalano, R.F., and Hawkins, J.D. (1995). *Risk Focused Prevention: Using the Social Development Strategy*. Seattle, WA: Development Research and Programs, Inc.
- Comanor, W. and Phillips, L. (1998). *The Impact of Income and Family Structure on Delinquency*. Department of Economics, UCSB. Departmental Working Papers, Paper 7-95R.
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., et. al. (2005) Complex trauma in children and adolescents. *Psychiatric Annals*, 35:5, 390-398.
- Cooney, S.M., Small, S.A., & O'Connor, C. (2008). Girls in the juvenile justice system: Toward effective gender-responsive programming. *What Works, Wisconsin Research to Practice Series*, 7. Madison, WI: University of Wisconsin-Madison/Extension.
- Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students. *Journal of School Psychology*, 36, 59-82.
- Courtois, C. A. & Watts, D. L. (1982). Counseling adult women who experienced incest in childhood or adolescence. *The Personnel and Guidance Journal*, January, 275-279.
- Craig, I.W., Harper, E. & Loat, C.S. (2004). The genetic basis for sex differences in human behaviour: Role of the sex chromosomes. *Annals of Human Genetics*, 68, 269-284.
- Decety, J., & Meyer, M. (2008). From emotion resonance to empathic understanding: A social developmental neuroscience account. *Development and Psychopathology*, 20, 1053-1080.
- Delaney-Black, V., Covington, C., Ondersma, S. J., Nordstrom-Klee, B., Templin, T., Ager, J., et al. (2002). Violence exposure, trauma, and IQ and/or reading deficits among urban children. *Archives of Pediatrics and Adolescent Medicine*, 156, 280-285.
- Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* by American Psychiatric Association: Edition Number: 4. July, 2000.
- DiPerna, J. C. & Elliott, S. N. (1999). Development and validation of the academic competence evaluation scales. *Journal of Psychoeducational Assessment*, 17, 207-225.
- Dishion, T. J., & Patterson, G. R. (2006). The development and ecology of antisocial behavior. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology. Vol. 3: Risk, disorder, and adaptation* (pp. 503-541). New York: Wiley.
- Durkheim, E. (1897). *Suicide*.
- Durlak, J. A., & Weissberg, R. P. (2007). The impact of after-school programs that seek to promote personal and social skills. Collaborative for Academic, Social and Emotional Learning, University of Illinois at Chicago. Retrieved December 5, 2007,

- <http://www.casel.org/downloads/ASP-Full.pdf>.
- Eccles, J. & Gootman, J.A. (Eds.). (2002). *Community programs to promote youth development*. Board on Children, Youth, and Families, Division of Behavioral and Social Sciences and Education, National Research Council & Institute of Medicine. Washington, DC: National Academies Press.
- Eigsti, IM, Zayas, V, Mischel, W, Shoda, Y, Ayduk, O, Dadlani, MB, Davidson, MC, Aber, JL, Casey, BJ. (2006). Predicting cognitive control from preschool to late adolescence and young adulthood. *Psychological Science*, 17, 478-84.
- Eisenberg N, Cumberland A, Spinrad TL, Fabes RA, Shepard SA, Reiser M *et al.* (2000). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*. 2000;72:1112–1134.
- Eisenberg N, Cumberland A, Spinrad TL. (1998) Parental socialization of emotion. *Psychological Inquiry*. 9:241–273.
- Eisenberg, N., & Fabes, R.A. (1990). Empathy: conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, 14, 131-149.
- Eisenberg, N., and Strayer, J. (eds.). (1987). *Empathy and its Development*. Cambridge: Cambridge University Press.
- Elias, M. & Bruene Butler, L., Social Decision Making/ Social Problem Solving for Middle School Students. Research Press. 2005.
- Elias, M.J., & Clabby, J. (1992). Building social problem solving skills: Guidelines from a school-based program. San Francisco, CA: Jossey-Bass.
- Elias, M.J., Weissberg, R.P., Hawkins, J.D., Perry, C.A., Zins, J.E., Dodge, K.C., et al. (1994). The school-based promotion of social competence: Theory, practice, and policy. In R. J. Haggerty, N. Garmezy, M. Rutter, & L. Sherrod (Eds), *Risk and resilience in children: Developmental approaches*. Cambridge: University of Cambridge Press.
- Elias, M.J., Weissberg, R.P., Hawkins, J.D., Perry, C.A., Zins, J.E., Dodge, K.C., et al. (1994). The school-based promotion of social competence: Theory, practice, and policy. In R. J. Haggerty, N. Garmezy, M. Rutter, & L. Sherrod (Eds), *Risk and resilience in children: Developmental approaches*. Cambridge: University of Cambridge Press.
- Elias, M. J., Zins, J. E., Weissberg, R P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). Promoting social and emotional learning: Guidelines for educators. Alexandria, VA: Association for Supervision and Curriculum Development.
- Elizabeth R. McAnarney (2008), Adolescent Brain Development: Forging New Links?, in *Journal of Adolescent Health*, April 2008 (Vol. 42, Issue 4, Pages 321-323)
- Elizabeth R. Sowell, Paul M. Thompson, Kevin D. Tessner, and Arthur W. Toga (2001), "Mapping Continued Brain Growth and Gray Matter Density Reduction in Dorsal Frontal Cortex: Inverse Relationships during Post adolescent Brain Maturation," *The Journal of Neuroscience*, November 15, 2001, 21(22):8819-8829
- Escobar- Cahvez, S. & Anderson, C. "Media and Risky Behaviors". *Children and Electronic Media*. The Future of Children. Princeton-Brookings, Spring 2008.
- Evans SW, Smith BH, Gnagy EM, Pelham WE, Bukstein O, Greiner AR, Altenderfer L, Baron-Myak C (2001). Dose-response effects of methylphenidate on ecologically valid measures of academic performance and classroom behavior in adolescents with ADHD. *Exp Clin Psychopharmacol* 9:163–175.
- Farrington, D. P., & Hawkins, J. D. (1991). Predicting participation, early onset and later persistence in officially recorded offending. *Criminal Behaviour and Mental Health*, 1(1), 1–33.

- Farrington, D.P. 1998. Predictors, causes and correlates of male youth violence. In *Youth Violence, vol. 24*, edited by M. Tonry and M.H. Moore. Chicago, IL: University of Chicago Press, pp. 421–447
- Feshbach, N. (1975). Empathy in children: Some theoretical and empirical considerations. *The Counseling Psychologist, 5* (2).
- Finkelhor, D. & Browne, A. (1986). Impact of child sexual abuse: a review of the research. *Psychological Bulletin, 99*, 66-77.
- Franklin K. (2000). Antigay behaviors by young adults: prevalence, patterns, and motivators in a noncriminal population. *Journal of Interpersonal Violence; 15*:339-362.
- Gardner, H. (1993). *Multiple intelligences: The theory into practice*. New York: Basic Books.
- Jay N. Giedd (2008) *The Teen Brain: Insights from Neuroimaging Journal of Adolescent Health Volume 42, Issue 4, April 2008, Pages 335-343*
- Gilliom, M., Shaw, D. S., Beck, J. E., Schonberg, M. A., & Lukon, J. L. (2002). Anger regulation in disadvantaged preschool boys: Strategies, antecedents, and the development of self-control. *Developmental Psychology, 38*, 222-235
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam.
- Gottfredson, M. R., & Hirschi, T. (1990). *A General Theory of Crime*.
- Graham, S. (1997). Using Attribution Theory to Understand Social and Academic Motivation in African American Youth. *Educational Psychologist, Vol. 32*,
- Greenwald, R. (2002). The role of trauma in conduct disorder. *Journal of Aggression, Maltreatment, and Trauma, 6*, 5-23.
- Gregory, J. F. (1996). The crime of punishment: Racial and gender disparities in the use of corporal punishment in the U.S. Public Schools. *Journal of Negro Education, 64*, 454-462.
- Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective social competence. *Social Development, 10*, 79-119.
- Hate Crimes Today: An Age-Old Foe in Modern Dress. Washington, DC, American Psychological Association, 1998. <http://www.apa.org/pubinfo/hate>
- Hawkins JD, Kosterman R, Catalano RF, Hill KG, Abbott RD. (2008). Effects of social development intervention in childhood 15 years later. *Archives of Pediatric and Adolescent Medicine, 162*(12):1133-41.
- Hawkins, J. D. (Ed.). (1996). *Delinquency and Crime: Current Theories*. New York: Cambridge University Press.
- Hawkins, J.D., Lishner, D.M., Jenson, J.M., and Catalano, R.F. 1987. Delinquents and drugs: What the evidence suggests about prevention and treatment programming. In *Youth at High Risk for Substance Abuse* (DHHS Publication No. ADM 87–1537), edited by B.S. Brown and A.R. Mills. Washington, DC: U.S. Government Printing Office, pp. 81–131.
- Hawkins, J. D., Herrenkohl, T. L., Farrington, D. P., Brewer, D., Catalano, R. F., & Harachi, T. W. (1998c). A review of predictors of youth violence. In R. Loeber & D. P. Farrington (Eds.), *Serious and violent juvenile offenders: Risk factors and successful interventions* (pp. 106-146). Thousand Oaks, CA: Sage Publications.
- Heal, K. 1978. Misbehavior among school children: The roles of the school in strategies for prevention. *Policy and Politics 6*:321–332.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: John Wiley & Sons.
- Herman, J. & Hirschman, L. (1977). Father-daughter incest. *Signs, 2*, (4), 735-756.
- Herrenkohl T I, Maguin E; Hill K G, Hawkins J D, Abbott R D, Catalano R F. (2000). Developmental risk factors for youth

- violence. *The Journal Of Adolescent Health*, 26(3):176-86
- Hirschi, T. (1969). *Causes of delinquency*. Berkeley and Los Angeles: University of California Press.
- Howell, James C., and J. David Hawkins (1998). "Prevention of Youth Violence." In M. Tonry and M. Moore (Eds.) *Youth Violence: A Review of Research, Crime and Justice*, Vol. 24. Chicago: University of Chicago Press.
- Huesmann L, Eron L. (1986). *Television and the aggressive child: a cross-national comparison*. Hillsdale, NJ: Lawrence Erlbaum.
- Huesmann, L. Moise-Titus, J., Podolski, C., and Eron L. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977 – 1992, *Developmental Psychology*, 39, No. 2.
- Huizinga, D. and Elliott, D. S. "Juvenile Offenders: Prevalence Offenders Incidence, and Arrest Rates by Race." *Crime and Delinquency* 33(2): 206-223, 1987.
- Huizinga, D., Thornberry, T.P., Knight, K.E., Lovegrove, P.J., Loeber, R., Hill, K., et al. (2007). *Disproportionate minority contact in the juvenile justice system: A study of differential minority arrest/referral to court in three cities*. Report unpublished by the U.S. Department of Justice. Made available by the National Criminal Justice Reference Service.
- Hurt H; Malmud E; Brodsky N L; Giannetta J., (2001) *Exposure to violence: psychological and academic correlates in child witnesses*. Archives of pediatrics & adolescent medicine (2001); 155(12):1351-6.
- Ian W. Craig , Emma Harper and Caroline S. Loat (2004), *The Genetic Basis for Sex Differences in Human Behaviour: Role of the Sex Chromosomes*, in *Annals of Human Genetics*, Volume 68 Issue 3, Pages 269 – 284, Published Online: 2 Jun 2004
- Jay N. Giedd, M.D (2008), *The Teen Brain: Insights from Neuroimaging*, in *Journal of Adolescent Health Volume 42, Issue 4, Pages 335-343 (April 2008)*
- Justice by Gender: The Lack of Appropriate Prevention, Diversion, and Treatment Alternatives for Girls in the Justice System*. 2001. Washington, DC: American Bar Association and the National Bar Association, at <http://www.abanet.org/crimjust/juvjus/girls.html>
- Kakar, S. (1996). *Child Abuse and Delinquency*. Maryland: University Press of America
- Kandel, E., & Mednick, S.A. (1991). *Perinatal complications predict violent offending*. *Criminology* 29(3):519–529.
- Kelley, T. M. (1996). A critique of social bonding and control theory of delinquency using the principals of *Psychology of Mind*. *Adolescence*, 31, 321-338.
- Kelley, A., So, Susan, Siegfried, Christine (2004) *Victimization and Juvenile Offending*, The National Child Traumatic Stress Network
- Juvenile Justice Working Group (2004)
- Kleinman, A. (1997). The clustering of mental and social health problems: Importance for policies and programs. *Updates on Global Mental and Social Health*, 2, 1, 1-2.
- Kohlberg, L. (1981). *The Philosophy of Moral Development*. Joseph Rowntree Foundation.
- A Kraus, G Valerius, E Seifritz, M Ruf, J D Bremner, M Bohus and C Schmahl. *Script-driven imagery of self-injurious behavior in patients with borderline personality disorder: a pilot FMRI study*. Acta Psychiatrica Scandinavica () (2009)
- Department of Psychosomatic Medicine and Psychotherapy, Central Institute of Mental Health, Mannheim, Germany.
- Lavi, Tamar Ph.D.; Solomon, Zahava Ph.D. (2005), *Palestinian and Israeli Youth of the Intifada: PTSD and Future Orientation*, in *Journal of the American Academy of Child*

- & *Adolescent Psychiatry: November 2005 - Volume 44 - Issue 11 - pp 1176-1183*
- Lederman, C. S. and Brown, E.N. (2000). Entangled in the Shadows: Girls in The Juvenile Justice System. *Buffalo Law Review* 48:909-925.
- Leone, P. E., Christle, C. A., Nelson, C. M., Skiba, R., Frey, A., & Jolivet, K. (2003). School failure, race, and disability: Promoting positive outcomes, decreasing vulnerability for involvement with the juvenile delinquency system. College Park, Maryland: National Center on Education, Disability, and Juvenile Justice (EDJJ).
- Lietz, J. J., & Gregory, M. K. (1978). Pupil race and sex determinants of office and exceptional education referrals. *Educational Research Quarterly*, 3(2), 61-66.
- Linda Garner Evans, Judy Oehler-Stinnett (2006), Structure and prevalence of PTSD symptomology in children who have experienced a severe tornado, in *Psychology in the Schools*, Volume 43 Issue 3, Pages 283 – 295 Published Online: 10 Feb 2006.
- Lipsey, M.W., & Derzon. J.H. (1998). Predictors of violent or serious delinquency in adolescence and early adulthood: A synthesis of longitudinal research. In R. Loeber & D.P. Farrington (Eds.). *Serious and violent juvenile offenders: Risk factors and successful interventions*. Thousand Oaks, CA: Sage.
- Lipsey, M.W., Hawkins, D. (2007, May) Prevention Of Antisocial Behavior: The Most Effective Interventions For Changing The Most Predictive Risk Factors. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Loeber, R., and Farrington, D.P., eds. 2001. *Child Delinquents: Development, Intervention, and Service Needs*. Thousand Oaks, CA: Sage Publications, Inc.
- McAnarney ER. Adolescent brain development: forging new links? *The Journal of Adolescent Health: official publication of the Society for Adolescent Medicine*. 2008 Apr; 42(4):321-3.
- MacDonald, J. M. and Chesney-Lind, M. (2001). Gender Bias and Juvenile Justice Revisited: A Multiyear Analysis. *Crime & Delinquency* 47:173-195.
- Maddux, J. (2002). *Self-efficacy: The power of believing you can*. In C. Snyder and S. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 277–287). New York: Oxford University Press.
- Main, M., & George, C. (1985). Response of abused and disadvantaged toddlers to distress in agemates: A study in the daycare setting. *Developmental Psychology*, 21, 407-412.
- Main, M., Hesse, E., & Kaplan, N. (2005). Predictability of attachment behaviour and representational processes at 1, 6, and 18 years of age: The Berkeley Longitudinal Study. In K.E. Grossmann, K. Grossmann & E. Waters (Eds.), *Attachment from Infancy to Adulthood*. pp. 245-304. New York: Guilford Press.
- McCord, J., Widom, C.S., and Crowell, N.A., eds. 2001. *Juvenile Crime, Juvenile Justice. Panel on Juvenile Crime: Prevention, Treatment, and Control*. Washington, DC: National Academy Press.
- McNulty, TL, Bellair, PE. (2003). Explaining Racial and Ethnic Differences in Adolescent Violence: Structural Disadvantage, Family Well-Being, And Social Capital. *Justice Quarterly*. Masten, A. and Coatsworth, D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53, 205–220.
- Merton, R.K. (1949) *Social Theory and Social Structure*. New York: The Free Press.
- Mischel, W., Shoda, Y. & Rodriguez, M.I. (1989). *Delay of gratification in children*. *Science* 244 (4907), 933.

- Moffitt, T.E., Caspi, A., Rutler, M. & Silva, P.A. (2002). Sex differences in antisocial behavior, conduct disorder, and violence in the Dunedin Longitudinal Study. Cambridge, UK: Cambridge University Press
- Moffitt, T.E., Lynam, D.R., & Silva, P.A. (1994). Neuropsychological tests predict persistent male delinquency. *Criminology*, 32, 277-300.
- Monane, Mark; Leichter, Donald; Lewis, Dorothy Otnow M.D., (1984). Physical Abuse in Psychiatrically Hospitalized Children and Adolescents. *Journal of Amer Academy of Child & Adolescent Psychiatry: SPECIAL SECTION: Recent Studies in Child Abuse, November 1984, Vol. 23 - Issue 6*
- National Council on Crime and Delinquency. (2007). "And Justice for Some: Differential Treatment of Youth of Color in the Justice System." Oakland, CA: National Council on Crime and Delinquency, retrieved from [http://www.nccdcrc.org/nccd/pubs/2007jan\\_justice\\_for\\_some.pdf](http://www.nccdcrc.org/nccd/pubs/2007jan_justice_for_some.pdf)
- National Council on Disability  
*National Disability Policy: A Progress Report*. March 31, 2009
- Nelson, D.A., Mitchell, C. & Yangm C. J. (2008) "Intent Attributions and Aggression: A Study of Children and their Parents." *Abnorm Child Psychol* 36:793–806
- Nelson RJ, Chiavegatto S. (2001) Molecular basis of aggression. *Trends in Neuroscience*, 24(12):713-719.
- Osher, D., Cartledge, G., Oswald, D., Sutherland, K. S., Artiles, A. J., & Coutinho, M. (2007). Cultural and linguistic competency and disproportionate representation. In R. B. Rutherford R. B. Rutherford was a college football and basketball coach at Oregon State University. Coaching years Rutherford was the head coach of the Oregon State Beavers football team from 1920–1923. During his tenure there, he compiled a 13-14-6 record. Jr., M. M. Quinn, & S. R. Mathur (Eds.), *Handbook of research in emotional and behavioral disorders* (pp. 54-77). New York: Guilford.
- Perry, S.M., Bass, K, Ray, A. & Berg, S. (2008) Impact of a computer-based social-emotional learning intervention on objective school outcomes among diverse adolescents: A summary analyses of six randomized controlled trials. Expanded from poster presentation at the 2007 Annual Meeting of the Society for Prevention Research.
- Piaget, J. (1962). *Play, Dreams and Imitation in Childhood*. New York: Norton. Piaget, J. (1966).
- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.
- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.

- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Rhodes, J. E. & Fischer, K. (1993). Spanning the gender gap: Gender differences in delinquency among inner-city adolescents. *Adolescence* 28: 879-889.
- Rivers, S. E., Brackett, M.A., Salovey, P., & Mayer, J.D. (2007). Measuring emotional intelligence as a set of mental abilities. In G. Matthews, M. Zeidner & R.D. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns* (pp. 230-257). New York, NY: Oxford University Press.
- Rogers K, Dziobek I, Hassenstab J, Wolf OT, Convit A. Who cares? Revisiting empathy in Asperger syndrome. *J Autism Dev Disord.* 2007 Apr;37(4):709-15.
- Rosenberg, M., & Pearlman, L.I. (1978). Social class and self-esteem among children and adults. *American Journal of Sociology*, 84, 53-77.
- Safren SA, Heimberg RG. (1999) Depression, hopelessness, suicidality, and related factors in sexual minority and heterosexual adolescents. *Journal of Consulting and Clinical Psychology*, 67(6):859-66.
- Salovey, P., & Mayer, J.D. (1990). Emotional Intelligence. *Imagination, Cognition, and Personality*, 9 185-211.
- Schwarz, Eitan D. M.D., F.A.P.A., F.A.A.C.A.P.; Kowalski, Janice M. Ph.D. (1991), Malignant Memories: PTSD in Children and Adults after a School Shooting, in *Journal of American Academy of Child & Adolescent Psychiatry*: November 1991
- Seguin, J.R., Pihl, R.O., Harden, P.W., Tremblay, R.E., and Boulrice, B. 1995. Cognitive and neuropsychological characteristics of psychically aggressive boys. *Journal of Abnormal Psychology* 104(4):614–624.
- Shamay-Tsoory, S.G., Tomer, R., Yaniv, S., Aharon-Peretz, J. (2002). Empathy deficits in Asperger syndrome: a cognitive profile. *Neurocase*. 8(3):245-52.
- Siegfried, C. B., Ko, S. J., & Kelley, A. (2004). Victimization and juvenile offending. *National Child Traumatic Stress Network: Juvenile Justice Working Group*, Retrieved from [www.nctsnet.org](http://www.nctsnet.org).
- Shaw, C.R. & McKay, H.D. (1929), *Juvenile Delinquency and Urban Areas*, University of Chicago Press, Chicago
- Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *Urban Review*, 34(4), 317-42.
- Skiba, R.J., Simmons, A.B., Ritter, S., Kohler, K.R., & Wu, T.C. (2003). The psychology of disproportionality: Minority placement in context. *Multiple Voices*, 6, 27-40.
- Snyder, C. R., Shorey, H. S., Cheavens, J., Pulvers, K. M., Adams, V. H., & Wiklund, C. (2002). Hope and academic success in college. *Journal of Educational Psychology*, 94, 820–826.
- Sowell, E. R., Thompson, P. M., Tessner, K. D., & Toga, A. W. (2001). Mapping continued brain growth and gray matter density reduction in dorsal frontal cortex: Inverse relationships during postadolescent brain maturation. *The Journal of Neuroscience*, 15, 8819–8829.
- Sutherland, Edwin H. (1924) *Principles of Criminology*, Chicago: University of Chicago Press.
- Taylor, O. L. (1990). *Cross-Cultural Communication: An Essential Dimension of Effective Education*, Revised Edition, The Mid-Atlantic Center, 1990
- Triandis, H.C. (1989). The Self and Social Behavior in Differing Cultural Contexts, in *Psychological Review*, 1989, Vol. 96, No. 3, pp 506-520
- Tsai, M. & Wagner, N. N. (1978). Therapy groups for women sexually molested as children. *Archives of Sexual Behavior*, 7, 417-427.

- Veysey, B.M. (July, 2003). *Adolescent girls with mental health disorders involved with the juvenile justice system*. Delmar, NY: National Center for Mental Health and Juvenile Justice.
- Walklate, S (2003) *Understanding Criminology – Current Theoretical Debates*, 2nd edition, Maidenhead: Open University Press.
- Wasserman, G.A., & Seracini, A.G. 2001. Family risk factors and interventions. In *Child Delinquents: Development, Intervention, and Service Needs*, edited by R. Loeber and D.P. Farrington. Thousand Oaks, CA: Sage Publications, pp. 165–189.
- Werner, E. E. (1992). The children of Kauai: Resiliency and recovery in adolescence and adulthood. *Journal of Adolescent Health*, 13, 262-268.
- Werner, E. and Smith, R. (1992). *Overcoming the Odds: High-Risk Children from Birth to Adulthood*. New York: Cornell University Press.
- Wilson, B. Media and Children’s Aggression, Fear, and Altruism. (*Children and Electronic Media*). The Future of Children. Princeton-Brookings, Spring 2008.
- Wilson, S.J., Lipsey, M. W., & Derzon, J.H. (2003). The effects of school-based intervention programs on aggressive behavior: A meta-analysis. *Journal of Consulting & Clinical Psychology*, 71, 136-149.
- Youth Violence: A Report of the Surgeon General*. (2001) U.S. Department of Health & Human Services: Washington, D.C.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.



**Chapter 4: What Works?**

**Effective strategies for reducing risk and enhancing protection**

Mitigating individual risk factors..... 1

Range of effective strategies..... 1

    Cognitive therapy.....2

        Mental processes.....3

            Attending to thought..... 3

            Logical reasoning ..... 3

            Perspective taking.....4

            Ascertaining motive.....4

            Brainstorming..... 5

            Problem solving.....5

        Cognitive restructuring..... 5

            Correcting distorted sense of self..... 6

            Addressing inflammatory messages ..... 6

            Reducing stereotyping ..... 6

            Addressing rationalization of anti-social norms ..... 6

        Promoting emotional regulation.....7

    Behavioral..... 7

        Reinforcement and consequences..... 7

    Social skills..... 8

        Skill streaming..... 9

    Counseling..... 9

        Characteristics of effective counseling for social-emotional challenges..... 10

        Characteristics of personal guidance through Ripple Effects..... 11

            Client centered..... 11

            Non-judgmental ..... 11

            Encourages affective exploration..... 11

            Demonstrates active listening..... 12

            Offers science-based information about areas of client concern..... 12

Offers relevant evidence-based strategies .....	12
Protects confidentiality .....	12
Refers out serious problems .....	12
Parent training.....	13
What’s missing: affective approaches.....	14
Emotional intelligence.....	14
Affective education.....	14
Empathy training.....	14
Conation - motivation.....	15
SEL: integrating modalities.....	15
No approach “the best” .....	16
How race and ethnicity fit.....	16
Linking most risk with greatest impact: a leveraged approach.....	16
References .....	18



## Chapter 4: What Works?

*Effective strategies for reducing risk and enhancing protection*

### MITIGATING INDIVIDUAL RISK FACTORS

Identifying mutable risk factors for juvenile delinquency provides the opportunity for mitigating those risks through strategies for change. Implicit in every risk factor is an hypothesis for addressing it. For instance, identification of impulsivity and emotional dysregulation as risk factors has given rise to cognitive interventions for managing feelings and reactions, especially anger and fear. Similarly, the correlation of neighborhood disorganization with juvenile delinquency has given rise to community organizing efforts to reduce the number of liquor stores in certain neighborhoods.

In the last three decades, hundreds of interventions have been designed to address risk factors related to delinquency and pre-delinquent behavior. Many have been developed to address juvenile aggression; many more have been designed to address illegal use of alcohol and drugs. As with risk factors themselves, these programs can be divided into those designed to address internal factors, and those designed to address external influences on children and youth.

The focus of Ripple Effects *Whole Spectrum Intervention System (WSIS)* is the individual's internal capacities. It targets factors under personal control – body, mind, heart and soul – both for youth and for the adults who are charged with their care. The emphasis is on promoting skill-based, social-emotional capacities. That said, Ripple Effects *WSIS* includes

training for personal action in multiple domains: family, peer relationships, school, community, social structures and media influence, always from the perspective of the individual.

### RANGE OF EFFECTIVE STRATEGIES

Within the broad category of individual, internal interventions, also called psycho-educational interventions, researchers have identified numerous effective interventions to address specific risk factors (Burns & Hoagwood, 2002; Greenberg, Domtrovich & Brumbarger, 1999; Ronen & Hoagwood, 2000; Wilson, Gottfredson & Najaka, 2001).

The largest meta-analyses of effective psycho-educational, school-based, interventions for aggressive and disruptive behavior have been conducted by Wilson (Sandra), Lipsey, and Derzon. Originally published in 2003, these studies were designed to identify shared characteristics of effective programs. A 2007 update of that meta-analysis analyzed 249 studies (Wilson & Lipsey, 2007). Mark Lipsey and David Wilson collaborated on two earlier meta-analyses that included non-school based interventions, which showed many similar results (Lipsey & Wilson, 1993, 1998). The researchers grouped the tested interventions into six major categories of approaches, or treatment modalities, with the important caveat that many programs include at least two of these approaches. The categories are:

- Cognitive therapy
- Behavioral strategies

- Social skills training
- Counseling therapy
- Peer mediation
- Parent training

They further divided these treatment modalities into four formats: universal, selected, special programs (i.e. special education) and comprehensive programs (multi-modal multi-level programs, often open-ended in length).

Ripple Effects *WSIS* can be described in terms of this conceptual framework. It is a combination program that incorporates five of the above six treatment modalities, each described in more detail below. It is designed for tiered delivery in universal, targeted and selected formats. Although its subject matter is wide and deep, it does not match Wilson and Lipsey's definition of a "comprehensive program." It is more often the selected, psycho-educational component of a larger program.

## Cognitive

The link between thought and behavior has long been recognized as important. As a structured therapeutic intervention, cognitive therapy has evolved over the last century, from Freud's focus on ongoing analysis of possible conscious or subconscious patterns of thought, to Aaron Beck's systematized method of deliberately changing how people think, in order to change how they feel, what they believe, and how they act (Beck, 1975). The current focus is on short terms strategies for shaping the process and/or content of thought in order to support specific goals for safe, healthy, successful behavior.

A large body of research has shown that cognitive-behavioral therapies are effective in addressing mental health problems such as anxiety, depression, and

PTSD that often co-occur with delinquent behavior (Butler, Chapman, Forman, Beck, 2006; Kendall, 2000). There is strong evidence that they have been effective in reducing aggressive and disruptive behavior in juveniles, with a major meta-analysis reporting mean effect sizes of .20 for universal service delivery formats and .29 for selected programs (Wilson & Lipsey, 2007). They have also been shown to be effective in reducing recidivism rates among juvenile offenders (Lipsey & Wilson, 1998). Lipsey, Landenerger and Lipsey's meta-analysis of cognitive behavioral interventions with offenders showed a larger mean effect size (.45) for cognitive programs than for any other offender intervention (2005). With both children and adults, these strategies are more effective with individuals who have higher risk. Brand name programs, such as "Reasoning and Rehabilitation" (Ross & Ross, 1995) and "Moral Reconciliation Therapy" (Little, Robinson & Burnette, 1999) are neither more, nor less effective than "generic" cognitive interventions (Wilson & Lipsey, 2007).

There are two main forms of cognitive therapy. One focuses on mental processes, such as attending, logical reasoning, perspective taking and brainstorming. The other focuses on restructuring the content of thought, such as replacing inflammatory self-talk with calming statements, or replacing anti-social norms with pro-social norms. Many programs include various combinations of the two. Anger management and social decision-making programs both combine them and are commonly considered specific categories of cognitive training.

## ***Mental processes***

Cognitive therapies that focus on mental processes involve developing one or more of these mental capacities: attending to thought, especially recognizing internal triggers, critical thinking/logical reasoning, perspective taking, and brainstorming. Logical reasoning and non-linear brainstorming are integral to decision-making models that have been proven effective in reducing inter-personal aggression in youth and adults (Beyth-Marom, Fischhoff, Jacobs-Quadrel, & Furby, 1991; Elias & Bruene-Butler, 1999; Durlak, 1983; Fischhoff, Crowell, & Kipke, 1999; Freedman et al. 1978; Shure & Spivack, 1988). Attention focusing strategies are linked to emotional regulation and improved mental health outcomes for conditions linked to delinquency (Brefczynski-Lewis, Lutz, Schaefer, Levinson & Davidson, 2007; Napoli, Krech & Holley 2005; Semple, Lee & Miller, 2006; Singh et al. 2007; Zylowksa, et al. 2008).

### *Attending to thought*

Attending to thought is an attention-focusing methodology whereby the mind consciously becomes aware of itself, of the body, and of the surroundings. Also sometimes called “mindfulness,” monitoring self-talk can be a first step in cognitive restructuring and emotional regulation (Luria, 1973). Some practices proceed from simple mental awareness to an effort to stop, or cancel inaccurate or inflammatory self-talk, and then to actually restructure the content of thought. (See below.) Others use mental practices to alter physical sensations (i.e. relaxation techniques). A smaller group of practices emphasize maintaining a detached awareness of thought and physical sensations as arising and departing

phenomena, which need neither to be changed, nor acted upon, but simply recognized and accepted. While there are insufficient studies to allow a robust meta-analysis of this latter approach, individual studies have shown that this practice of quieting the mind can activate the area of the brain responsible for affect. It has had these results with children and youth (Bögels et al. 2008; Lutz et al. 2008).

Ripple Effects includes a “mindfulness” module that links to tutorials for “self-talk” and “physical sensations.”

### *Logical reasoning*

Logical reasoning and critical thinking capacities include the ability to gather information and accurately identify a problem, engage in a pattern of consequential logic, and reach defensible conclusions based on evidence at hand. These thinking processes are frequently associated with the pursuit of science, but they are useful in social-emotional and academic situations as well. The ability to engage in the consequential logic of an if/then structure is a key component of impulse control. Recognizing the logic fallacy in drawing global generalizations from limited experience (i.e. “I flunked a test; it shows I’m too stupid to succeed in school.”) is also a factor in self-efficacy and academic improvement.

Ripple Effects *WSIS* promotes rigorous reasoning as an independent capacity, and as part of a structured decision-making model. There are specific lessons on correctly “identifying a problem,” “evaluating alternatives” against criteria of “safety,” moral “rightness,” “effectiveness,” and emotional impact, and “testing solutions.” At each developmental level in the training software, there is a lesson on “predicting consequences.” The program treats consequentialism (predicting

consequences) as an independent skill, with focus on developing the cognitive structure of “if/then” sentences as a necessary precondition for predicting future consequences of immediate actions, and drills students in its use. Every one of the 700 lessons in the combined training programs includes a five-part critical thinking and assisted writing exercise, in the form of an animated journal.

### *Perspective taking*

Perspective taking is a related, cognitive strategy designed to promote identification with victims and potential victims. Lipsey’s meta-analysis indicates that training in perspective taking is less effective than the cognitive approaches of reasoning and norm setting (1992b). In fact, there is evidence that some offenders may enjoy seeing others suffer. This may not adequately take into account the fact that perspective taking is only one part, the cognitive element, of a three part, evidence-based system for developing empathy, which also includes affective and behavioral elements (Eisenberg & Fabes, 1990; Eisenberg & Miller, 1987; Feshbach, 1982). Nor do meta-analyses of individual interventions include data on the effectiveness of perspective taking that occurs in restorative justice settings, where offenders are encouraged to actually listen to the experience of their victims (Butts & Mears 2001; Howell 1995; Bender, King & Torbet, 1996; Zehr, 1990).

A growing body of evidence supports the notion that empathy is a learnable set of skills that have affective, cognitive and behavioral components (Bar-On & Parker, 2000; Bar-On, Maree & Elias 2006; Elias et al. 1994; Feshbach, 1982; Goleman, 1995; Salovey & Mayer, 1990). Absent the affective component, which promotes first the capacity to know one’s own feelings,

and then the ability to predict how other might feel, it is possible that training in perspective taking could actually increase offenders’ ability to manipulate others. Programs that combine cognitive with affective and behavioral components in empathy training have been demonstrated to be effective in reducing school-based aggression (Durlak & Weissberg, 2007; Elias et al. 1994; Greenberg et al. 2003).

Ripple Effects *Whole Spectrum Intervention System* includes training in perspective-taking as part of a four part strategy for developing empathy, which also includes understanding feelings, showing care and resisting the impulse to turn people into objects (stereotyping). In addition to the free-standing lesson on perspective-taking, training in perspective taking is built into the structure of every other lesson. Participants are asked to take the part of the protagonist in every scenario that introduces a new topic.



*A randomized controlled trial of the impact of Ripple Effects on resiliency assets demonstrated both increased scores on empathy scale of the California Healthy Kids Survey, and greater felt experience of connectedness among classmates who were in the control group that had daily contact with students in experimental group (De Long-Cotty, 2008).*

### *Ascertaining motive*

Ascertaining motive is a logic driven process that includes gathering information about situational and facial cues, clarifying ambiguity and reaching a conclusion (Crick & Dodge, 1994).

To address misattribution of motive (i.e. “he did it on purpose”; “that teacher hates me”) Ripple Effects incorporates a lesson on “accidents and on purpose,” which links to training in reading “situational

cues” and reading “facial cues”, and “asking questions” in ambiguous situations.

### *Brainstorming*

Brainstorming is the process of generating options to subsequently evaluate. It requires temporarily suspending the active judgment that is so useful before—and again after—this step. There is evidence that the quality of a decision may be linked more to the quantity of the options considered than to their initial quality, and that considering poor alternatives is a useful step in getting to better ones (Diehl & Stroebe, 1987; Gallupe, et al. 1992; Osborn, 1963). Although a cognitive capacity, brainstorming ability can be limited by over-developed logical thinking, if analytical strength leads to prematurely closing off alternatives that don’t meet pre-defined criteria. Brainstorming can also be limited by lack of a belief in one’s capacity to come up with a solution (lack of self-efficacy) (Bandura, 1997).

In Ripple Effects, stand-alone lessons for both students and teachers promote brainstorming skills, including how to maximize the value of group brainstorming exercises and how to consciously suspend judgment in order to generate multiple alternatives. Lessons also promote the efficacious belief in one’s ability to come up with options. Each of the journal exercises include the step of identifying possible options. In addition, every lesson starts with a problem-solving scenario that presents a challenge and asks participants to brainstorm options available to the protagonist, and to evaluate the benefits and risks of those options.

### *Problem solving*

There is substantial evidence that training in the combined skills of logical

reasoning and brainstorming is an effective intervention for promoting problem solving (Durlak & Weissberg, 2005; Elias & Bruene-Butler, 1999; Shure & Spivack, 1988); reducing pre-delinquent, aggressive behavior (Dodge, 1980); reducing intent to engage in use of controlled substances (Hawkins, Catalano & Miller, 1992); and increasing the chance of school success (Elias et al. 1994; Zins, Weissberg, Wang & Walberg, 2004). Several evidence-based prevention curricula recognize the importance of decision-making and personal responsibility, not only for prevention of delinquent behavior, but also for promotion of positive youth development (Durlak & Weissberg, 2005; Elias & Bruene-Butler, 1999; Shure & Spivack, 1988). Ripple Effects is among them.

Ripple Effects *Whole Spectrum Intervention System* identifies conscious decision-making as one of seven key life skills and explicitly and implicitly teaches it throughout the program. It includes lessons in personal responsibility at both elementary and middle/high school levels. There are embedded links to decision-making training in dozens of lessons on substance use, interpersonal relations, school related behavior



*A randomized controlled trial of the impact of Ripple Effects on resilience assets demonstrated that it had significant positive impact on problem solving skills among sixth graders who had moderate risk factors for delinquency, including ELL status (De Long-Cotty, 2008).*

### **Cognitive restructuring**

Cognitive restructuring attempts to actually change the content of thought. When applied to offenders it most often addresses:

- Distorted sense of self (i.e. inflated, narcissistic sense; unrealistic “victim” identity, and/or weak sense of self–efficacy)
- Misattribution of hostile motive
- Inflammatory messages that fuel anger, fear or other emotions
- Stereotypes associated with bias crimes
- Anti-social norms as rationalization of anti-social behavior

### *Correcting distorted sense of self*

To correct a distorted sense of self, Ripple Effects provides training in cognitive restructuring for both an inflated, narcissistic sense of self (under the topic “self-centered”), and an unrealistically weak sense of self–efficacy (under the topics “power”/“control”). Two of the seven key skills in both staff and student Ripple Effects programs are devoted to strengthening a healthy, but not inflated sense of self. One set focuses on self-awareness/ understanding (“know yourself”); the other focuses on “assertiveness,” the ability to command respect for oneself and one’s beliefs.

Exercises to increase self-awareness, include more than 37 interactive self-profiles, and more than 2000 journal writing exercises. There are lessons and interactive profiles to develop awareness of body (“body image,” “exercise type”), mind (“learning style,” “intelligences”), heart (“temperament,” “identifying feelings”) and soul (“creativity,” “beliefs” and “values”), as well as lessons on “strengths” and “weaknesses.” Self-efficacy related topics include “goal setting,” “perseverance” and “mistakes.” There is a specific lesson on “self-esteem,” with the parenthetical title (“not self-centeredness”).

### *Addressing inflammatory messages*

To address inflammatory messages Ripple Effects includes a tutorial for shaping the content of self-talk (“internal triggers), including learning to recognize and correct inaccurate or inflammatory messages. It also provides specific, corrective messages to use in response to emotionally inflammatory self talk that fuels anger, fear, envy and jealousy.

### *Reducing stereotyping*

To reduce stereotyping associated with bias activity, in collaboration with the Leadership Conference on Civil Rights Education Fund and Partnership Against Hate, Ripple Effects developed a set of more than 35 tutorials that include training in stereotypes and ethnic conflict, as well as appreciating diversity, and empathy training



(See *Promoting Respect, Stopping Hate*. Partnership against Hate, 2006.)

### *Addressing rationalization of anti-social norms*

To address rationalization of anti-social norms, Ripple Effects *WSIS* supports formation of conscience among children and teens, especially those who are not receiving explicit, value-based parental direction. Content in Ripple Effects includes values clarification lessons, lessons on norms, sensitization toward others, and training in specific values that are intrinsic to democracy, such as “fairness,” “honesty,” “respect,” “responsibility” and “respect for diversity,” and a decision-making framework that includes “rightness” as a criteria in making personal choices. Separate lessons treat the topics of “options,” “norms,” “values,” “self-determination” and “responsibility.”

Moral “rightness” according to as student or teacher’s personal code of values, is presented as a criteria for evaluating every decision. Specific lessons deconstruct mental constructions that put responsibility on the victim for “bullying,” “rape,” “dating abuse,” “molesting,” “hate crimes” and other exploitation topics.

### ***Promoting emotional regulation***

To promote emotional regulation, Ripple Effects *WSIS* offers a full unit on emotional regulation (managing feelings) in both student training programs, as well as the staff coaching software. It includes standardized, cognitive-behavioral strategies, such as managing self-talk, identifying internal and external triggers, and practicing relaxation techniques. The program also offers lessons on controlling these specific emotions: “anger,” “fear,” “sadness,” “shame,” “disappointment,” “envy,” “disrespect,” “jealousy,” “frustration,” “grief,” “guilt,” “loneliness,” “embarrassment,” “anxiety,” “numbness.”

### **Behavioral**

Under the category of behavioral interventions, theoretically any number of delinquency prevention strategies that address physical behavior might fit, from boot-camp type, physical training programs to relaxation techniques, to physical impulse control, to posture training as part of assertiveness. However, by convention, among psychologists behavioral programs have a more limited meaning. They are understood as those that explicitly incorporate principles of behavior modification (stimulus-response-reinforcement) as first defined by B.F. Skinner. Programs that utilize explicit, tangible, formal reinforcement, such as “token economies,” are included in this

category, as are programs that rely on contingency contracts that spell out specific agreed upon commitments and consequences for not honoring them.

### ***Reinforcement and consequences***

The central insight from behavioral psychology is that reinforcement (consequences), not thoughts, or motivation, shapes behavior (Skinner, 1953). In general, positive reinforcement is more effective than negative reinforcement. Sincere, focused praise can be an effective positive reinforcement. However, overly general, insincere praise is not effective, and praise for adolescents may backfire, if delivered in public instead of private settings (Dweck, 2002).

Behavioral psychology posits that the strength of targeted change partly depends upon the schedule (rate/interval and consistency) of rewards and punishment. Initially, very consistent reinforcement is needed to establish behavior. Once established, a variable ratio schedule is more effective than a fixed one to maintain it (Skinner, 1953, 1978). Since escaping punishment is a reward in itself, the fact that acts of juvenile delinquency often result in no punishment, means that in strictly behavioral terms, anti-social behavior is strongly reinforced by inconsistencies in the very system of punitive sanctions that seeks to change it. Thus it should not be surprising that meta-analyses have consistently indicated that severely punitive, but inconsistent behavior management techniques do not have evidence of effectiveness in reducing delinquency or recidivism (Lipsey, 1995).

Although individual studies have shown some positive effect with token systems of reinforcement (Abramowitz & O’Leary, 1991), those results have not held up when studies are combined for meta-

analysis (Lipsey & Wilson, 1998). They have not been demonstrated to be effective in reducing recidivism among offenders. However, a caution is in order. One of the dangers of meta-analyses is that they fail to account for population specific outcomes. Contracts have been shown to be effective when used in school settings, especially with students identified as having special needs (Heward, 1987; Martin & Pear, 2005). Monetary rewards have been shown to be effective in motivating some groups of low-income students. This is an example where the standardization of data that meta-analysis depends on may be inconsistent with recognizing important variances in data, especially those associated with socio-economic and cultural differences and/or disabilities.

Ripple Effects incorporates behavior modification by providing:

- Positive reinforcement in the form of animated rewards and praise, for any answer in surveys of attitudes or self-appraisal and correct answers in all tests of concept mastery,
- Feedback from interactive exercises in the form of a video game style point structure
- Training for students and teachers in how to deliver specific, focused praise
- Training in how to recognize and respond to compliments
- Training and education for implementers in the theory of reinforcement, practical strategies on how to use natural consequences, praise, and a graduated system of negative consequences to shape behavior

- A structure for written commitment to specific goals (journal), which can become the basis for student contracts
- Certificates of Recognition for successful completion of all the components of each of the seven key social-emotional abilities

## Social skill

Another category of effective intervention is social skills training. Technically social skills would include all those capacities – and only those capacities - that involve interaction with others. However, in practice, several programs that are classified as social skills training for purposes of meta analyses include training in cognitive-behavioral techniques that address intra-personal issues, such as coping with stress. In addition, many programs that are categorized as social skill programs promote affective education, emotional regulation, and impulse control as well.

In the academic literature, social skill training most often refers to structured, step-by-step-learning of any skill that involves interaction with other people. It can run from aggression replacement therapy for adolescents, to training in how to conduct a retail transaction for young people with Down's syndrome.

The most common forms of skill training for delinquency prevention are context specific; for instance, resistance skill training for substance abuse and aggression reduction training. Individual Education Plans (IEPs) for students with communicative disorders, such as Autism spectrum disorders and Asperger's syndrome, often include such structured skill training under the umbrella "life skill training." Universal prevention programs more often target proactive social skills

such as “making friends” or “showing care.”

### **Skill streaming**

A key concept in social skill training is “skill streaming” popularized in the curriculum of that name by Arnold Goldstein (Goldstein, 1988). This refers to the five-part process of teacher modeling, student role playing, group performance, feedback, and transfer training (practicing the skills at home and in the community).

Lipsey’s meta analyses of social skill training programs did not include substance abuse prevention programs, which comprise a substantial amount of school-based prevention programming. Analysis of impact of social skill training as a substance abuse prevention program has consistently demonstrated positive impact, when implemented with fidelity in both live (Botvin et al. 1990; 1995) and computer-based settings (Marsch, Bickel, & Badger, 2006).

Ripple Effects *WSIS* incorporates and applies theory on social skill training in these ways:

- It devotes a whole unit at each level (children, adolescents, adults) to developmentally appropriate training in generalized assertiveness, including voice, posture, eyes and message, as part of generic training. It offers specific lessons for: “confronting behavior,” “standing up for beliefs,” “making complaints,” “taking control,” “communicating feelings,” “confronting injustice,” “setting limits,” and “stating needs.”

- It provides step-by-step training in both “communication” and “group skills,” including: “introducing yourself,” “conversations,” “thanking someone,” “expressing sympathy,” “giving and receiving compliments,” “making apologies,” “ignoring (provocative behavior),” “appreciating diversity,” “dealing with authority,” “resolving conflict,” “joining groups,” “having discussions,” “making space,” “getting help,” “helping others,” “sharing,” and “accessing community.”
- It offers tutorials that address issues of status (“respect”), “power,” and “economic and social relations,” which impact citizenship and effective participation in a democracy.
- In addition, the design of *Ripple Effects Whole Spectrum Learning Platform* incorporates a body of evidence about *how* to effectively conduct social skill training, including the use of modeling and rehearsal and transfer training (See Chapter 5 for discussion and Chapter 6 for detailed diagrams of how this is accomplished.)



*A three-arm, randomized, controlled trial in a New York City middle school, showed significantly higher scores for social skills related to conflict resolution ( $p < .05$ ) and showing respect ( $p < .05$ ), as measured by blind observers, in the group exposed to Ripple Effects, as compared to the control group (Stern & Repa, 2000).*

### **Counseling**

Research has shown that individual and family counseling can be effective methods

for reducing risk factors related to delinquency. Meta-analyses have *not* validated the effectiveness of group counseling as an effective method to impact measurable outcomes (Lipsey & Hawkins, 2007). The focus here is on individual counseling.

Individual counseling as a therapeutic intervention to prevent delinquency is often delivered by school counselors. Less frequently, it is delivered by clinical psychologists who travel between schools in a district. The American School Counselors Association recommends a ratio of 1 counselor to 250 students (ASCA website, 2009). According to the National Center for Education Statistics, the national average is closer to 1 counselor for 475 students (2007). The ratio of trained psychologists to students is much lower. Because by definition it is a one-to-one relationship, individual, live counseling by a qualified professional may be the least scalable of the effective interventions. Nonetheless, it has proven outcomes and must be explored.

School counselors are formally charged with promoting academic success, career preparation and social-emotional development for all students equally. Counseling as a selected intervention for students with behavior problems is focused on social-emotional development. However, few students with aggressive behavior at school voluntarily seek out counseling.

### ***Characteristics of effective counseling for social-emotional challenges***

Ideally, counseling focused on social-emotional problem solving has these characteristics: It is person-centered, non-judgmental, invites affective (non intellectual) exploration of experience, involves active, reflective listening,

presents clients with a set of potentially effective strategies that could enable them to constructively deal with a presenting problem, and refers out clients who need more extensive therapy or medical help (Borders & Drury, 1992; Whitson & Sexton, 1998). Carl Rogers, the originator of client-centered therapy, believed that a therapist's genuine positive regard and empathy were the only requisites for clients to better trust and understand themselves, and to change their behavior as a result (Rogers, C. 1959)

Ripple Effects' technology-enabled *Whole Spectrum Intervention System* functions metaphorically like a guidance counselor. It does not dispense medical advice, but it "listens," paraphrases and represents learner input, and then presents strategies that could be of help. Users "present" their personal challenges through their selection of topics. The expert system built into the program matches those challenges to a prescriptive set of proven-effective strategies for meeting them. By clicking on links, learners can go deeper into the suggested strategies. In the process, the program unobtrusively guides them to the formation of core social-emotional competencies, including problem-solving skills, which are the building blocks of resilience.

Ripple Effects *WSIS* has been vetted by a diverse group of psychologists and psychiatrists for use in school counseling settings. It is used in many schools to bridge communication between students and counselors by providing a vocabulary of social emotional experiences, to prompt disclosure of personal problems, including abuse, and to triage a heavy case load. Students with minor concerns can use the training software to explore independently; so that counselors can focus on those students or situations that are most urgent and/or require the most expertise.

Counselors report that students sometimes disclose underlying problems, including physical and sexual abuse after use of the program.



*A study of use of Ripple Effects software by 3,685 students over, three years in discipline settings in 40 schools indicated 27% of elementary students, 38% of middle school students, And 36% of high school students, voluntarily used the program for personal guidance and counseling for issues not directly related to their behavioral offense. When given the opportunity, more than 95% of students in six RCTs, took advantage of the opportunity to receive private guidance on topics of personal interest to them, which were not required by the study protocol (Ray, Berg & Patterson, 2008).*

**Characteristics of personal guidance through Ripple Effects**

Exposure to Ripple Effects WSIS approximates a counseling experience in several ways:

*Client centered*

Users of the software are at the center of the Ripple Effects experience. It is “all about me.” They choose what topics to explore, choose how much of themselves to reveal, choose what set of skill training opportunities to take advantage of, and choose the gender of their electronic guide. User-regulated topic selection allows each person to select and explore the issue or risk factor most important to her or him.



*Formative evaluations involving focus groups in several classrooms of high school students indicated that the desired point of entry for most students are not traditionally recognized risk factors, such as family violence, drugs*

*or gangs, but appearance issues and peer relationships. Students expressed almost no interest in proactively learning core social emotional abilities. Instead, their expressed interest was in “nots” – “not thin,” “not popular,” “not athletic,” “not good looking.” Thus these topics were added to the program before first release (Ripple Effects internal data, 1998-2007).*

*Non-judgmental*

Counselors attempt to be non-judgmental; a computer can literally be so. The computer literally has no preference about whether students choose an exploitation topic from the perspective of perpetrator (“bully”), target (“bullied”), or witness (“bystander”). However, once a given topic is chosen, a computer is capable of communicating all the biases and judgment that any individual counselor is.

In the case of Ripple Effects training software, use of peer voices rather than adult authority reduces the felt impression of judgment. In addition, tutorials involving anti-social behavior, treat the experience of perpetrators as understandable, though not acceptable, and maintain a posture of respect in tone and style throughout.

*Encourages affective exploration*

Scenarios for each of hundreds of Ripple Effects topics have questions about the feelings of the protagonist in the situation being explored. Every journal exercise includes a writing opportunity for users to identify their own feelings about the issue being explored. There are a whole set of lessons on core skills for identifying, understanding and communicating feelings, (“mixed feelings,” etc.). An entire unit is directed toward “managing feelings.”

*Demonstrates active listening*

Ripple Effects software invites, attends to, reflects and validates learner's interior experience. More than 30 interactive self-profiles pose questions, "listen" to user responses, and mirror back the content they have provided. In addition to profiles for core social emotional abilities, there are interactive self-profiles related to norms, social values, and propensity toward exploitation or victimization in a relationship. The peer voices in the software literally resonate with the voices inside users' own heads. The assisted writing journal exercises provide word prompts to help less verbal students name their own experience, and provide open-ended opportunities for self-expression for students who are more fluent. The interactive profiles mirror back representations of what learners say about themselves.



*Process evaluations consistently show that student users report feeling "listened to" by the program (Correspondence and interviews, Ripple Effects, 2000-2008).*

*Offers science-based information about areas of client concern.*

For specific concerns, such as "panic attacks," "pulling (one's) hair out," "post traumatic stress (PTSD)," "obsessive-compulsive disorders," "tics," and "depression," the tutorials include symptoms and definitions from DSM-IV. Where non-medical interventions have been proven effective, such as changing self-talk to control "anxiety", tutorials include training or guidance in those methods.

*Offers relevant evidence-based strategies*

Even the most gifted, experienced child psychologists, let alone beginning school counselors, rarely have personal expertise in providing training in all five of the most effective approaches described above. It's even less likely that either group would also be expert in the whole spectrum of much less common, but also valid approaches to dealing with idiosyncratic risk factors that may influence vulnerability to delinquency, especially mental health problems.

As described on pages 2.1-2.4 and suggested by its name, Ripple Effects incorporates a *Whole Spectrum* of effective interventions, with a focus on cognitive, behavioral and social skill training strategies for hundreds of concrete problems. Through an expert system it presents a small subset for consideration by users, based on the selections they have made.

*Protects confidentiality*

Ripple Effects protects client confidentiality by password protecting each user's input into the program, encrypting journal entries, and providing a "privacy screen" that can be lowered at the click of a mouse.

*Refers out serious problems*

For all problems that potentially involve serious injury to self and/or others (i.e. "anorexia", "suicidal thoughts," etc.) and for those that may have a basis in chemistry or biology (i.e. "attention deficit disorder"), as well as those that may require intensive, longer term therapy, Ripple Effects directs learners to seek further medical help and links them to training in how to use community resources and how to ask for help.

## Parent training

Extensive research has shown that parent training as early as pregnancy and early childhood can have positive effects on the child, as he or she matures (CDC, 2009). Numerous researchers have found that parent training helps reduce aggressive, antisocial, and delinquent behavior among children (CDC, 2009; Dumas, 1989; Feldman & Kazdin, 1995; Kazdin, Siegel, and Bass, 1992; Satterfield et al. 1987; Tremblay et al. 1992). These parent training programs address family and parental risk and protective factors. Protective factors include parental supervision, attachment to parents, and consistency of discipline (Huizinga, Loeber, and Thornberry, 1995). Remedial interventions may focus on poor supervision, excessive family conflict, family isolation, sibling drug use, and poor socialization (Kumpfer & Alvarado, 1995).

Some parent programs are framed in terms of children's behavior. For instance the extensively tested, model program *The Incredible Years* addresses "lack of commitment to school, early and persistent antisocial behavior, and family conflict" in a 12-week program that involves group discussion of a series of 250 video vignettes (Webster-Stratton, 1984; Webster-Stratton, 1985). Other programs are framed in terms of parent experience. *Parents Who Care*, another extensively tested program from the Seattle Social Development Project, focuses on setting a context of risk and protection, developing positive communication skills to promote bonding, and developing positive discipline/ family management skills (Haggerty, Skinner, MacKenzie & Catalano, 2007). Social-emotional training at the elementary school level, which also includes parent education workshops, has been correlated with long term (15 years later) higher educational,

health, and economic outcomes, though not with reduced crime or substance abuse (Hawkins et al. 2008).

The Wilson-Lipsey meta-analysis of school based programs to reduce aggressive and disruptive behavior (2007) did not include free-standing, parent education programs. It included only those parent programs that supplement psycho-educational programs targeting youth. Of the 249 studies included in the meta-analysis, only 11 included parent training. All of these were part of comprehensive, multi-level programming, which was the least effective service format, with mean effect size of only .05, which was not significant.

Ripple Effects does not have a free standing, parent support software training program. The teen program does include tutorials on "pregnancy" and "teen parenting". It also provides adolescents with generic training in cognitive-behavioral and communication strategies, similar to those promoted in *Parents Who Care*<sup>TM</sup>, which have been correlated not only with improved academic and behavioral outcomes for young people, but also with more effective parenting practices later in life.

In addition, Ripple Effects offers an illustrated *Personal Trainer for Parents* manual as a supplement for use with stand-alone parent programs, or as an enrichment of - and take away from - parent teacher conferences. The *Personal Trainer for Parents* includes coaching in communication and discipline patterns, cognitive-behavioral skills for emotional regulation, and how to recognize and leverage their children's learning strengths.

Finally, the *Coach for Staff* software includes coaching for teachers in how to communicate effectively with parents and invite greater involvement of parents in their children's school activities. To foster

that positive communication, the Ripple Effects system includes positive communication post cards, in which “The Eagle Eye” pounces on something each parent’s child has done right. The noted behavior can be any concrete, expression of a component of one of the seven key social emotional competencies listed on page 5.28. A social observation form checklist is available via the web to hone teachers’ recognition of positive behavior. The post cards can be sent electronically or through the postal service.

### **WHAT’S MISSING: AFFECTIVE APPROACHES**

In the models used here, affective approaches are not separated out from cognitive, behavioral, or social skill modalities. Affective treatment modalities are implied, but not described, in many of the counseling program protocols. There is no doubt that mind, body and emotion are intertwined on many levels (Damasio, 2005), and many effective programs include attention to all three (Feshbeck, 1975, 1982).

#### ***Emotional Intelligence***

Yet some scientists posit that recognizing, understanding, labeling, expressing and regulating emotion involves a distinctly separate set of abilities that are enhanced by cognitive and behavioral techniques, but not fully explained by them (Salovey & Mayer, 1990; Hoffman, 1982; Eisenberg & Fabes, 1987, 1990, 1995; Batson, 1991).

#### ***Affective education***

Under the acronym *RULER*, Bracket and Rivers (2007, 2008) have developed an entire program of affective education,

focused exclusively on affective capacities of recognizing, understanding, labeling, expressing and regulating emotions (Rivers, Brackett, & Salovey, 2007). They suggest that without formal attention to this domain, serious program deficits can result and outcomes will fall short of what is possible. Neurobiological research confirms both that separate parts of the brain govern thinking, feeling, and behaving and that those parts are closely linked, often react simultaneously and thus over time get “wired together” to such an extent that they “fire together” (Goldsmith, Pollak & Davidson, 2008). Brain and cardiology research has led to increased awareness of the controllable, physiological dimensions of emotion, and has tested a wide range of techniques for changing or regulating emotion, from cognitive therapies described above, to light boxes, to breathing and meditation exercises (Davidson & Lutz, 2008; McCraty & Tomasino, 2006).

#### ***Empathy training***

A specialized field of affective education that has critically important social implications, is empathy (Feshbach, 1975, 1982; Ickes, 1997, 2003; Goleman, 1995; Eisenberg et al. 1992, Davis, 1994, Hoffman, 2000; Eisenberg & Fabes, 1990). Researchers are studying how it is triggered, fostered, measured, and lost. Although the evidence being accumulated supports many, sometimes conflicting theories about the origins of empathy, and all affective capacities, there is now general agreement that affective capacities are both separate from cognitive and behavioral capacities, and heavily influenced by those. Thus it is not surprising that sometimes it is described as a state of felt identification with another, sometimes as “everyday mind reading” (Ickes, 2003),

sometimes as being able to step into someone else's shoes, and sometimes as caring behavior that reflects some felt awareness of the other.

Ripple Effects content draws heavily from this field. Empathy and emotional regulation, with their constituent abilities, represent two of the seven Ripple Effects key skills. There are individual tutorials for each of the following:

*Empathy:* "feelings-names for," "mixed," "changing," "owning them," "predicting," "perspective taking," "understanding motives," "showing you care," "paraphrasing," "body language," "asking (open-ended) questions."

*Managing feelings:* "mindfulness," "physical sensations," "triggers-inside," "triggers-outside," "relaxing," "expressing feelings," "letting go," "laughing," "practicing happiness."

### **Conation - motivation**

Another set of approaches that are not teased out in these studies target "conation" or motivation in its broadest sense. This concept straddles the line between affect, decision-making, and behavior. It is the process of self-reflective inquiry that leads to motivation and intentionality (Huitt, 1999). In even simpler terms, but important ones to resistant adolescents, it directly addresses the question, "But why (do it?)." Dweck has looked at the role of a "growth mindset" – a belief in the importance of effort versus innate ability—in fostering motivation (Dweck, 2006). Many social problem-solving models include goal setting as a first step (Elias & Clabby, 1992). Bandura's model of self-efficacy includes motivation, goal setting and perseverance as important factors in self-regulation (1997), and self-regulation in turn is folded into cognitive-behavioral models for change. But the prior question is "why set

personal goals at all?" The wide spread failure to motivate whole subgroups of young people, especially urban Latino and African American youth, to stay in school and obey the law, suggests that it would be useful to do further analysis on this issue.

Ripple Effects addresses conation with specific tutorials on: "what you love," "goals," "success-phobia," "future," "control," "unmotivated," "hopeless."

### **SEL: Integrating modalities**

Despite the value of separating out affective modalities, there are risks as well. Empathy training, without corresponding training in assertiveness and establishing limits and boundaries, conceivably could have the unintended consequence of simply developing more pliant victims. This is especially true for females who have been previously victimized and may be overly sensitized to the perpetrators' expressed feelings and needs. On the other hand, social skill training in assertiveness, paired with cognitive training in predicting logical consequences, without the addition of empathy training, conceivably could result in developing more skillful manipulators.

The difficulty in drawing clear lines between obviously interconnected phenomena has led some researchers, as well as practitioners, to move in the opposite direction. A group of researchers associated with the Collaborative for Academic, Social and Emotional Learning (CASEL) combines social, emotional, cognitive and behavioral approaches under a single category of social-emotional programming. By doing so they have been able to accumulate a body of evidence that lends itself to sophisticated statistical analyses.

A series of those analyses have demonstrated positive impact of this more

broadly described, social-emotional programming on attitudes, behavior and academic performance (Zins et al. 2004). In a meta-analysis of the impact of after-school programming, Joseph Durlak and Roger Weissberg examined the combined impact of programs that include any combination of these strategies, on behavior and school performance, and identified positive changes in attitudes, behavior and school performance (Durlak & Weissberg, 2007).

Social-emotional capacity building in children that combines affective, behavioral and cognitive approaches has resulted in both short terms reductions in school-based aggression (Greenberg, et al. 2003; Grossman et al. 1997) and long term improvement in health, educational and economic life outcomes (Hawkins, Kosterna, Catalan, Hill, & Abbott, 2008).

Ripple Effects approach is to explicitly incorporate cognitive, behavioral (physical and verbal) affective, and social skill training, as well as counseling techniques. Most lessons involve specific skill training in at least two of these modalities. Many include three.

### **NO APPROACH “THE BEST”**

Each of these strategies for reducing anti-social and delinquent behavior has been proven effective with some children and youth, in some situations, some of the time. None of the first three – cognitive, behavioral or social skill training – is greatly more effective than the others, with all having a mean effect size in the range of .20 as part of universal interventions, and .29, as selected intervention (Wilson & Lipsey, 2007).

None of these effective practices work with all juveniles, in all situations, all of the time. In general, selected interventions are

more effective than universal ones, larger effect sizes are found with younger youth, and those who have higher risk. (Wilson & Lipsey, 2007). In all areas, for both students and teachers, there are larger positive effects for individualized instruction than for one size fits all (Bender, 2002) and greater effects for ongoing, embedded coaching, than for one-time only training sessions (Fixsen, Naoom, Blase, Friedman & Wallace, 2005).

For these reason Ripple Effects includes the *Whole Spectrum* of these approaches, each individually and in a myriad of context-specific combinations. Greatest use of Ripple Effects is among middle school students with elevated risk of school failure and delinquency.

### **HOW RACE AND ETHNICITY FIT**

These recent meta-analyses of effective interventions statistically control for race and ethnicity. That sets aside the reality that ethnic identity is itself a major risk factor for societal sanctions for anti-social behavior, starting with school-based discipline as documented on pages 2.8, 2.9, 3.15 and 3.16.

The correction Ripple Effects makes for the impact of race and ethnicity on behavior is not to extract it from the intervention, but to explicitly address it in tutorials for both students and teachers, as described in Chapters 3, 5, 6 and 7.

### **LINKING MOST RISK WITH GREATEST IMPACT: A LEVERAGED APPROACH**

With so many tested strategies to choose from, and so many risk factors to consider, against a backdrop of limited resources the question arises: “What is the most leveraged way to put what has been

learned about what works, with whom, under what conditions, to the best use?" It was exactly this question which led Lipsey et al to cross correlate the most effective strategies with the most important risk factors. A reminder: the identified risk factors at age 10, which most predicted delinquent behavior at age 16, in order of correlation strength after controlling for socio-economic status, gender, and race and ethnicity, were:

- Prior anti-social behavior, (including externalizing behavior)
- Personal characteristics, (lack of attention control, emotional regulation, problem solving)
- Social relations (sociability, social self-concept)
- Family factors (parental warmth, discipline style and family functioning)
- School behavior (academic performance, school participation, adjustment)

The first three have the potential to be largely under the control of students themselves. The last is largely under the combined control of students and their teachers. Parents have the biggest influence on family factors, but children can learn to have growing control over their own reactions to those factors. (Benard, 2003).

The identified effective strategies include:

- Behavioral strategies
- Cognitive therapy
- Social skills training
- Counseling therapy for individuals and families
- Parent training

*Adding these elements together, and reintegrating the important factors of*

*gender, class and ethnicity, taken together this multi-disciplinary body of evidence suggests that a leveraged way to approach delinquency prevention would be to target higher risk children with ongoing, individualized training in evidence-based strategies that positively affect externalizing behavior, attention, self-regulation, and social problem-solving, and target their teachers with on-going coaching in effective methods for strengthening personal leadership, deconstructing race-based attitudes, and constructively managing problematic behavior at its earliest occurrence.*

*In terms of content, it would promote universally protective, personal characteristics for both students and the adults who work with them; make available the full range of proven effective strategies in developmentally appropriate ways; correct inappropriate behavior without blame or shame; be culturally competent; and address issues of race, class and gender directly.*

*This combination of approaches contains serious challenges from the perspectives of both pedagogy and implementation. The next chapter addresses the pedagogical issues.*

## REFERENCES

- Abramowitz, A. J., & O'Leary, S. G. (1991). Behavioral interventions for the classroom: Implications for students with ADHD. *School Psychology Review, 20*, 220-234.
- American School Counselor Association, (2009). Per website url: <http://www.schoolcounselor.org/content.asp?pl=328&sl=460&contentid=460>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bar-On, R., & Parker, J.D.A. (2000). *Handbook of emotional intelligence: Theory, development, assessment and application at home, school and in the workplace*. San Francisco: Jossey-Bass.
- Bar-On, R., Maree, J.G. & Elias, M.J. (Eds.). (2006) *Educating people to be emotionally intelligent*. Westport, CT: Praeger Publishers.
- Batson, C. D. (1991). *The Altruism Question: Toward a social-psychological answer*. Hillsdale, NJ: Erlbaum.
- Beck, A.T., *Cognitive Therapy and the Emotional Disorders*. Intl Universities Press, 1975
- Benard, B. (2004). *Resiliency. What we have learned*. San Francisco: WestEd.
- Bender, V., King, M., Torbet, P. (2006). *Advancing Accountability: Moving Toward Victim Restoration*. Pittsburgh, PA: National Center For Juvenile Justice.
- Bender, W.N. (2002). *Differentiated Instruction for Students with Learning Disabilities*. Thousand Oaks, CA: Corwin Press.
- Berg, S. , Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Beyth-Marom, R., Fischhoff, B., Jacobs-Quadrel, M., & Furby, L. (1991). Teaching decision making to adolescents: A critical review. In J. Baron & R.V. Brown (Eds.), *Teaching Decision Making to Adolescents*, (pp. 19-60). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Biglan, A., Brennan, P.A., Foster, S.L., Holder, H.D., Miller, T.L., Cunningham, P.B. et al. (2004). *Helping adolescents at risk: Prevention of multiple problem behaviors*. New York: Guilford.
- Bögels, S., et al. (2008). Mindfulness Training for Adolescents with Externalizing Disorders and their Parents. *Behavioral and Cognitive Psychotherapy, 36*, 193-209.
- Borders, L.D. & Drury, S.M. (1992). Comprehensive school counseling programs: A review for policymakers and practitioners. *Journal of Counseling & Development, 70*, 487-498.
- Botvin, G. J., Baker, E., Dusenbury, L., Botvin, E. M., & Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. *Journal of the American Medical Association, 273(14)*, 1106–1112.
- Botvin, G., Baker, E., Dusenbury, L., Tortu, S., & Botvin, E. (1990). Preventing adolescent drug abuse through a multimodal cognitive-behavioral approach: Results of a 3-year study. *Journal of Consulting and Clinical Psychology, 58(4)*, 437-446.
- Brefczynski-Lewis, J. A., Lutz, A., Schaefer, H. S., Levinson, D. B., & Davidson, R. J. (2007). Neural correlates of attentional expertise in long-term meditation practitioners. *Proceedings of the National Academy of Sciences of the United States of America, 104(27)*, 11483-11488.
- Burns, B. J., & Hoagwood, K. (2002). Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders. New York: Oxford University Press.
- Butler, A.C., Chapman, J. E., Forman E. M., Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review 26*, 17– 31.

- Butts, J.A. & Mears, D.P. (2001) Reviving Juvenile Justice In A Get-Tough Era. *Youth & Society, Vol. 33*, No. 2, 169-198.
- Centers for Disease Control and Prevention. *Parent Training Programs: Insight for Practitioners*. Atlanta (GA): Centers for Disease Control; 2009.
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101.
- Damasio, A. (2005). *Descartes' Error*. 10th Anniversary edition, with a new author preface. New York: Penguin Books.
- Davidson, R. J. & Lutz, A. (2008). Buddha's Brain: Neuroplasticity and Meditation. *IEEE Signal Processing 25*(1), 171-174. NIHMS83558.
- Davis, Mark H. (1994). *Empathy: A Social Psychological Approach*. Madison: WCB Brown & Benchmark.
- De Long-Cotty, Bo. (2008). Can Computer-based Training Enhance Adolescents' Resilience? Results of a Randomized Controlled Trial. Health and Human Development, WestEd , Oakland, CA,
- Diehl, A. and W. Stroebe, 1987, Productivity loss in brainstorming groups: toward the solution of a riddle. *Journal of Personality and Social Psychology, 5*, 3, 3, September, 497-509.
- Dodge, K.A. (1980). Social cognition and children's aggressive behavior. *Child Development, 51*, 162-170.
- Dumas, J.E. (1989). Treating antisocial behavior in children: Child family approaches. *Clinical Psychology Review, 9*, 197-222.
- Durlak, J. A. (1983). Social problem solving as a primary prevention strategy. In Felner, R. D., Jason, L. A., Moritsugu, J. M., and Farber, S. S. (eds.), *Preventive Psychology: Theory, Research and Practice*. Pergamon Press, New York.
- Durlak, J. A., & Weissberg, R. P. (2007). The impact of after-school programs that seek to promote personal and social skills. Collaborative for Academic, Social and Emotional Learning, University of Illinois at Chicago. Retrieved December 5, 2007, from <http://www.casel.org/downloads/ASP-Full.pdf>.
- Durlak, J.A., & Weissberg, R.P. (2005). *A major meta-analysis of positive youth development programs*. Invited presentation at the Annual Meeting of the American Psychological Association. Washington, D.C.
- Dweck, C.S. (2002). Messages that motivate: How praise molds students' beliefs, motivation, and performance (In Surprising Ways). In J. Aronson (Ed.), *Improving academic achievement*. New York: Academic Press.
- Dweck, C.S. (2006). *Mindset*. New York: Random House.
- Eisenberg, N., & Fabes, R.A. (1990). Empathy: conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion, 14*, 131-149.
- Eisenberg, N., & Fabes, R. A. (1992). Emotion, regulation, and the development of social competence. In M. S. Clark (Ed.), *Review of personality and social psychology: Emotion and social behavior* (Vol.14, pp. 119-150). Newbury Park, CA: Sage.
- Eisenberg, N., & Fabes, R. A. (1995). The relation of young children's vicarious emotional responding to social competence, regulation, and emotionality. *Cognition and Emotion, 9*, 203-229.
- Eisenberg, N., & Miller, P. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin, 101*, 91-119.
- Ekman, P. (1999) Facial Expressions, In T. Dalgleish and T. Power (Eds.) *The Handbook of Cognition and Emotion*. 301-320. Sussex, U.K.: John Wiley & Sons, Ltd.

- Elias, M.J. & Bruene-Butler, L. (1999). Social decision-making and problem solving: Essential skills for interpersonal and academic success. In J. Cohen (Ed.), *Educating minds and hearts: Social emotional learning and the passage into adolescence*. New York: Teachers College Press.
- Elias, M.J., & Clabby, J. (1992). *Building social problem solving skills: Guidelines from a school-based program*. San Francisco, CA: Jossey-Bass.
- Elias, M.J., Weissberg, R.P., Hawkins, J.D., Perry, C.A., Zins, J.E., Dodge, K.C., et al. (1994). The school-based promotion of social competence: Theory, practice, and policy. In R. J. Haggerty, N. Garnezy, M. Rutter, & L. Sherrod (Eds.), *Risk and resilience in children: Developmental approaches*. Cambridge: University of Cambridge Press.
- Feldman, J. & Kazdin, A. E. (1995). Parent management training for oppositional and conduct problem children. *The Clinical Psychologist*, 48(4), 3-5.
- Feshbach, N. (1975). Empathy in children: Some theoretical and empirical considerations. *The Counseling Psychologist*, 5 (2).
- Feshbach, N. D. (1982). Studies of empathic behavior in children. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 315-338). New York: Academic Press.
- Fischhoff, B., Crowell, N.A., & Kipke, M. (1999). *Adolescent Decision Making: Implications for prevention programs*. Summary of a Workshop. Washington, DC: National Academy Press. (ERIC Document Reproduction Service No. ED441185)
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).
- Freedman BJ, Rosenthal L, Donohoe CP, Schlundt DG, McFall RM. A social-behavioral analysis of skill deficits in delinquent and nondelinquent adolescent boys. *J Consult Clinical Psychology*. 1978;46:1448–1462.
- Gallupe, R.B., L.M. Bastianutti, and W.H. Cooper. Unblocking brainstorm. *Journal of Applied Psychology*, 76, 1; 137-142.
- Goldsmith, H. H., Pollak, S., & Davidson, R. J.,(2008). Developmental neuroscience perspectives on emotion regulation. *Child Development Perspectives*, 2(3), 132-140.
- Goldstein, A.P. (1988) *The Prepare Curriculum*. Champaign, IL: Research Press.
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam.
- Greenberg, M. T., & Kusche, C. A. (1997). *Improving children's emotion regulation and social competence: The effects of the PATHS curriculum*. Paper presented at meeting of the Society for Research in Child Development, Washington D. C.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., & Elias, M. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58, 466–474.
- Greenberg, M.T., Domitrovich, C.E., & Bumbarger B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment*, 4, Article 1. Retrieved March 1, 2002, from <http://journals.apa.org/prevention/volume4/pre0040001a.html>.
- Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P. Y., Asher, K. N., Beland, K., & Rivara, F. (1997). Effectiveness of a violence prevention curriculum among children in elementary school: A randomized controlled trial. *Journal of the*

- American Medical Association*, 277(20), 1605–1611.
- Haggerty, K. P.; Skinner, M. L.; MacKenzie, E. P.; Catalano, R. F., (2007), A Randomized Trial of Parents Who Care: Effects on Key Outcomes at 24-month Follow-up, *Prevention Science*, 8: 4, 249-260.
- Hawkins JD, Kosterman R, Catalano RF, Hill KG, Abbott RD. (2008). Effects of social development intervention in childhood 15 years later. *Archives of Pediatric and Adolescent Medicine*, 162(12):1133-41.
- Hawkins, J. D., Catalano, R.F., & Miller, J.Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112(1), 64–105.
- Heward, W. (1987). Contingency contracting. In J.O. Cooper, T. J. Heron, & W.J. Heward (Eds.), *Applied behavior analysis*. Columbus, OH: Merrill.
- Hoffman, M. L. (1982). Development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 281-313). NY: Academic Press.
- Hoffman, M. L. (1981). Is altruism part of human nature? *Journal of Personality and Social Psychology*, 40, 121-137.
- Hoffman, M.L. (2000). *Empathy and Moral Development*. New York: Cambridge University Press.
- Howell, J.C. 1995. *Guide for Implementing the Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders*. Washington: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Huitt, W. (2001). Motivation to learn: An overview. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University.
- Huizinga, D., Loeber, R., and Thornberry, T.P. 1993. Delinquency, drug use, sex, and pregnancy among urban youth. *Public Health Reports* 108 (Supplement 1):90–96.
- Ickes, W. (1997). *Empathic accuracy*. New York: The Guilford Press.
- Ickes, W. (2003). *Everyday mind reading: Understanding what other people think and feel*. Amherst, NY: Prometheus Books
- Kazdin, A.E., Siegel, T.C.C., and Bass, D. 1992. Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology* 60:733–747.
- Kendall, P. C. (2000). "Guiding Theory for Therapy with Children and Adolescents." In P. C. Kendall (Ed.), *Child and Adolescent Therapy: Cognitive-Behavioral Procedures* (pp. 3–27). New York: Guilford.
- Kumpfer, K.L., & Alvarado, R. (1995). Strengthening families to prevent drug use in multi-ethnic youth. In G. Botvin, S. Schinke, & M. Orlandi (Eds.), *Drug abuse prevention with multi-ethnic youth* (pp. 255-294). Thousand Oaks, CA: Sage Publications.
- Landenberger, N. A. & Lipsey, M. W. (2005). The positive effects of cognitive-behavioral programs for offenders: A meta-analysis of factors associated with effective treatment. *Journal of Experimental Criminology*, 1(4), 451-476.
- Linehan, M. (1991). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York: Guilford Press.
- Lipsey, M. W. (1992b). The effect of treatment of juvenile delinquents: Results from meta-analysis. In F. Losel, D. Bender, & T. Bliesener (Eds.), *Psychology and law: International perspectives* (pp. 131-143). New York: Walter de Gruyter
- Lipsey, M.W., & Wilson, D.B. (1998) Effective intervention for serious juvenile offenders: A synthesis of research. In R. Loeber & D. Farrington (Eds.), *Serious and violent*

- juvenile offenders: Risk factors and successful interventions* (pp. 313-345). Thousand Oaks: Sage.
- Lipsey, M.W., Hawkins, D. (2007, May) *Prevention Of Antisocial Behavior: The Most Effective Interventions For Changing The Most Predictive Risk Factors*. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Lipsey, M.W. (1995). What do we learn from 400 research studies on the effectiveness of treatment with juvenile delinquents? In J. McGuire (Ed.), *What works? Reducing reoffending* (pp. 63-78). NY: John Wiley.
- Little, G., Robinson, K. D., Burnette, K. D., & Swan, S. (1999). Successful ten-year outcome data on MRT-treated felony offenders: Treated offenders show significantly lower reincarceration in each year. *Cognitive-Behavioral Treatment Review*, 8(1), 1-3.
- Luria, A. R. (1973). *The Working Brain*. Basic Books.
- Lutz, A., et al. (2008). Regulation of the Neural Circuitry of Emotion by Compassion Meditation: Effects of Meditative Expertise. *PLoS One*, 3(3), 1-10.)
- Marsch, L.A., Bickel, W.K., Badger, G.J. (2006). Applying computer technology to substance abuse prevention science: Results of a preliminary examination. *Journal of Child & Adolescent Substance Abuse*, 16(2): 69-94.
- Martin, G. & Pear, J. (2005). *Behavior modification: What is and how to do it* (8<sup>th</sup> Ed.) Upper Saddle River, NJ: Prentice Hall.
- McCraty, R & Tomasino, D. (2006) Emotional Stress, Positive Emotions, and Psychophysiological Coherence, In: *Stress in Health and Disease*, edited by B. B. Arnetz and R. Ekman. Weinheim, Germany, Wiley-VCH: 342-365.
- Napoli, M., Krech, P., & Holley, L. (2005). Mindfulness Training for Elementary School Students: The Attention Academy. *Journal of Applied School Psychology*, 21(1), 99-125.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford, England: Blackwell Publishers.
- Osborn, A.F. (1953, rev. 1957, 1963). *Applied Imagination: Principals and procedures of creative thinking*. New York: Charles Scribner's Sons.
- Pames, S.J. and Meadow, A. (1959). Effects of "brainstorming" instructions on creative problem solving by trained and untrained subjects, *Journal of Educational Psychology* 50; 171-176.
- Ray, A., Patterson, V., & Berg, S. (2008) Impact of a district-wide individualized, computerized, positive behavioral intervention on discipline referrals, in-school suspensions and out of school suspensions. Ripple Effects. San Francisco, CA.
- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 - 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.

- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.
- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Ripple Effects, Inc. (1998 – 2007). Internal research correspondence, with teachers and students at multiple schools. San Francisco, CA.
- Ripple Effects, Inc. (2000 – 2008). Qualitative outcome reports from staff at multiple sites using Ripple Effects software. San Francisco, CA.
- Rivers, S. E., Brackett, M.A., Salovey, P., & Mayer, J.D. (2007). Measuring emotional intelligence as a set of mental abilities. In G. Matthews, M. Zeidner & R.D. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns* (pp. 230-257). New York, NY: Oxford University Press.
- Rivers, S. E., Lord, H., McLaughlin, K. A., Sandoval, R. F., Carpenter, M. D., & Brackett, M. A. (2008). Educating the whole child with emotional literacy: Promoting academic, social, and emotional competence. In M. A. Brackett, J. P. Kremenitzer, M. Maurer, M. D., Carpenter, S. E. Rivers, & N. A. Katulak (Eds.), *Emotional Literacy in the Classroom: Upper Elementary*. Port Chester, NY: National Professional Resources
- Rogers, C (1959), "A Theory of Therapy, Personality and Interpersonal Relationships, As Developed in the Client-Centred Framework," Kirschenbaum, H & Land Henderson, V (Ed), *The Carl Rogers Reader*, (pg 236 - 237), London: Constable
- Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical Child and Family Psychology Review*, 3, 223-241.
- Ross, R.R., & Ross, R.D. (1995) *Thinking Straight: the Reasoning and Rehabilitation Program for Delinquency Prevention and Offender Rehabilitation*. Ottawa: AIR publications.
- Salovey, P., & Mayer, J.D. (1990). Emotional Intelligence. *Imagination, Cognition, and Personality*, 9 185-211.
- Satterfield, J.H., Satterfield, B.T., and Schell, A.M. 1987. Therapeutic interventions to prevent delinquency in hyperactive boys. *Journal of the American Academy of Child and Adolescent Psychiatry* 26:56–64.
- Semple, R. J., Lee, J., & Miller, L. F. (2006). Mindfulness-based cognitive therapy for children. In R. A. Baer (Ed.), *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications* (pp. 143-166). San Diego, CA: Elsevier Academic Press.
- Shure, M. B. and G. Spivack.1988. "Interpersonal Cognitive Problem Solving." In R. H. Price; E. L. Cowen; R. P. Lorion; and J. Ramos-McKay (Eds.). *Fourteen Ounces of Prevention: A Casebook for Practitioners*. Washington, DC: American Psychological Association, 69-82.
- Singh, N., et al. (2007). Adolescents with Conduct Disorder Can Be Mindful of Their Aggressive Behavior. *Journal of Emotional and Behavioral Disorders*, 15(1), 56-63.
- Skinner, B.F. (1953). *Science and human behavior*. New York: Macmillan.
- Stern, R. & Repa, J.T. (2000). The study of the efficacy of computerized skill building for adolescents: Reducing aggression and increasing pro-social behavior. Unpublished manuscript.
- Tremblay, R.E., Vitaro, F., Bertrand, L., Le Blanc, M., Beauchesne, H., Boileau, H., and David, L. 1992. "Parent and child training to prevent early onset of delinquency: The Montreal Longitudinal-Experimental Study." In *Preventing*

- Antisocial Behavior: Interventions from Birth through Adolescence*, edited by J. McCord and R.E. Tremblay. New York, NY: Guilford.
- Wachtel, T. & McCold, P. (2000). Restorative justice in everyday life. In J. Braithwaite & H. Strang (eds.), *Restorative Justice in Civil Society* (pp. 117-125). New York: Cambridge University Press.
- Webster-Stratton, C. 1984. A randomized trial of two parent training programs for families with conduct-disordered children. *Journal of Consulting and Clinical Psychology* 52(4):666-678.\*
- Webster-Stratton, C. 1985. Predictors of treatment outcome in parent training for conduct-disordered children. *Behavior Therapy* 16:223-243.\*
- Whitson, S.C., & Sexton, T.L. (1998). A review of school counseling outcome research: implications for practice. *Journal of Counseling & Development*, 76, 412-426.
- Wilson, D.B., Gottfredson, D.C., & Najaka, S.S. (2001). School-based prevention of problem behaviors: A meta-analysis. *Journal of Quantitative Criminology*, 17, 247-272.
- Wilson, S. J. & Lipsey, M. W. (2007). School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *American Journal of Preventive Medicine*, 33 (Supplement 2), S130 - S143.
- Wilson, S. J. (2007, June). Effects of early intervention on risk factors for antisocial behavior. Paper presented at the 15th Annual Meeting of the Society for Prevention Research, Washington, DC.
- Wilson, S. J., Lipsey, M. W. & Derzon, J. H. (2003). The effects of school-based intervention programs on aggressive and disruptive behavior: A meta-analysis. *Journal of Consulting & Clinical Psychology*, 71(1), 136 - 149
- Zehr, H. (1990). *Changing Lenses: A New Focus for Crime and Justice*. Scottsdale, Pa.: Herald Press.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.
- Zylowksa, L., et al. (2008). "Mindfulness Meditation Training in Adolescents and Adults with ADHD: A Feasibility Study." *Journal of Attention Disorders*, 11(6), 737-746.

## Chapter 5: Education

### The other half of the psycho-educational equation

Educational philosophy.....	1
Art or science? .....	1
Either/or.....	2
Both/and.....	2
Ripple Effects <i>Whole Spectrum Philosophy of Education</i> .....	2
Learning context.....	3
Safety.....	5
Ripple Effects school safety profiler.....	5
Safety training for students.....	6
Addressing warning signs.....	6
Obvious "in" and "out" groups.....	6
Name calling is common.....	7
Charges of unfairness not fully addressed.....	7
Rude or rough behavior is accepted. ....	7
Discipline is inconsistent.....	7
Teachers feel afraid or under siege.....	7
Students feel disrespected by teachers.....	8
"Loners" are not recognized as being at risk.....	8
There is little or no public recognition for most students.....	8
School leadership is weak or disrespected.....	9
Connectedness and support.....	9
Social relations.....	9
Support for students.....	10
Positive behavioral support.....	10
Support for teachers.....	11
Support to increase parent involvement.....	11
Opportunities for social-emotional learning.....	12
Responsibility.....	12

Shared vision.....	13
Aligned policies.....	13
Enforceable rules.....	13
Consistent, logical consequences.....	13
Problem solving structures and processes.....	14
Challenge.....	14
External expectations.....	15
Internal factors.....	15
Personal relevance.....	15
Internal motivation.....	15
Stimulation.....	15
Wider equity issues.....	16
Social-cultural heritage of inequity.....	16
Persists even in “progressive” models.....	17
Ripple Effects’ bias: preferential option for the poor.....	17
Discrimination based on ethnicity.....	18
English language learners (ELL) limited english proficiency (LEP)....	18
Gender gap.....	19
Students with disabilities.....	20
Physical and cognitive.....	20
Social-emotional disorders.....	20
It’s not always children who have special needs.....	21
Knowledge and meaning.....	22
Traditional position.....	22
Knowledge is objective.....	22
Knowledge is inert.....	22
Content standards & frameworks.....	23
Critique of objectivist philosophy of knowledge.....	23
Subjectivist position about knowledge.....	24
Critique of subjectivist approach to knowledge.....	25
Social-emotional learning as a specialized field of knowledge.....	25
SEL frameworks and standards.....	27

Thematic contexts for SEL.....	29
Trend toward integration.....	29
Learning process.....	29
Traditional model: cognitive and linear.....	30
Learning as conditioned response.....	30
Critique of classical model of learning process.....	31
Neuro-scientific evidence.....	31
Developmental differences.....	31
Social-cultural heterogeneity.....	31
Non english symbol system in place.....	32
Delaying decision-making compounds risks.....	32
Delaying self-expression is problematic.....	32
Promotes passive consumerism in learning.....	33
Constructivist learning: whole system, pattern seeking.....	33
Non-linear sequencing.....	34
Affective involvement.....	34
Problem solving.....	35
Reflective self inquiry.....	35
Whole person transformation.....	36
Social-cultural context.....	36
Language development.....	37
Journaling.....	38
Metaphor.....	38
Learning differences.....	38
Intelligences.....	39
Learning style preferences.....	39
Critique of learning style typing.....	40
Reconciliation of perspectives.....	40
Learning disorders and disabilities.....	41
Social-emotional learning as a specialized form of learning.....	41
Social learning processes.....	41
Instruction.....	42

Goals.....	42
Roles.....	43
Methods.....	44
Process: transmission.....	44
Process: transaction.....	44
Process: learning cycle.....	45
Four key instructional approaches for SEL.....	46
Process: pure discovery.....	47
Critique of discovery methods.....	47
Process: supportive guidance.....	49
Instructional differentiation.....	50
Zones of proximal development.....	50
Immediacy.....	50
Scaffolding.....	51
Questioning as scaffolding: bloom’s taxonomy.....	52
Structure: universal design for learning (UDL) .....	53
The role of story.....	54
Classroom management.....	55
Classroom orchestration.....	55
Classroom management as pedagogy.....	55
Integration of instructional and group management practices.....	56
RE managing diverse learners unit.....	57
Ripple Effects tutorials in " <i>Managing Diverse Learners Unit</i> " .....	57
Orchestrating learning to prevent discipline problems.....	57
"With-it-ness" .....	58
"Overlapping" (multi-tasking) .....	58
Smoothness.....	58
Momentum.....	59
Assessment.....	59
Pre-intervention assessment.....	59
Response to intervention (RTI) .....	60
Observational assessment.....	61
Self-assessment.....	61

Pre-intervention assessment of organizational readiness.....	62
Post-intervention assessment.....	63
Assessment as measure of concept mastery.....	63
Assessment as means to content mastery.....	63
Assessment of performance knowledge.....	64
Assessment of external outcomes.....	64
Assessment of implementation process.....	65
Data analysis.....	66
Interpretation of assessment results.....	66
Cultural competence.....	67
Effective cross-cultural capabilities.....	67
Promoting cultural competence in students.....	68
Promoting cultural competence in teachers. ....	68
Professional development.....	68
Major report on effective practices.....	69
Effective content.....	69
Grounded in the concrete.....	69
Focused on student learning processes and assessment.....	70
Includes expert presentations of best practices for specific challenges.....	70
Relevant/useful.....	70
Context.....	71
Situated in community.....	71
Job-embedded.....	72
Integrated into larger goals and assessment structures.....	72
Learning process.....	73
Active engagement in students' learning cycle.....	73
Includes modeling.....	73
Includes learner-generated and peer-generated content.....	73
Self-regulated.....	74
Shared reflection.....	74
Participatory planning and shared decision-making.....	74
Emotionally supportive.....	75

Non-blaming.....	75
Personalizes and supports each teacher’s own SEL process.....	76
Frequency and amount.....	76
Sustained, not episodic.....	76
Sufficient dosage.....	76
Tiered intervention for staff.....	77
RE universal intervention for staff.....	77
RE targeted intervention for staff.....	77
RE individualized intervention for staff.....	78
Time and resource distribution.....	78
Appendix B: preconfigured scopes and sequences.....	80
References.....	81



## Chapter 5: Education

### *The other half of the psycho-educational equation*

Psycho-educational interventions have been developed and tested primarily by psychologists. However, as the name suggests, these treatment modalities have their source in dual disciplines. They not only deal with the human psyche, they also are educational modalities and their primary locus of delivery is public schools. Psycho-educational interventions are used not only to address anti-social and delinquent behavior in schools, but to prevent or reduce mental health disorders that frequently co-occur with anti-social behavior, and to directly address psycho-social components of school failure. In addition they are increasingly used for school-based, positive youth development programs, including character education and core social-emotional skill building.

High rates of school failure among youth with multiple risk factors for delinquency is well documented and causes for that failure have been extensively studied (Ferguson, 2002; Jencks & Phillips, 1998; McCall, Hauser, Cronin, Kingsbury & Houser, 2006). Environmental, behavioral and instructional factors all have been shown to play a role (Bennett et al. 2004; Hammond, Linton, Smink & Drew, 2007; McEvoy & Welker 2000). Thus research and theory in the field of education has much to add to understanding of best practices for school-based, preventive interventions to address anti-social behavior, as well as best practices to boost academic achievement, especially among young people at elevated risk for delinquency.

## EDUCATIONAL PHILOSOPHY

### Art or Science?

Despite the recent trend toward transforming education into pure science, Schools of Education still properly reside in Colleges of the Arts. The roots of educational practice are in philosophy. Evidence suggests that philosophical orientation – not exposure to quantitative data – largely determines how educators view teaching, learning, knowledge and the use of technology (Darkenwald & Merriam, 1982). That view in turn affects development and implementation of school level policies, relationships with students, parents and colleagues, instructional practice, classroom management strategies, attitudes toward assessment, and understanding of the specialized field of social-emotional learning.

On the one hand, basing teaching and learning practice on philosophical positions has resulted in many kinds of ignorance replicating and perpetuating themselves over many centuries. Not the least of these are gross inaccuracies about the role of ethnicity and social class in learning. This is partly why scientific evidence of “what works” has become indispensable to educational reform.

On the other hand, reducing valid educational practice to what can be proven in variable-stripped, randomized, controlled trials fails to recognize that philosophical insights and various combinations of intuitive understanding and hard earned, practical wisdom greatly contribute to the art of education. To

dismiss the insights from deep philosophy and the wisdom gleaned from everyday teaching and learning experience simply because they have not been fully tested under controlled conditions, is to risk depriving children of the very thing science and government and education all agree is their right: the best practices to ensure success in academic learning and successful socialization into the role of responsible citizens.

Recent developments in brain research, especially neuroscience, provide some help in resolving the tension between the science and the art of education. Brain studies support elements of a wide range of philosophical positions and greatly expand what can legitimately be called “evidence-based” practices in education, especially in social-emotional education. In particular, an explosion of neuroscientific findings in the last decade have substantiated philosophical insights associated with constructivist education that previously had been considered idealistic conjecture by many education scientists.

### **Either/or**

Educational philosophy and theory is often framed in terms of various sets of dueling opposites: Knowledge is subjective or objective, fluid or inert, expanding or fixed, particular or universal, about meaning or about facts. Learning is active or passive, personal or universal, about spontaneous discovery or systematic investigation, involves cognitive or affective, social or behavioral procedures. Pedagogy is either learner or instructor centered, content or process focused, involves linear or non-linear sequencing, innovative or proven practices, relies on teachable moments or scheduled lessons. Classroom management involves autocratic or democratic decision-making; ecological

versus individual discipline approaches; conditional contracts versus unconditional acceptance. Professional development is episodic or job embedded, about knowledge transfer or skill-building, collaborative or competitive, built around expert instruction or personal reflection. Assessment is periodic or continuous, subjective or objective, personal or impersonal, based on standardized tests or real world products and outcomes.

### **Both/and**

These dichotomous categories represent the purist endpoints of various expressions of two opposite philosophies of learning that are at the forefront of educational debate today. They are often broadly grouped under the umbrella terms “traditional” and “progressive” education. Both can claim a connection with classical philosophy and ancient educational practices. Both present coherent models that address learning modes and instructional methodologies. Both can cite evidence of positive outcomes. The former has accumulated more quantitative evidence, the latter more qualitative evidence. Both can cite recent brain research to defend their positions. Although the two sets of positions are sometimes presented as mutually exclusive philosophies, they can also be seen as two halves of a 360 degree arc of education.

### **Ripple Effects *Whole Spectrum Philosophy of Education***

It is this whole spectrum, 360 degree framing that is the rationale for Ripple Effects’ incorporation of both sets of principles into different parts of its system. Rather than treating these approaches as competing ideologies that demand a vote for or against, or as mathematical points on

a line, the Ripple Effects approach is to treat them like variants of hue and saturation that make up a circular color palette (Figure 5.1). From this full palette, a wide range of rich learning experiences for each student can be drawn.

Far from being logically incompatible, a color and its direct opposite can be used together to strong effect. For example, the pairing of demanding expectations with lavish student support results in higher outcomes, than either approach creates independently (Osher et al. 2003.)

The educational theory that underpins Ripple Effects *WSIS* has sources in science and art; in experimental trials and qualitative studies; in brain research and philosophical insights. They apply to:

- The learning context
- The nature of knowledge and meaning
- The learning process
- Instructional methods
- Classroom management practices
- Cultural competence
- Assessment
- Professional development

## LEARNING CONTEXT

Educational research shows that the learning environment is consistently and significantly correlated with both behavioral and academic outcomes (Spier,

Cai & Osher, 2007; Spier, Cai, Osher & Kendziora, 2007). An unsafe, hostile, chaotic or simply indifferent learning environment is correlated with poorer school performance among all students, especially those who have personal learning challenges. That is why most successful prevention programs target not only learners, but also the learning environment, as a major protective or risk factor for students (Gottfredson, 1986; Solomon et al. 2000; Hawkins, Catalano, Kosterman, Abott & Hill, 1999; Reynolds, Temple, Robertson & Mann, 2001).

Dozens of factors have been empirically correlated with more – or less – effective learning environments. In a meta-analysis of factors related to reduced school failure and drop out rates, David Osher describes four major characteristics that define a school climate conducive to positive social and academic outcomes for students. They are: safety, support, responsibility, and challenge (2007). Recent brain research, in particular fMRI and PET imaging techniques, have confirmed that there are neurobiological as well as psycho-social explanations for why all four of these factors are directly related to school outcomes (Caine & Caine, 2002). They do not fall neatly into one side or the other of the traditional versus progressive debate. As in physical environments, these factors exist in ecological relationships to each other. A change in one can affect all the others.

### RIPPLE EFFECTS WHOLE SPECTRUM PHILOSOPHY OF EDUCATION

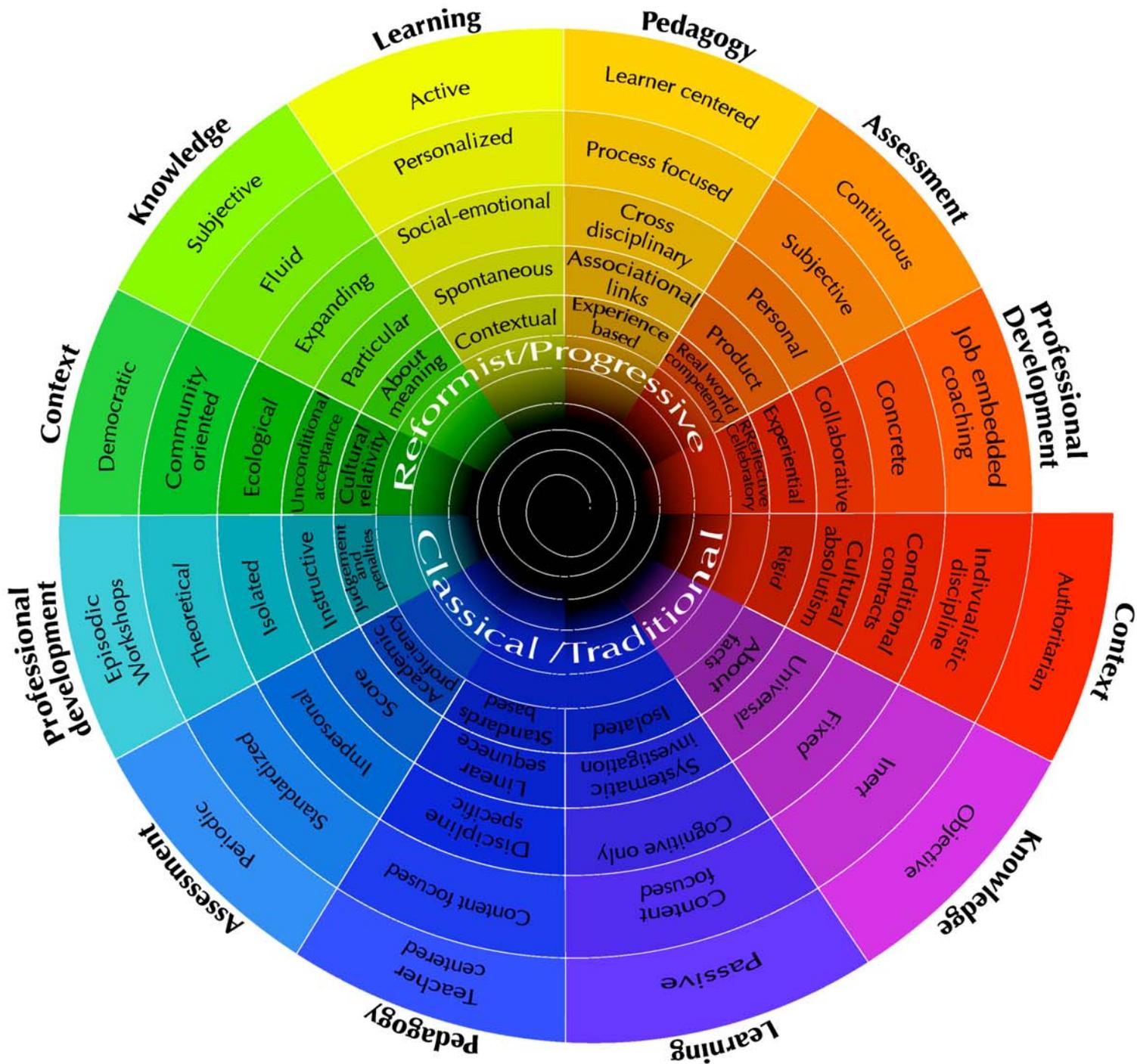


Figure 5.1

## Safety

Common sense indicates that people who are in the middle of a hurricane, or victims of a crime still in process, or even preoccupied with waiting for either to occur, are less likely to be successful in learning a new skill in algebra than people who can calmly focus on new learning, with support and without distraction. Nevertheless, until rigorous meta-analyses and brain research could confirm these self-evident facts, the roles of school safety – emotional as well as physical – in student achievement had been widely underestimated. Now the scientific evidence is in.

The connection between school safety and academic performance is rooted in neurobiology. Neuroimaging has demonstrated that perceived threat activates the primitive part of the brain responsible for fight/freeze/flight reactions (subcortex), at the expense of higher order, problem-solving functions in the prefrontal cortex. In the survival mode, responses become more limited and automatic; nuance is lost (Gruneberg and Morris, 1979; Perry, 2007); people are unable to engage in complex thinking (Le Doux, 1996). Students who are terrified at school (including social terror) may freeze, act out, or simply withdraw (Perry, 2007). Short of stark terror, when fear is a chronic state, stress fatigue can kick in, and the brain “downshifts” to compensate (Caine & Caine, 1994). Impulsive, short-term thinking and behavior may be the result. Whatever is previously learned and automatic will come to the surface (Le Doux, 1996; Perry, 2007). This why some experts assert that social-emotional learning must be continually rehearsed and

reinforced throughout the school years, so that it becomes automatic in times of greatest stress (Elias, et al 2006). Perry identifies episodic “alarm” as a separate state that activates the limbic part of the brain, the seat of emotion. Something sensed in the environment triggers an emotional reaction. That primitive sensing may be accurate and protective, but may also be inaccurate, a false alarm projecting threat where there is none. This is consistent with the misattribution of hostile motives that is characteristic of many youth offenders (Lipsey et al. 2007). In this emotion-driven frame of mind, only immediate consequences can be considered. By contrast, a calm state – but not a bored one – activates the neo-cortex, which makes abstract thinking possible. This is why some SEL programs, like Social Decision Making (Elias, Bruene-Butler, 1999), first calm children before teaching them reasoning skills, even in discipline settings. It at least partly explains the correlation between calming exercises before testing, and higher standardized test scores in language and math (Thayer, Hansen, et al. 2009).

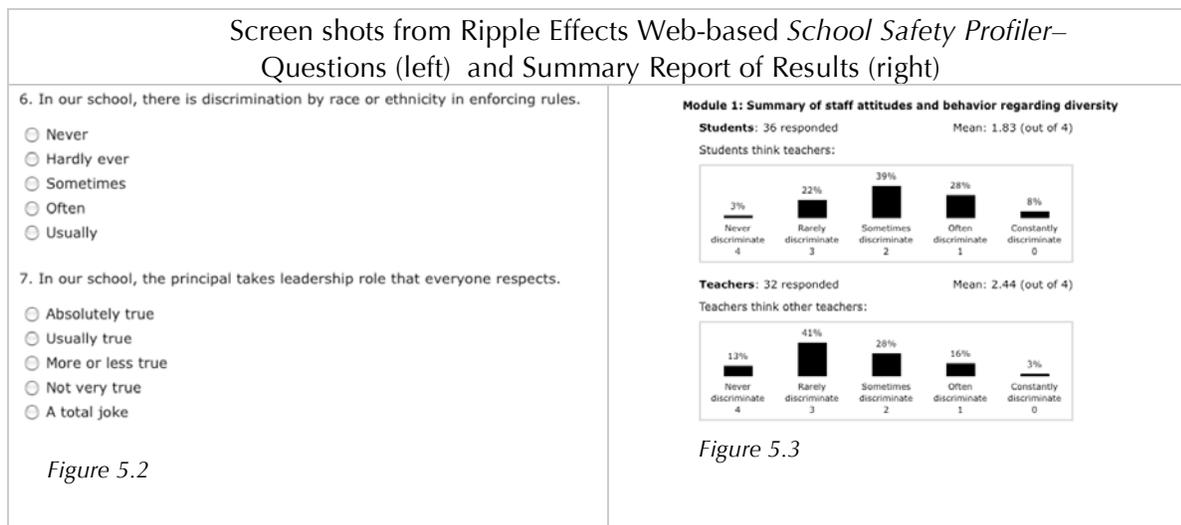
Ripple Effects *Whole Spectrum Intervention System* addresses physical, social and emotional components of school safety at three levels: the school, the educator, and the student. It provides resources for assessment of school safety, for prevention of school-based violence, and provides both students and staff with training in how to deal with threatening or unsafe conduct. Included in that training are strategies for self-calming and emotional regulation.

*Ripple Effects School Safety Profiler*

Ripple Effects School Safety Profiler is a web-based tool to measure perceived

safety at the school level. The Profiler is made up of separate online surveys to capture the perspectives of students and educators. Both students and educators can see school results, and can compare perceptions. The survey queries all parties regarding discipline/school climate, respect for persons, presence of, or access to

weapons, presence of drugs or alcohol. The survey also measures students' perceived ability to use social skills to handle challenging situations, and their access to and confidence in community resources for problem solving, two aspects of student support.



### Safety training for students

Ripple Effects content library includes personal safety training for children, teens and staff.

Safety training for elementary age children includes general safety training and training in personal safety issues of physical and sexual abuse, bullying and fighting.

Safety training for teens includes physical and sexual abuse by adults, and peer exploitation, including bullying, cyber-bullying, dating abuse and rape. It also includes topics on fighting, threats, weapons and recklessness, and trauma, whether related to natural or human-caused disasters. School administrators can delete any topic that consider inappropriate for any student group.

Training for staff, includes dealing with threats, deescalating potentially violent

situations, and handling disclosure of physical or sexual abuse by youth.



For a more comprehensive description of the use of Ripple Effects for personal safety and violence prevention, see the supplemental Ripple Effects guide *Targeted Prevention: Risk Reduction*.

### Addressing warning signs

The Office of Safe and Drug Free Schools has identified ten school-level signs of a potentially unsafe environment (1998).

Ripple Effects *Whole Spectrum Intervention System* addresses each of these ten indicators, both at the level of the student and the level of the adult.

*Obvious "in" and "out" groups,*

Ripple Effects Whole Spectrum Intervention System includes lessons on "cliques," "not-invited," "left out," and "community connectedness" for both students and implementers.

*Name calling is common*

Ripple Effects Whole Spectrum Intervention System includes lessons on name calling that address the role of perpetrators and the reactions of students who are targets. It includes several lessons on stereotypes that often motivate name calling, including stereotypes based on ethnicity, gender and sexual orientation.

*Charges of unfairness not fully addressed*

Ripple Effects includes the topic "fairness" as a specific lesson for both students and teachers. The professional development software coaches implementers in how to constructively deal with charges of unfairness, and how to put in place a problem solving structure, including how to use advisory period for group problem solving.

In addition, it not only encourages students to confront perceived unfairness, but also trains them in constructive ways to do so, with an emphasis on confronting unfair policies and behavior, as a positive alternative to attacking people or otherwise acting out.

Ripple Effects goes one step further, it addresses fairness not only as an interpersonal issue, but also as a societal one. The topic of social justice is addressed directly and in terms of many of its forms, such as economic, gender, racial and ethnic justice.

*Rude or rough behavior is accepted.*

Ripple Effects Whole Spectrum Intervention System includes professional development on how to develop and implement a code of conduct that would preclude rude and rough behavior. In addition, it offers training to both students and staff on courtesy, as well as tutorials on specific ways of using body language to communicate caring and assertiveness, rather than either passivity or aggression. It includes training for staff on cultural differences about what may be perceived as rough or aggressive. It includes lessons for younger students on keeping their hands and feet to themselves.

*Discipline is inconsistent*

Ripple Effects includes coaching for teachers on how to design and deliver consistent discipline within a code of conduct that includes clear rules with a graduated system of consequences. It also includes professional development to raise awareness of possible racial bias in disciplinary responses.

It provides students with training both on respecting authority and on confronting unfair practices, including discrimination. Additional lessons for students help them distinguish parental discipline from abuse. Training materials for parents encourage consistent, moderate discipline.

*Teachers feel afraid or under siege*

Ripple Effects professional development software includes lessons for teachers on how to manage fear, respond to threats and de-escalate potentially dangerous situations. Training points include having a back up system and a clear protocol for handling emergency situations. In addition, staff coaching includes lessons on "assertiveness" and "commanding respect,"

both of which are correlated with reduced attacks on teachers.

*Students feel disrespected by teachers*

Abundant evidence indicates that perception of disrespect by teachers, especially for African American students is a key factor in reducing student motivation (Ferguson, 2006).

Respect is a two-way equation. *Ripple Effects School Safety Profiler* provides clear data about the degree to which students in a given school feel disrespected by teachers, and indicates whether there is a gap in the perception of respect between students and teachers. Data from *School Safety Profiles* completed by dozens of schools around the country show a consistent pattern of discrepancy in perception between teachers and students in three key areas: respect by teachers for students, presence or absence of bullying, and availability of drugs or alcohol (Ripple Effects records, 2002-2007).

Ripple Effects' professional development software includes lesson for both teachers and students on giving, as well as getting respect, including training on how to use voice, eyes, body, posture, proximity to communicate respect for, and command respect from others.

*"Loners" are not recognized as being at risk*

Ripple Effects *Whole Spectrum Intervention System* specifically includes the topic, "loner." The program has community building exercises that are designed to increase a sense of belonging for both students and adults. It trains teachers in ways to include loners without putting them on the spot, such as having them play the 3rd party "watcher" role, if there are role plays. In addition, interactive profiles on learning style differences identify possible social isolation as a

vulnerability for those learners who both are informed by thoughts, principles and ideology, rather than feeling or instinct, and learn by sitting back and watching, rather than jumping in and doing.

Temperament profiles help students understand how a natural inclination toward introversion and cooler personality can lead to greater social isolation. Ripple Effects does not put the whole burden for change on socially isolated students; rather, a configuration for use as a universal promotion program develops community-building skills in all students.



A randomized controlled trial conducted by West Ed indicated that when an experimental group of students was exposed to Ripple Effects' empathy training, not only were their gains in empathy scores significantly higher than their classmates who were not exposed, but peers in the same classrooms had statistically significant greater net gains in connectedness scores. In other words, when one group learned to show care, the other group felt more included (De Long-Cotty, 2008).

*There is little or no public recognition for most students*

Ripple Effects *Whole Spectrum Intervention System* provides printable recognition certificates for completion of a full unit of computerized training for each of seven key social-emotional competencies. The video game point scoring system also recognizes learner achievement in completing content assessment exercises. Ripple Effects includes lessons for both teachers and students on "compliments" and "praise."

Professional development software encourages staff to pounce on pro-social behavior. Supplemental web resources provide teachers with a *Social Behavior*

*Observation Form* to heighten their awareness of that behavior and templates for mail or electronic postcards to notify parents when the “Eagle Eye” has recognized their children’s pro-social behavior. Instructors are encouraged to have a method for peers to recognize each other’s pro-social behavior.

*School leadership is weak or disrespected*

*Ripple Effects Whole Spectrum Intervention System* includes a whole unit on leadership development for educators. Training lessons in that unit parallel the components of seven core social-emotional abilities in the student programs. In addition, there is a specific lesson on motivation. In a separate unit on “Making Programs Work” there are tutorials on practical logistics of leadership, such as engaging stakeholders in decision-making and getting buy in.

## **Connectedness and Support**

A safe environment is sufficient to prevent injury to children, and to allow them to activate the parts of their brain required for higher-level thinking. Although it is necessary to ensure their school success, it is not by itself, sufficient to do so. An environment that is safe, but indifferent, cannot ensure success for students most at risk of failure. Lack of positive social connection to school has been repeatedly tied to lowered academic performance (Osher et al. 2003, Lee et al. 1999), externalizing and aggressive behavior (Battistich & Horn, 1997; McNeely, 2004), and high drop out rates (Jerold, 2006). Positive social connection is linked to positive social relations and supportive services.

## **Social relations**

Empirical research on school outcomes consistently shows that positive, caring relationships between adults and students at school is an important factor in the learning environment, especially for students who may not have positive parental support (Blum & Rinehart, 1998; Wimberly, 2002; Ferguson, 2008). Having positive relations with pro-social peers is equally important (Johnson, 2000; Wentzel, 1998). Both are resiliency factors among students with multiple risks for school failure and conduct problems (Benard, 2004).

Social relationships at school are not only the context for learning and behavior; a growing number of scientists and educators argue that they are directly involved in the learning process itself. Neuroscientists argue that every individual is born with a “contact urge.” Monkeys deprived of social contact fail to thrive physically; evidence suggests there may be cognitive costs as well. Recent brain studies have identified “mirror neurons” through which, when one monkey sees another poked with a stick, the parts of the brain responsible for sensing pain light up in the observing monkey. This is a neurochemical example of the deep links between social beings (Gopnik, Meltzoff & Kuhl 1999). It partly explains why injury to any is an injury to all. Caine and Caine, who have developed a twelve point system of education based on direct application of mind-brain research to K-12 education argue that “All students have the capacity to comprehend more effectively when their needs for social interactions and relationship are engaged and honored” (2004).

In *Ripple Effects* student training software, a whole series of lessons coach students on how to choose friends, and

how to form and sustain positive relationships with them. Ripple Effects builds into its training software for children and teens, core skills that enable mutually respectful and gratifying personal relationships. The program also addresses a wide variety of relationship issues in concrete terms: “dating,” “friends,” and “solidarity” are all topics; so are “fighting,” “bullying” and “dating abuse,” “peer pressure” and “parents.”

The student training software also includes specific lessons on how to improve communication and relationships with parents and with teachers. The tutorial “teacher conflict” is one of the most popular in the teen software.

Every lesson has a transfer training application for friends and family.

Professional development software includes both core competency training in connectedness (relationship) skills and specific social skill training to enhance educators’ personal relationships with students, parents and other teachers. It addresses the teacher/learner bond directly with lessons (including video modeling) to promote empathic identification of teachers with students, and to develop their ability to communicate their care. Training includes specific suggestions such as greeting students by name at the door, keeping abreast of students’ extra curricular activities, and using body language to communicate care.

### **Support for students**

Ripple Effects student training software addresses the issue of student support on several levels. It provides direct support and personal guidance on a host of personal issues, including health and mental health issues, from anxiety and social isolation, to obesity, to talking too much. It builds student capacity to find

support, through specific lessons on “getting help” and “using community resources,” as well as a lesson on how to approach and talk to a counselor, and how to find and work with mentors. Every one of the hundreds of topics has an assisted journal activity that includes identifying exactly who the student can turn to for help with whatever issue s/he is exploring.



*In formative evaluations, students report that the software program “listens to me” and “it’s like a friend.” Both qualitative and quantitative data indicate that students use the Ripple Effects program to get guidance and encouragement on personal topics, especially related to abuse and parental alcoholism.*

*Quantitative data from outcome studies indicate that more than 96% of all students who have minimal exposure to Ripple Effects (3.5 contact hours over seven weeks), also voluntarily use the software to access individualized support and guidance on topics of personal concern. However, disaffected students are unlikely to get the initial exposure unless it is required rather than invited, and compliance monitored (Bass, Perry, Ray & Berg, 2008; Berg & Ray, 2008).*

### *Positive behavioral support*

The combination of student and staff software also provides implementers with a flexible method for providing positive behavioral support to students in classroom, counseling, and discipline setting. Training for these setting level uses make up a whole set of tutorials in the *Coach for Staff* software.

Ripple Effects balances the experts’ emphasis on positive youth development, with the implementers’ practical need to address a specific behavior problem at a particular point in time; and with students’

genuine interest in understanding why they do things, and how they can have more control over their actions. The student software provides cognitive-behavioral and social skill training to address dozens of behavioral infractions recognized at most school districts, from “talking back,” to “cheating,” to “fighting,” to “bias activities.”

The software does more. Individual tutorials address not only specific behavior problems, but also underlying reasons for those problems in the domains of the individual, family, peer, school, and community. It includes both risk and protective factors, with separate but equivalent names for how adults and youth may identify them.

### ***Support for teachers***

Ripple Effects professional development software provides teachers with five kinds of support: personal guidance about their own social-emotional experience and its role in self-care and in supportive teaching; problem-solving support and guidance for particular challenges with students as they arise; technical skill training in classroom management; coaching in cultural competence and responsiveness; and training in implementation of Ripple Effects and other student-centered, prevention and intervention programs.

As with the student program, Ripple Effects professional development software takes the point of view of the learner in every scenario. At a time when teachers are under siege from many directions, Ripple Effects is unequivocally on their side. It has a specific lesson on how to obtain support for themselves, including taking advantage of underused, district level, intermediary resources. Teacher implementation of the Ripple Effects student software also increases the capacity of educators to

provide students with individualized support to encourage achievement of specific goals. For instance, if the expectation is for students to score high on tests, they can assign the “testing” tutorials. If the expectation is for students to keep hands and feet to themselves, a lesson by that name can show students how. Finally, Ripple Effects *Coach for Staff* trains implementers to handle disclosure of personal problems by students, including abuse and other issues for which school personnel are mandated reporters.

### ***Support to increase parent involvement***

Parental involvement in school is a key factor in overall school success and success of each student, even those whose own parents are not directly involved. School based programs that help stretched-thin parents meet their own needs draw more participants than those designed for parents to help their children (Epstein & Lee, 1995; Cotton & Wikeland, 1989).

Ripple Effects *WSIS* supports parents and parent involvement in these ways:

An Illustrated parent-training guide addresses expectations, communication, discipline, self-regulation, learning differences. Schools can download and print it without cost

Schools can buy extensions of their institutional licenses to allow training software to be installed at home

Teachers can use “Eagle Eye” postcards to notify parents of their children’s prosocial behavior

Staff software provides training in how to use conferences to help parents understand how their children learn best, and how to strengthen bonds between parent and school

Family relationships, especially parent-child relationships, have a special place in the student programs. “Talking to parents,”

“conflict with parents,” “family history,” “curfews,” and “embarrassment about family,” all are tutorials in the student software



*Research on impact of Ripple Effects indicates that that non-professionals (including parent volunteers) facilitating the software can have outcomes equal to and greater than certified teachers providing live instruction in life skills during the same periods (Bass, Perry, Ray & Berg, 2008). Thus Ripple Effects encourages schools to hire parents as facilitators of the software training, especially in after-school programs. They can leverage their relationship with students and the community without compromising the fidelity to science-based practices, which is built into the program.*

### ***Opportunities for social-emotional learning***

The correlation between social-emotional learning programs and school safety has been well documented for more than two decades (Payne, Gottfredson & Gottfredson, 2003; Gottfredson et al 2004). The correlation between SEL and positive peer-to-peer (Flook, Repetti, Ullman, 2005) and teacher-student relationships (Murray & Malmgren, K. 2005) is also well established. Now the link between social-emotional learning programs and academic achievement has also been empirically established. A growing body of research has demonstrated that social-emotional learning (SEL) programs positively impact school performance (Durlak et al. 2008, Greenberg et al. 2003, Hanson et al. 2004, Zins et al. 2004, Dymnicki et al 2009). Many researchers categorize these SEL programs in two major groups: positive youth development (PYD) and character education (CE). The former focus on social-

emotional competency (skills and feelings), the latter on values and choices consistent with democracy and ethical behavior.

Ripple Effects is a comprehensive program that promotes social-emotional competencies in students and in the adults that work with them. Seven core social emotional abilities (self understanding, empathy, assertiveness, impulse control, management of feelings, decision making, connection to community), broken down into 120 micro-components, form the core of the program. Hundreds of additional lessons use various combinations of those components to concretely address specific social, emotional and academic challenges. A listing of the Seven Key Skills and their component parts can be found on page 5.28.

### **Responsibility**

A sense of personal and collective responsibility is the third marker of successful learning environments. It is a major factor in felt culture, and a key predictor of involvement in delinquent activity (Osher, 2000). Schools that encourage both students and teachers to take responsibility for their actions, and that actively engage them in setting goals and shaping the rules and expectation that govern their behavior, produce higher academic performance and stronger bonds to school (Wentzel, 1991). They have lower rates of violence and lower drop out rates than environments that don't (Wentzel, 1991). That shared sense of responsibility cannot be legislated. Rather, five mutually reinforcing and aligned factors contribute: a shared vision of a learning community characterized by responsible behavior and academic success, institutional policies that support that vision (Osher et al. 2003), embodiment of those policies in a Code of Conduct with

a clear set of rules (Albert, 1996, 2003); a consistent set of graduated consequences for breaking the rules (Osher et al. 2003); and a problem solving structure and process to address challenges as they arise (Elias and Bruene-Butler, 1999).

### ***Shared vision***

A shared vision and sense of common purpose contribute to the sense of shared responsibility that marks successful schools. They are more commonly found in small schools, and those that serve a clearly defined academic niche, than large “generic” schools (Raywid, 1999; Cotton, 2001; Meir, 2002).

Ripple Effects *Coach for Staff* provides coaching in how to create and sustain a vision of shared purpose and success for the whole school community, which includes the vision that all members treat each other with respect and all high school students graduate. The staff development software also includes coaching for setting school-wide, cooperative goals in positive terms, and holding to a vision in the face of obstacles.

### ***Aligned Policies***

Ripple Effects *Coach for Staff* encourages administrators to develop – and teachers to push for – school-wide policies that reflect the operating vision, are consistent with district guidelines, and with which every classroom and extra curricular setting can be aligned. Although it generally does not make recommendations about specific policies the Professional Development software includes coaching on policy issues related to safety and fairness. Teachers are trained in their legal responsibilities as mandated reporters. The coaching includes guidance on how to handle disclosure of abuse, balancing the

need to maintain trust and confidence with mandated reporting responsibilities.

In the Teen and Elementary training software, students are trained to report anything that could jeopardize the safety of a peer, teacher or the school community. They are encouraged to confront unfair policies without attacking policy makers.

### ***Enforceable rules***

A set of clearly stated, widely disseminated, enforceable rules is yet another indicator of a school marked by a sense of personal and group responsibility.

Ripple Effects includes training for staff on how to involve students in developing effective, enforceable rules and how to bring a culturally competent and responsive mindset to the interpretation of rules. It includes training for students in how and why to respect those rules.

### ***Consistent, logical consequences***

The persuasive power of rules is enhanced by a uniform system of graduated consequences for breaking those rules. The most effective consequences are logically related to the behavior that occasions them, uniformly applied, and not unduly severe (Lipsey and Wilson, 1998).

Ripple Effects *Whole Spectrum Intervention System* is designed to enable a standardized, consistent, graduated set of disciplinary consequences for dozens of school based behavioral infractions, from talking back, to cheating, fighting, hate crimes, etc. It can do so without sacrificing the personalization that is correlated with greatest positive effect. The consequence (completing a Ripple Effects topic) is directly related to the offense of the same name. Rule breaking behavior is listed by several names, reflecting the separate, but equivalent terms that adults and youth may

use to identify the same behavior (i.e. “Skipping” vs. “Truancy”).



See *Tertiary Intervention: Sample Individual Treatment Plans* for instruction for how to use Ripple Effects students program in graduated system of consequences that allows for both standardization of response and individualization of treatment. For instance:

- 1st offense: Student is given a warning (same for every student)
- 2nd offense: Assigned tutorial dealing directly with problem behavior (same process for every student; content differs by student)
- 3rd offense: additionally required to scroll through the list and find what s/he thinks might underlie the problem behavior (process the same for everyone, content differs by student)

### ***Problem solving structures and processes***

Training in social problem solving for non-academic areas has repeatedly been shown to result in school based aggression, starting with children as young as second grade (Elias et al. 1986; Weissberg & Elias, 1993; Elias & Bruene-Butler, 1999). Recent meta-analyses have also linked it to improved academic performance (Zins et al. 2004). Both analytical and creative thinking contribute value to the process. When either is omitted during the problem solving process, effectiveness declines (Huitt, 1992).

Ripple Effects provides both educators and students with training in the problem solving process. It includes the classic method of identifying the problem, brainstorming alternatives, evaluating those alternative against clear criteria, (Ripple Effects suggests fairness, rightness, safety,

effectiveness and impact on the feelings of others), selecting a solution to test, trying it, getting feedback and fine tuning. In addition, the assisted journal writing function of the training software adds two more elements: at the beginning, naming one’s feelings about the situation or experience being explored; at the end, identifying who in the community can be a resource to help with solving this problem.

A problem-solving framework underlies the structure of the entire Ripple Effects system, with 700 scenario-based, multimedia problem statements that can be jumping off points for personal or collective problem solving.

The professional development program includes coaching in how to put a problem solving structure in place, with examples of kinds of structures that have evidence of effectiveness (for example, rotating group of problem solvers, regular class meetings, peer mediation). While consistently coaching educators to involve students in the problem solving process, the software also points out that it is unfair and unrealistic to expect students to independently handle problems, such as racial conflict, that adults are unwilling to deal with. For peer mediation to work, it must complement adult authority, not substitute for it.

### **Challenge**

A safe nurturing, supportive, responsible environment can, by itself, produce strong links to school. However, it can’t ensure academic proficiency or success. Another important and necessary characteristic of effective learning environments is academic challenge. There are three aspects of positive challenge in a school environment: external expectations, internal meaning and motivation, and

academic stimulation and engagement (Osher et al. 2004).

### **External expectations**

Implicit and explicit external expectations affect student performance, and perhaps as importantly, teacher perception of student performance (Weinstein, 2008; Murphy & Hallinger 1985; Brophy, 1983).

Ripple Effects WSIS directly addresses external expectations of students' success in the professional development software. It trains teachers in how to set and communicate universal expectations for student academic success and responsible behavior. It raises consciousness about how unconscious stereotypes about ethnicity and income can affect teachers' expectations for individual students. It also addresses group level expectations for students, by incorporating site-based goals in the site planning process.

### **Internal factors**

Equally important to student success are internal factors that impact learning, including personal relevance, internal motivation and stimulation.

#### *Personal relevance*

Ripple Effects assumes every student has some trigger point that is the place of greatest personal interest and concern. The program ties more than 500 evidence-based, social-emotional training modules to more than 1500 personally relevant topics for children, adolescents and adult staff. Learners can enter from whatever point has the greatest personal meaning for them, and be led, step-by-step, to training in core social-emotional abilities that bear on successfully handling that issue.

### *Internal Motivation*

The drive for meaning is its own motivation (Gopnik, Meltsoff and Kuhl, 1999), but can be countervailed by internal beliefs about the impossibility and/or negative social costs of pro-social behavior and academic success (Bandura, 1986, 1997; Huitt, 1999).

Ripple Effects student training software directly and indirectly addresses the issue of internal motivation and agency (conation). It systematically develops self-efficacy through lessons on self-awareness, personal strengths, goals, confidence, and control. It addresses the issue of norms against social and academic success in specific lessons on "success-phobia" and "school failure." It explicitly encourages students to set high goals for themselves and reminds them often of their strengths and capacity for greatness.

### *Stimulation*

While teachers often cite defiance as the number one behavior problem in schools, observational research has documented that "goofing off" (behavior that arises out of boredom) is much more frequently the source of disruptive activity (Malone et al. 1998). Boredom has also consistently been identified as a key factor in drop out decisions (Bridgeland et al. 2009). Threat is not an effective antidote to boredom (Perry, 2007), but sensory, cognitive and affective stimulation are (Caine & Caine, 2005), as is "positive stress" (Seligman, 1993). Deft orchestration of what's happening in the classroom, in particular maintaining momentum through instructional transitions, (Kounin, 1970) can also reduce boredom.

Ripple Effects includes "bored" as a specific topic in the student programs. as well as "unmotivated", and "what you love." Sensory stimulation of the parts of

the brain that respond to visual, sound, text, and kinesthetic cues are built into the design of the *Whole Spectrum Learning Platform*. Specific instructions for direct physical rehearsal of target skills is included in each lesson. Instructions for sports application further extend the opportunities for physical engagement in the social-emotional learning process. On a parallel track, the staff training program also addresses the issue of bored students, and provides strategies for engaging diverse learners with multiple kinds of instruction.

Both cognitive stimulation and classroom orchestration are issues best understood in the broader theoretical framework of learning and pedagogy (pp.5.57-5.58) that is the basis for the *Whole Spectrum Learning Platform* described in Chapter 6.

### **Wider equity issues**

Schools *are* a context for education and *have* a context for education. They have a specific social-cultural heritage, and are located within a matrix of active socio-economic and cultural influences that seep through the walls like gas. The impact of socio-economic influences on juvenile involvement in the criminal justice system has been described in Chapter 1. Many of those same forces impact the educational system and explain why, for far too many urban students of color, schools pave the way to prison (Ferguson, 2006; McCall et al. 2006). A particular paradox for both education and justice is that while they are both considered bedrock institutions of democracy, neither has its origin in a system of equality.

### ***Social-cultural heritage of inequity***

Educational inequity is part and parcel of western cultural heritage (Kellner, 2003).

The classical Greek system of education reserved formal learning for the leisure class, a group comprised mostly of slave holding, male patricians. It was a system defined by – and biased for – the economically and socially rich. Education was designed to prepare the rich for patronizing governance of the poor; it was not designed to prepare the poor for their own governance. Classical Roman education, while maintaining class distinctions, and still excluding slaves, cast a much wider net. It was the first Western experience of scaled, “public” education. The purpose of Roman education was to advance an empire in which loyalty was maintained through the ties of citizenship. Education was the primary means of socialization for both citizenship and empire building. Today schools retain that function of socialization toward citizenship. Unlike the Greek education for the elite, which put a premium on independent thinking, public education for the Roman lower classes emphasized training in how to be proficient soldiers and builders (roles for which females could not yet be imagined to fit). This put a premium on formal structures of authority, consistent codes of discipline, and the value of following instructions – values recognizable in many schools today. For the distinctly smaller, Roman “middle” class, education was focused on developing skills for administering bureaucracies and waging war. For the yet much smaller group of true aristocrats, classical Roman education was similar to classical Greek education. The role of the humanities, especially oratory, was prized for the few who would enter politics, as befit their rank. Yet that exposure to the humanities did not lead to renouncing the inhumane practices of human slavery and gender exclusion. It has taken many centuries for “ideal” educational policies to

evolve from social exclusion, to separate but equal education, to full inclusion of all. Even when formal policies have advanced, real world, daily practices have often lagged behind.

*Persists even in “progressive” models*

The classical education model that was formally built on social inequity is explicitly criticized, even disdained, by many modern, progressive educators. Yet it has been at least an implicit part of contemporary models for education as well. Most alternative models for learn-by-doing, “democratic” education have been developed within private schools for the economically elite, and within university settings, as “segregated” schools for the children of the educationally elite. While slavery has been eliminated, and gender exclusion has greatly receded, socio-economic inequities continue to be a major influence in schools and learning (Oakes et al 2004; Oakes, 1985; Kozol, 1991).

There is no single stronger predictor of student educational failure than poverty (USDE, 2001). Economic forces don’t stop at the schoolhouse door. The economic “haves” have access to better schools with more resources, staffed by better trained and more experienced teachers who have higher expectations of their students and provide them more support, than the “have nots” (Oakes, 1985; Oakes, Mendoza & Silver, 2004). Thus, universal academic proficiency cannot be realized without addressing the issue of gross economic inequity between students.

*Ripple Effects’ bias:  
Preferential option for the poor*

Ripple Effects implicitly and explicitly rejects educational bias toward those who have disproportionate social, economic, and political power. To the degree that the

content and process within Ripple Effects WSIS reflects philosophical bias in any area (and it is almost impossible to have none) Ripple Effects leans toward “a preferential option for the poor” (Gutierrez, 1988). Taken as a whole, Ripple Effects is an affirmative, educational measure to empower the poor, whether that poverty is a condition of body, mind, heart, spirit, physical, mental or emotional infirmity, social status, family structure, discriminatory laws, ethnic labeling or other impoverishing internal or external forces, including economic ones.

Ripple Effects addresses the impact of class differences directly in both the student and teacher software. Student software includes a tutorial on class (“money”), and also related tutorials on feelings like envy and shame. It addresses lowered aspirations (“hopeless”) and a foreshortened sense of future (“no future”), characteristics that are often associated with both poverty and trauma. (A related topic, “rich,” addressed special stresses that impact children of great privilege, was included in the original design, but had to be dropped due to lack of resources.)

The professional development software addresses the links between economic status and student and teacher expectations for educational success. It raises consciousness about the impact of economic status on simple things like participation in “free” field trips, which require special clothing or materials.

On the structural level, the use of Ripple Effects software supports economic equalizing forces in education, by making the very best instructional practices available to all students, regardless of experience levels of their teachers, and by providing less experienced teachers, who disproportionately serve the poor, with immediate access to more experienced

teachers' earned wisdom and modeling via the software.

### ***Discrimination based on ethnicity***

The outside-the-schoolhouse correlation between African American, Latino, and Native American ethnic identity and poorer lifetime health and earning outcomes, as well as the specific overrepresentation of these groups in criminal justice settings, as described in Chapter 2, is mirrored within schools, in disproportionate academic achievement, discipline and special education referrals.

In 2006 the Northwest Evaluation Association analyzed academic achievement data from more than 500,000 students between third and eighth grade. They found that at the end of each grade, European-American students performed better than African-American and Hispanic students. Students from wealthier schools outperformed students from poorer schools. For each score level, at each grade, in each subject, minority students grew less than European-Americans and students from poor schools grew less than those from wealthier ones (McCall, Hauser, Kronin, Kingsbury, Houser, 2006).

African American, Latino and Native American students are disproportionately represented in school discipline settings of (Lietz & Gregory, 1997) suspensions (Costenbader & Markson, 1998; Skiba et al. 2003), expulsions (Skiba et al. 2000), and corporal punishment (Gregory, 1996). This ethnicity-based disproportionality exists independent of related variables, such as income and learning disabilities. It is an urgent civil rights issue within schools that must be addressed with unyielding commitment and great sensitivity. This unsolved equation has two sides: that of teachers and that of students. Both must be addressed.

Ripple Effects addresses the volatile issues of disproportionate academic failure and discipline referrals correlated with race and ethnicity, with a non-blaming, multi-level approach to social justice and cultural competence from perspectives of school, students and teachers. It is described in detail at the end of this chapter (pg. 5.67).

### ***English Language Learners (ELL) Limited English Proficiency (LEP)***

The poorer school performance of English Language Learners is easier to understand – and to justify – than poorer performance that can be traced to ethnic stereotyping, although often the two go together. There is great debate about whether equal education for undocumented ELL children, whose parents may be in the country illegally, is a matter of social justice, or simple charity. If the latter, some argue that it is an unaffordable level of generosity in harsh economic times. However, the economic counter-arguments for educating all children to a basic level of proficiency are strong. Educated immigrants have lower participation in crime, higher earnings and pay more taxes than their undereducated peers. Regardless of one's position on the education of undocumented children living in America, for American citizens and legal immigrants who arrive at school with limited English proficiency (LEP), an equal opportunity to learn is a basic civil right.

To assist English language learners make a successful transition to English, Ripple Effects provides peer narrated audio, matched to text in the program, engaging illustrations as visual clues, and word prompts in the journaling exercises. It also allows learners to complete the journal writing exercises in any language recognized by the computer.

It is usually the case that until ELL students fully master decoding skills, they do not have opportunities to participate in higher order thinking for comprehension. By delaying these higher order skills beyond the time they would be developmentally appropriate in their native language, these students are at a disadvantage for succeeding in college, even when they complete high school.

With Ripple Effects, because of the narrated text, word prompts, and opportunities to write in their own language, these students can temporarily suspend their decoding skills and engage in higher order thinking about the content area in which they are indisputably experts, their own lives. Ripple Effects also addresses the phenomenon of lowered reasoning demands on ELL students because of the imposition of stereotypes about limited academic ability by some teachers, and internalization of those limiting stereotypes by some students. One student tutorial provides training in how to confront discriminatory expectations by teachers. Another (“ELL”) includes a true story by an Hispanic student, who refuses to believe the counselor, who tells him he will not have sufficient command of English to go to college. The student set a personal goal and ended up getting a full scholarship to University of Cal Berkeley. Additional tutorials specifically address motivation, goals, family background, culture.

### ***Gender gap***

Since the passage of Title IX legislation in 1972, gender equity in education is the law, from sports to math and science. Scientists continue to argue about whether there are biological, gender-based differences in cognitive capacities that account for boys’ historically scoring

higher in math and science and girls scoring higher in language related tests. It is possible that by the time the argument is settled the gender gap will be erased. High school “aptitude” differences among boys and girls of the same class and ethnicity are shrinking fast. A narrowing of achievement gaps between males and females is accelerating each year. Among African Americans, females now outpace males in school achievement by almost every measure. A legitimate question is whether boys are now being left behind.

As with class and ethnicity, gender stereotypes may begin outside the school, but they insidiously impact much that goes on inside, including social behavior and dynamics. Across all ethnicities, girls still have much higher chances of being targets of sexual harassment at school; boys still have much higher chances of being referred for discipline-related infractions. Feminist critical theorists assert that these discrepancies must be partly traced to differences in socialization, which more greatly rewards aggressiveness in boys and passivity and quietude in girls (Weiler, 1991; Elsworth, 1989).

In some cases, ethnic stereotypes are overlaid on gender ones, and vice versa, to even more pernicious effects. The stereotypes that African American boys have a greater chance of ending up in the criminal justice system than they do of completing college, and that African American girls are more likely than not to become their children’s sole source of financial support, are both remnants of a system of enslavement. Both have some basis in statistical probability. Yet neither is predictive of an individual student’s future. The persistence and reinforcement of these stereotypes becomes, for too many students, self-fulfilling prophecies.

As described in chapter 3, Ripple Effects addresses gender issues directly in

tutorials for both students and teachers. It also addresses them within a wider framework, as in the “confronting injustice” tutorial, where the scenario is about how girls in the school could respond to being denied equal playing time on the soccer field. The software addresses gender stereotypes implicitly in the thousands of illustrations, which use a strict scoring system to ensure that girls and boys are equally portrayed as active/assertive/athletic/achieving. One of the hardest stereotypes to break has been that of the typical body shape of a teen or pre-teen girl. Hundreds of drawings have had to be returned to the artists for revision, to correct “Barbie doll” personifications that can insidiously influence girls’ physical and mental health.

### ***Students with disabilities***

For most of this country’s history, indeed, for most of recorded western civilization, students with recognizable mental disabilities and a wide range of physical disabilities were excluded completely from school. Following the pattern of progression for other civil rights, the status of students with disabilities progressed in stages from total exclusion, to separate (and usually inferior) educational opportunities, to equal rights under the law. Since 1975, by special federal legislation, all students who have identifiable disabilities are entitled to a free and full education in the least restrictive environment possible. This is true whether those disabilities and disorders are cognitive, physical, or social-emotional.

#### *Physical and cognitive*

In Ripple Effects, physical and cognitive disabilities are directly addressed through tutorials by name (i.e. “hearing impaired,” “dyslexic,” etc), as well as

through related topics such as “wheelchair,” and “special education.” Students with mobility related disabilities have physical accessibility to the program wherever they have computer access. Rich images and full sound to text equivalents for all videos make Ripple Effects software fully accessible both to students with hearing impairment who can focus on the text and pictures, and to dyslexic students and LEP students who don’t need to actively decode in order to understand and analyze the main themes.

The organizational structure of more than 10,000 micro tutorials within the 700 topic areas, makes the program accessible to students with short attention span, regardless of cause. The “impossible to fail” information structure enables students who have not has success in other academic contexts to have a first success. “Live text” (which includes narration for all screens), but not “graphic text” (where words are embedded with illustrations) can be translated to Braille with third party assistive devices for the visually impaired. The size of the screen can be enlarged through system preferences to accommodate mild visual impairments. However, because the program is so image heavy, it is not recommended for students with severe visual impairments.

#### *Social-emotional disorders*

Upwards of 80% of all students identified as having special needs have been referred for social-emotional, behavioral or communicative disorders (Data Accountability Center, OSEP, 2009). These include clinically diagnosed conditions, such as autism spectrum disorder, conduct disorder, and impulsivity.

Social-emotional readiness to learn, regardless of the cause, is a fundamental equity issue, of no less importance, and

potentially far more serious consequences, than any other equity factor. Students with emotional disturbance have worse school outcomes than students from any other disability group. They “fail more courses, obtain lower grade point averages, miss more days of school, and are retained at grade more than other students with “disabilities” (AIR, 2009). A clear link has been established between social-emotional competency and school and life success. For children with social-emotional disorders, the need for remedial SEL training and psycho-educational best practices is acute.

As described in Chapters 3 and 4, Ripple Effects offers a full spectrum of affective, attention, cognitive, behavioral, social skill and personal guidance strategies to meet the immediate and longer term needs of students with social-emotional disorders. Tutorials that explicitly address social, attentional, and emotional disorders (“dyslexia,” “attention problems,” “depression,” “cutting,” etc.) as well as physical disabilities, all help directly affected students to develop resilience and assertiveness, and to approach trusted adults for help. These lessons also help students without disabilities to develop increased empathy toward students with disabilities. Field reports indicate that tutorials on emotional regulation and social skill training, which can be repeated as many times as needed, have been used successfully with students who have mild to moderate communicative disorders, like mild forms of Asperger’s syndrome (Ripple Effects *Client Reports*, 1999-2009).

The most widespread use of Ripple Effects across the United States is as a “least restrictive environment” intervention as part of individualized intervention plans (IEPs) for students who have been identified as having social-emotional disorders, or who have risk factors for being

disproportionately referred for those disorders. It is also being used as a reasonable accommodation for certain cognitive and sensory impairments.

Ripple Effects’ *Coach for Staff* software and supporting materials directly supports creation of learning environments where instruction in emotional self-management is an integral part of all learning. It offers specific tutorials to help teachers deal with emotional outbursts and common behavior problems, such as defiance and disruptive behavior.

*It’s not always children who have special needs*

Unfortunately not all children who have been labeled as emotionally disturbed have a true disorder. In some cases, the child’s “special need” is actually a classroom teacher’s need to have someone else deal with a correctable behavior problem. This is especially true for novice teachers and those with low-level classroom management skills. For children who are being shunted into Special Needs classifications for behavior problems that could easily be correctable within mainstream settings, the need to relieve classroom teachers of the too heavy burden of personally providing that training is urgent.

Ripple Effects is responsive to teachers’ need for supportive services, by directly providing students with needed behavior correction, independent of the teacher’s personal skill level.

In other cases, the child’s “special need” is directly linked to overlapping interests of parents and policy makers, who both benefit by having challenging children classified as severely emotionally disabled (SED). The government provides financial incentives to parents whose children are diagnosed with conduct disorders, but not

to those who raise responsibly behaving children despite adverse circumstance. Schools can raise their mean standardized test scores and avoid punitive intervention, if they by excluding the scores of severely (misbehaving) students who are failing in schools. Both sets of incentives are misaligned against the students' interest. Their families are caught in a terrible double bind. If their children behave responsibly and succeed in school, the family can pay a heavy financial price. If they fail, extra income is more easily assured. It is because students' outcomes are so closely tied to social policies and dynamics outside the school door, that this wider context needs to be kept continually in mind, when designing intervention programs.

Misaligned parental incentives described above is one reason that Ripple Effects recommends hiring parents to facilitate student use of the student software, even – for some children with intensive needs – in their own homes.

As can be seen from the above, school culture does not exist independently of a wider social context. But these wider social-equity issues still do not fully explain the fact that even when the setting is safe, supportive, designed to encourage personal and collective responsibility, academically challenging and located within a framework of commitment to social equity, a substantial minority of students may not learn what is intended or assigned. Specific processes of learning, teaching, classroom orchestration and assessment – the traditional “stuff” of schools, is still a big part of the picture.

## KNOWLEDGE AND MEANING

Theories about knowledge and meaning precede and underpin models of

learning and instruction. Major differences between traditional and non-traditional understandings of the nature of knowledge have to do with the objectivity of knowledge, its inertness, its structure, and its valid measures.

### Traditional position

#### *Knowledge is objective*

A basic principle of the traditional position, one that can be traced at least as far back as ancient Greek philosophy, is that there is an objective, “true” world that exists apart from culture and apart from the learner. In particular, it exists apart from the learner's senses and emotions. Because it is objective, it can be described – and known – in terms of concrete facts and procedures.

The knowledge base of *The Whole Spectrum Intervention System* incorporates empirically validated, factual information for hundreds of topics from credible, academic and government sources in health, education and juvenile justice. It presents specific, procedural knowledge (skills and best practices) that have been correlated with specific outcomes, as described in Chapter 4.

#### *Knowledge is inert*

A second major classical principle in the West is that the world, and knowledge about it, is fixed. Thus it can be sliced and diced into chunks. Those chunks can be poured into and out of containers, including the container of the mind. This rationale underpins the division of knowledge into specific disciplines. It is the logic underlying computer programming and all data base structures. It is the rationale for breaking educational standards and frameworks into a multitude

of specific learning objectives and well-defined lesson plans for meeting them.

#### *Content standards & frameworks*

A nested set of objective content standards and frameworks operate on the federal, state, county, city and district levels. State policies govern curricular requirements, including requirements for non-academic areas, such as character education, service learning, work place skills, GED requirements, and/or discipline policies. There are state criteria for adoption of both text books and supplemental materials.

Ripple Effects has sliced an evidence-driven, factual and procedural knowledge base into tens of thousands of chunks, components that can be individually learned and tested for.

See how specific tutorials can be matched to National Health Standards and Frameworks for health ([www.rippleeffects.com/education/support/implementation/health.html](http://www.rippleeffects.com/education/support/implementation/health.html)) and state standards for Language Arts in the areas of Listening and Speaking, Writing, Reading, Media Analysis and Production ([http://www.rippleeffects.com/education/language\\_artsalignment.html](http://www.rippleeffects.com/education/language_artsalignment.html)) as well as some social studies standards. Ripple Effects has been certified as meeting California state requirements for supplemental materials in terms of social content.

### **Critique of objectivist philosophy of knowledge**

Despite the obvious value of objectivity in the public schools, there are both theoretical and practical critiques of this position, especially when it is applied to social-emotional learning.

Far from being a fixed quantity, the amount of recorded knowledge is expanding at remarkable speed. Although there are wide discrepancies in the estimates of rates of knowledge expansion, there is equally wide agreement, that whatever the exact rate of expansion, the amount of human knowledge in many fields has reached the point that no human memory can include it all.

Separate from the sheer volume of factual and procedural knowledge being amassed is its relevance. Focusing on fixed knowledge and procedures made sense in a manufacturing economy where a substantial proportion of workers were required to master a limited set of information and skills to be proficient. It makes much less sense in a service-based economy, where idiosyncratic, case based decision-making is frequently needed. It does not allow sufficient flexibility to address the needs of a rapidly changing world. An increasingly complex, information and service-based economy, requires not only high level thinking skills, but higher level social interaction than at any time in history (The Partnership for 21st Century Skills, 2004).

Each and all of these factors have contributed to development of new models of knowledge, with new implications for learning and teaching.

Ripple Effects houses a huge, multi-media content library in a data base structure with the capacity for continuous expansion. Although still delivered on a disk or flash drive, the program has more than quadrupled in size since first introduced. It is not intended to be completely known by any one learner. Rather The *Whole Spectrum Intervention System* is a flexible and fluid one, so that this content base can be approached and implemented in myriad ways, to meet

myriad purposes, and adapted to changing learning circumstances.

Ripple Effects *Whole Spectrum Intervention System* builds skills for positive social interaction, collaboration, considered decision-making, and adaptation to change that are requirements of a 21st century work place. Tutorials include: "Knowing yourself:" "Learning style," "Intelligences," "Temperament," "What you love," "Stress response type," "Beliefs and values," "Creative potential," "Strengths and weaknesses," "Setting goals," "Reflecting on performance," "Dealing with criticism," "Self-esteem," "Communication skills," "Introducing yourself," "Having a conversation," "Expressing thanks," "Expressing sympathy," "Giving a compliment," "Receiving a compliment," "Making an apology," "Ignoring," "Dealing with authority," "Sharing;" and "Group skills," such as "Making space," and "Joining a group or game."

### **Subjectivist position about knowledge**

John Dewey (1859-1952) was the first to articulate in an educational context the theory that the world – or at least any person's understanding of it – is not a fixed and certain reality. Although considered the father of educational pragmatism and partly motivated by political considerations, Dewey's starting point was philosophy. He posited there was an irrefutable contingency to all reality, which is "constructed" in real time, by each person in an evolutionary process. Each person's conscious or unconscious understanding of self – including emotional understandings – interacts with stimulus from the environment to form a new reality, in successive layers of meaning.

Recent brain research suggests that the position that reality is individually

constructed is rooted in physiology as well as philosophy. Data from brain imaging techniques show that the individual evolutionary process of understanding is accompanied by changes in the physiology of the brain (Huttenlocher, 2002). Brain imaging also provides proof that raw experience – even without cognitive awareness of it – changes the brain (Cozzolino, as cited in Caine and Caine, 2006). The search for patterns affects how and which cells work together (Diamond, 1988). Groups of cells that are called on simultaneously and repeatedly form response patterns that eventually get wired together, and from then on fire together (Hebb, 1961). In this way, people bring different brains to each new experience, not only in terms of native aptitudes, but also in terms of the cellular blocks of subjective content built from their experiential bases of understanding. A growing body of brain-based research supports the contention that meaning is a deeply personal thing, all the way down to the cellular level. In this sense, as Francisco Varela has described, all cognition is embodied, and in a constant state of change (1991).

Ripple Effects *Whole Spectrum Intervention System* formally recognizes the primacy of learners' personal experience – especially emotional experience – as the framework and entry point into new understanding. It provides more than 1000 separate topical entry points into the training program in the teen software alone, with several hundred more each in the elementary student and staff training versions. Because of the deeply personal nature of the learning experience, it builds in safeguards for privacy and protections for confidentiality into the program.

Since people have very different starting points, the constructionist view leads to the conclusion that there is not one

objective reality, but a multiplicity of realities. This subjectivity of knowledge has face validity for social-emotional experience and understanding. The words “alcoholic parent,” or “bullied,” are just two examples of hundreds of salient, highly subjective aspects of reality that may be generically classified as common risk factors for youth at risk for delinquency and dropping out, but which represent a

multiplicity of deeply personal understandings of reality.

Ripple Effects begins each tutorial with a mini case study, a scenario that highlights the subjectivity of social-emotional experiences and promotes perspective taking as a means toward wider and deeper understanding, as in the sample narrative below.



Sample Script: (test and narrated audio)

Every weekday when John wakes up he's filled with dread. He hates going to school where he's treated like an outcast and forced to do boring work. In fact, John hates school so much, he's pretty much stopped going.

Figure 5.4: Mini case study screen from tutorial “hate school” in *Ripple Effects for Teens*

### Critique of subjectivist approach to knowledge

Despite the philosophical and brain-based arguments that support a subjective approach to knowledge, such an approach to all knowledge is vulnerable to obvious criticism as well. If reality were entirely subjective and meaning created entirely by the learner(s), there would be no point to curriculum-based instruction at all (Winn, 1993). There would be no justification for objective standards. Common sense argues that unlike the meaning of the word “loved,” the reality and meaning of the word “two,” (at least in the dominant, base 10 system – an important caveat) is essentially independent of a student’s experience of it.

The position that incorporates the most data is that both traditional and progressive understandings of knowledge are true, but partial.

As described above, Ripple Effects incorporates both objectivist and subjectivist philosophies of knowledge into separate elements of the *Whole Spectrum Intervention System*.

### Social-emotional learning as a specialized field of knowledge

Straddling the border between psychology and education, Social-Emotional Learning is an emerging, specialized field. It incorporates both traditional and non-traditional understandings of the role of subjectivity and objectivity in knowledge. CASEL has

identified a specific group of abilities that comprise social-emotional competencies (2003). They include subjective areas of self-awareness (feeling-informed understandings of both self and others); a body of social relationship/communication skills that have been negotiated by social and cultural agreement, and strictly cognitive proficiencies, such as being able to construct and use an if/then sentence in order to evaluate options for decision making.

### Universal skill building

The field of social-emotional learning rests on the belief that, even though people may have differing innate aptitudes for one or other of the competencies, all are learnable (Salovey, et al 2004, Weissberg & Elias, 1993). The Collaborative for Academic, Social and Emotional learning (CASEL) defines social-emotional learning as “the process of acquiring the (core) skills to recognize and manage emotions, develop caring and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively” (Zins and Elias, 2006; CASEL, 2007). These core competencies can be matched one to one to Ripple Effects’ tutorials as seen in Table 5.1 on page 5.27

Ripple Effects has further broken down these key competencies into more than 100 micro-tutorials, as seen on page 5.28.

### SEL frameworks and standards

Even within the inherently subjective area of social-emotional learning, there is growing consensus that mastery of an identifiable body of social-emotional knowledge (awareness + judgment + procedural skills) is needed for successful school and life experience in a diverse society. Because this is so, universal standards and frameworks for SEL have an appropriate place. With social-emotional learning, even more than academic areas, the challenge is to provide standards and frameworks for learning that preserve core concepts, while allowing for local variance in how and when they are applied. Some national, non-profit organizations with specific mandates, such as Character Education Partnership (CEP), Search Institute and the Collaborative for Academic, Social and Emotional learning (CASEL) have developed and recommend “common” standards or principles for their discipline, outside of government. A few states have adopted them with minor revisions.



See how Ripple Effects matches to grade-by-grade, SEL standards developed by CASEL (Elias, 1999). (<http://www.rippleeffects.com/education/SEL/alignment.html>)

See how Ripple Effects lessons can be matched to 12 of 13 principles of the Character Education Partnership. (<http://www.rippleeffects.com/education/CEP/alignment.html>)

<b>CASEL key competencies</b>	<b>Ripple Effects Tutorials</b>
<p><b>Self-Awareness</b> Identifying emotions</p> <p>Recognizing strengths</p> <p><b>Social Awareness</b> Perspective-taking Appreciating diversity</p> <p><b>Self Management</b> Managing emotions Goal setting</p> <p><b>Responsible decision making</b> Analyzing situations</p> <p>Assuming personal responsibility Respecting others Problem solving</p> <p><b>Relationship skills (relationships)</b> Communication</p> <p>Building relationships</p> <p>Negotiation Refusal</p>	<p>Understanding feelings Identifying feelings, mixed feelings</p> <p>Strengths, learning styles Empathy Perspective taking Diversity appreciating (ethnicity, gender, religion, disabilities)</p> <p>Impulse control, self talk Managing feelings Goals, perseverance, success-phobia</p> <p>Decision making Motives (accident/ on purpose, Predicting feelings (situational and facial cues).</p> <p>Responsibility Respect, citizenship Problem solving, identifying problems, brainstorming options, evaluating alternatives, testing solutions</p> <p>Connectedness (relationships) Communication skills, questions, listening, body language, discussion, making room for others</p> <p>Connecting with others, making friends, talking to parents</p> <p>Resolving conflict, fighting (w friends, w parents) Refusing, assertiveness, peer pressure (alcohol, drugs, sex)</p>

Table 5.1: Ripple Effects tutorials matched to CASEL core competencies

**List of Ripple Effects “Seven Key” skills and their components**

**Knowing Who You Are**

*learning style*  
*smarts*  
 feelings  
 temperament  
 emotional intelligence  
 what you love  
 body  
 sports & exercise type  
 values  
 character  
 creativity  
 self-esteem  
 family background  
 risk and protection  
 community history  
 resilience  
 goals  
 accepting yourself

*Commanding Respect*

behavior-confronting  
 beliefs-standing up for  
 complaints-making  
 control-taking  
 feelings-communicating  
 injustice-confronting  
 limits-setting  
 needs-stating  
 pressure-resisting  
 rights-exercising

*Identifying with Others*

feelings-names for  
 feelings-mixed  
 feelings-changing  
 feelings-owning them  
 feelings-predicting  
 perspective taking  
 motives-understanding  
 care-showing it  
 paraphrasing  
 body language  
 questions-asking  
 solidarity-showing

**Connecting with Others**

*Communication Skills*  
 introducing yourself  
 conversations  
 thanking someone

sympathy-expressing  
 compliments-giving  
 compliments-receiving  
 apologies  
 ignoring

**Social Skills**

authority-dealing with  
 community resources  
 conflict-resolving  
 counselors-using  
 citizenship  
 discussions-having  
 dissent-supporting  
 diversity-appreciating  
 groups-joining  
 getting help  
 helping others  
 mentors  
 sharing  
 space-making  
 support-getting

**Social Values**

courtesy  
 fairness  
 generosity  
 justice  
 kindness  
 loyalty  
 reliability  
 respect-showing  
 honesty  
 responsibility  
 trustworthiness

**Managing Feelings**

mindfulness  
 sensations-physical  
 triggers-inside  
 triggers-outside  
 relaxing  
 feelings-expressing  
 letting go  
 laughing  
 happiness-practicing  
*anger*  
*anxiety*  
*crazy feelings*  
*crying*  
*depression*

*disappointment*  
*discouraged*  
*disrespected*  
*embarrassment*  
*envy*  
*fear*  
*frustration*  
*grief*  
*guilt*  
*guilt-survivor*  
*jealousy*  
*loneliness*  
*numbness*  
*revenge*  
*sadness*  
*shame*  
*suicidal*  
*unworthy*

**Controlling Impulses**

reactions-stopping  
 consequences-predicting  
*lie*  
*cheat*  
*steal*  
*hit*  
*ridicule*  
*sexual impulses*  
*defy authority*

**Making Decisions**

problem-solving  
 problem-naming  
 brainstorming  
 alternatives-evaluating  
 solutions-trying  
*Dropping out*  
*Skipping*  
*Using drugs*  
*Experiments*  
*Recklessness*  
*Sex*  
*Gangs*  
*Weapons*

\*Words in italics = application areas

*Thematic contexts for SEL*

Thematic, targeted prevention programs use training in social-emotional learning to reduce specific social injury, substance abuse, health and mental health problems. For more than two decades school-based prevention programs have been in place to address one or more of these issues. Today there are school-based, prevention programs for bullying, bias activity and sexual harassment; for gangs and gun violence; for tobacco, alcohol and drug abuse (often with separate programs for prescription drugs and street drugs); for obesity and eating disorders; for depression and suicide prevention; for physical, sexual and emotional abuse; for pregnancy and sexually transmitted diseases, especially HIV; for low self esteem and low aspirations. Although they often target common areas, such as assertiveness, for skill development, they each rest on an objective body of factual knowledge.

As described in the Introduction, Ripple Effects includes both a large library of factual information, procured from credible sources, and a body of subjective knowledge gradually accrued by each learner, for each learner, through exercises such as journal writing and completion of interactive profiles.

*Trend toward integration*

Despite positive results with individual programs, prevention practitioners, researchers and educators increasingly recognize that having a fragmented, piecemeal set of prevention programs for an ever expanding list of health and social issues is not a viable option for public schools (Elias et al. 1997; Gottfredson,

2001; Sarason, 1996; Wilson et al. 2001). There are too many to fit into the available school day. Even if they could all fit, there is substantial redundancy in the skill-based training that many utilize. Thus the trend is toward “combination” prevention programs that address health, behavioral and academic issues in a coordinated way, integrated into the academic mission of schools (Elias et al. 1997; Zins et al. 2004).

These are often also called “comprehensive” programs, although Lipsey and other researchers reserve the word comprehensive to describe programs that have components to reach families and communities directly, as well as student programs. Ideally these programs focus on skill training in core social-emotional abilities that are broadly applicable to academic, as well as social and health challenges (Zins, et al. 2004; Elias, Gara, Schuyler, Brenden-Muller & Scyette, 1991).

The latter describes Ripple Effects approach.

**LEARNING PROCESS**

With basic differences in understandings about the very nature of knowledge, it is not surprising that traditional and non-traditional positions also diverge in their understanding of how the process of learning occurs. In the traditional model, since knowledge is fixed, it needs to be stored somewhere; that place is memory. The question is how it happens.

**Traditional model: cognitive and linear**

Classical thinkers submit that the process of learning and remembering is overwhelmingly cognitive and linear. It always progresses in predictable stages from simple to complex. The ancient

Romans set out a three-stage process for all learning: from rote memory to logic, to decision-making and self-expression. In a more calibrated model, Bloom's famous taxonomy set the sequence as a six stage progression of cognitive ability that involves remembering, understanding, applying, analyzing, synthesizing/creating, evaluating (Bloom, 1956; Anderson, L. 2001). Howard Gardner posits "five kinds of minds" that parallel this developmental model (2006).

Modern models of information processing all identify pure sensory input as the first stage in memory making. Many cognitive scientists who favor an information processing approach cite evidence that before information is stored in long-term memory, it is organized using one or more mediating structures of memory: declarative (for factual information), procedural (for skill training) and/or imagery (to motivate, support and supplement the first two).

### ***Learning as conditioned response***

Calibrated and sequenced, grade-by-grade, academic curricula are derived from this model. Both brain research, which shows the gradual development of the parts of the brain responsible for higher order thinking, and developmental psychology (Piaget, 1959) at least partly confirm the simple to complex progression of learning.

Behaviorism, which became popular in schools in the 1960's, emphasized that learning is less about cognition than trained habit (Skinner, 1954; Lewis, 1999). Skinner cited the same progression from simple to complex, in a "stimulus, response, reinforcement" cycle of progressively more complex conditioning.

Ripple Effects incorporates traditional understandings of learning in these ways:

It offers different versions of the program based on different developmental levels: elementary, middle/early high school, and adult. At the elementary level, it focuses more on simple memory, understanding, and adherence to rules that promote learning and behavioral readiness. At the adolescent level, a more than doubled content base increases opportunities for higher level thinking involved in personal decision-making in a host of contexts.

Ripple Effects implicitly builds formal sequencing and adherence to that sequencing into the fixed progression of slides within each "info" and "how to" lesson for every tutorial. It organizes logically related chunks of knowledge into linear sequences through an embedded system of hyperlinks. For those who are intent on preserving a linear sequence of simple to complex, a left to right structure in the buttons at the bottom of each screen (after the first button) can meet these needs. Ripple Effects provides more than 60 pre-configured scopes and sequences for dozens of specific curricula and individual treatment plans. See page 6.44 for list.

Evidence indicates that a developmental, formally sequenced approach works well for most students in at least some areas, and at least some students in most areas. A substantial majority of students master increasingly complex material and pass from grade to grade without major incident (NCES, 2004).

### ***Critique of classical model of learning process***

While many students succeed, a substantial minority of students fail to progress at the expected rate, are left further behind each year, or drop out altogether. Brain studies, developmental psychology, demographic data, a

fundamental shift in workplace requirements, evaluation findings, and cultural critique all provide some understanding of why the classically sequenced approach to learning does not work for some students.

#### *Developmental differences*

The traditional model assumes developmental consistency within each age group, when IQ tests and physical and psychological assessments all indicate that differences in innate cognitive capability, affective development, and brain growth patterns are greater within cohorts at every grade level, than are mean difference between cohorts.

By consolidating lessons at the elementary (grades 2-5) and middle/high school (grades 6-11) level, rather than having separate versions for each grade, Ripple Effects allows greater flexibility in responding to developmental differences.

#### ***Neuro-scientific evidence***

Citing a wide range of neuroscientific evidence to support their thesis, prominent brain-based educators and theory synthesizers Renate and Geoffry Caine suggest that higher order learning is more complex than simply logic and decision-making. They say it is comprised of "a broad synthesis of abilities that include formal operational thinking, and ability to deal with abstract and complex relations," but also include "capacities attributed to executive functions such as working memory, flexibility, self-directed learning, affective intelligence and knowing oneself" (Caine R, 2004).

The Ripple Effects *Whole Spectrum Learning Platform* (Chapter 6) with its structure of multiple modes of instruction for every tutorial, specifically supports each

of the components of the broad synthesis of learning and memory processes described above. The program supports declarative memorization by repeating the same information in several formats for each lesson, and by circular linking to those concepts from many directions. It tests for comprehension of both factual and technical knowledge with interactive "got it" games. It provides opportunities for applying insights in transfer training exercises for friends and family. It promotes analysis through thought provoking questions that accompany the case study scenarios, true video stories, and "info" and "how to" screens. It provides a structure for creating and synthesizing learning through the interactive journal, as well as opportunities to contribute true stories to be incorporated in the program. It enables self-evaluation through interactive self-profiles, and provides a scorecard of completed activities. In addition to these cognitive methodologies, it utilizes the classic, operant conditioning technique of positive reinforcement to cement new learning.

#### *Social-cultural heterogeneity*

From the social-cultural perspective, a traditional model of learning assumes socially homogenous learning groups, when demographic data clearly demonstrates that today's schools are anything but. Where once students attended schools that were largely segregated by ethnicity and class, now most students attend schools where social diversity and economic diversity is increasingly the norm. Socio-economic differences have been consistently linked to differences in both social-emotional and academic readiness to learn (Magnusson and Duncan, 2009).

In the professional development program, and in the student software as well, Ripple Effects directly addresses both class and cultural differences and their impact on learning orientations. It addresses them indirectly in topics such as “success-phobia” and “pressure to succeed” in the teen program; and in instruction on personal space and keeping hands and feet to oneself in the elementary program.

#### *Non English symbol system in place*

Many adolescents come to school for the first time, with a non-English language and symbol system already in place. To delay their access to higher order thinking practice until decoding of a new symbol system is completely in place does not make political or practical sense.

Ripple Effects does not make complex or higher order learning exercises dependent on first mastering elementary symbol decoding. By providing audio tracks of peer narration of text throughout all programs, learners who are struggling with the basics of decoding written English can leapfrog that step to engage directly in decision-making training and other higher order thinking exercises.

#### *Delaying decision-making compounds risks*

Abundant empirical evidence – from teen driving fatalities, to date rape and pregnancy rates, to school discipline rates, to teen rates of involvement in crime (Chapter 2) – suggest that delaying training in formal decision-making until adolescence provides too little help with this crucial process and presents it too late. It is true that the executive function does not fully develop until late adolescence; and executive functions in the prefrontal cortex orchestrate emotions, thinking, memory, body and physical movement

(Goldberg, 2001). The pruning of redundant cells in the pubescent brain, in preparation for a major growth spurt leading to adulthood, may result in temporary decreases in impulse control and a stunted ability to accurately predict consequences (Society of Neuroscience, 2007). However, these are reasons to accelerate, not delay, exercises that would activate the executive function. Recommended frameworks for social-emotional learning begin training in social decision-making by second grade (Elias & Bruene-Butler, 1999 ).

Ripple Effects teaches key cognitive structures of logic and causality, such as if/then and why/because sentence structures, beginning in second grade, and reinforces them from many different point of entry. It provides teens direct decision-making training in the following areas: (using) “drugs” (more than a dozen by name), “drinking,” “smoking,” “dealing drugs,” “(having) sex”, (getting) “pregnant,” (carrying) “weapons,” (being) “reckless,” “lying,” “running away,” “breaking rules,” “cheating,” “skipping school,” “dropping out.”

#### *Delaying self-expression is problematic*

Not only the delay of decision-making training, but the delay of formal training in self-expression, including emotional expressiveness, until logic is well established, is also problematic. It can increase the risk of anti-social forms of self-expression. People express emotions without training, beginning at infancy. In light of the terrible social injury linked to emotional dysregulation by young offenders, the argument to begin teaching them socially acceptable ways of expressing themselves, from a young age, has face validity. This latter approach is reflected in the standards for SEL, which

encourage pro-social emotional expressiveness starting at a very young age.

Substantial anecdotal evidence also documents the link between increased opportunities for self-expression, especially through creation of new media, and reduced involvement in anti-social activity, but few experimental studies have systematically studied this link. Creative expression is an integral aspect of some prevention programs that have scientific evidence of success, such as the RULER affective development program (Brackett and Rivers, 2007). The combination of face validity and strong qualitative evidence argues for increased support for training in expressive arts, especially during middle school. Beyond that, in most cultures throughout history, creative expression has been recognized as valuable in its own right, needing no external justification.

Ripple Effects offers formal training in emotional expressiveness that includes emotionally expressive writing in every tutorial, on every topic, at every grade level. It also includes a tutorial on creativity, with an interactive profile so that each student can better understand not whether s/he is creative, but how. Supplemental materials for the teen program include a series of art exercises through which students complete graffiti style classroom posters with pro-social messages.

#### *Promotes passive consumerism in learning*

Finally, treating knowledge as a volume of data in search of a dispensary teaches students to be consumers, not agents of learning. By extension, some educators believe it prepares students to be spectators, rather than actors in their own lives. Many in the school reform movement think this is a fundamental flaw that reinforces social passivity and weakens

democratic institutions (Freire, 1987; Dewey, 1965).

Ripple Effects provides a series of tutorials to promote an activist relationship to learning and to life. They include goal setting and personal assertiveness, and also skills for confronting injustice and mobilizing others, as well as topics such as (finding) “what you love.” This is true for both student and staff training.

#### **Constructivist learning: whole system, pattern seeking**

In the constructivist model, learners instinctively seek out and find the knowledge most important for them to know. This is the basis of the nomenclature “discovery learning.” Both observational studies of human infants, and brain imaging, support the hypothesis that all humans – indeed all sentient beings – are born with an instinctive drive to discover patterns and meaning in their environment (Gopnik, 1999). They cannot make that exploration using their minds alone. Caine & Caine, who identify themselves as brain-based constructivists, stress the importance of recognizing learners as whole systems in which emotion and all the senses are involved in learning. They define learning as “the bridge between instinct and reality” (2004). In this model, learners not only look for patterns embedded in reality, they actually build these patterns, using the base of prior experience as their starting point. Wittrick coined the term “generative learning” (1974, 1990) to enlarge the notion of constructivist learning to include the concept of “connectionism,” whereby new notions are linked not only to prior personal experience, but also to their own internal components to form new notions.

Ripple Effects *Whole Spectrum Intervention System* aligns with constructivist philosophy in that it is learner

driven and explicitly promotes pattern-seeking. The system provides a method for learners to store, enhance and change their subjective understandings of content, to recognize patterns linked to that content through real world transfer training applications to friends, family and media analysis, and to generate new notions from idiosyncratic arrangements of the components of the program.

### ***Non-linear sequencing***

In the constructivist model, because learners start from different points, it follows that they cannot all take the same paths or sequences to arrive at a given place. This is true in terms of both content and process. Brain research supports the notion that there are myriad pathways to learning that are not each the shortest neural distance between two points; instead they are more like intersecting jungle paths (Edleman, 1992).

In terms of content, the embedded linking system in Ripple Effects *Whole Spectrum Learning Platform* allows literally billions of pathways to learning, with all roads ultimately leading to training in core social-emotional competencies. Learning is self-regulated by the learner, within a set of options selected in real time by the built-in expert system, as being most relevant at each choice point. Although learners can follow a multitude of “jungle paths,” their choices at each intersection are not unlimited. There is a logic built into each intersection, based on scientific theory and evidence of effectiveness. Finite sets of possible options are provided at each turn. The possible combinations of unique learning experiences overall is nearly infinite, but the presentation of available options at each point is not. This delimiting of available paths is done in real time

through the expert system described in the next chapter.

In terms of process, the *Whole Spectrum Learning Platform* provides 10-13 kinds of learning options for every topic. Those instructional models are physically arranged from left to right, in a zigzag progression that begins with concrete case study, then moves to declarative learning, then to procedural, then back to story, then to analytical exercises, then to subjective interpretations, with imagery used at every step. However, there is no requirement, nor even the recommendation, that learners use them in that order.

### ***Affective involvement***

Brain studies have now confirmed that, far from impeding learning, emotion is central to learning and memory, and emotional experience is a differentiating characteristic of learners (Damasio, 1994, 1999). Dewey’s philosophical insight that emotion is a component of most, if not all, experience is biologically true and may be imprinted at the molecular level (Pert, 1997). It follows that, tying learning to an emotionally weighted experience makes it more memorable, *if* the emotional experiences is not negatively stressful (Perry, 2003), an important caveat.

In the constructivist model, because emotional history constitutes a large part of the base of personal experience, and the parts of the brain that regulate emotion are involved in all learning (Damasio, 1999), emotion and physicality are integral to the learning process (Caine & Caine, 2001, 2005).

Ripple Effects enables students to access training through any one of more than 1000 doors of their most deeply felt personal interest and need. Because students can explore any topic they want (in addition to those assigned), learning is

automatically meaningfully located in each student's most relevant, real world experiences – both personal and social/cultural. This instantly activates and enlists in learning, the parts of the brain that process emotions and make learning most likely to stick. In every case study (scenario screen), Ripple Effects provides questions that prompt learners to explicitly identify the role of emotion in the situation being discussed. It asks learners to hypothesize the emotions of protagonists in the case studies (scenarios).

The assisted journal writing exercises prompt learners to consciously identify their emotional reaction to the material being discussed.

In addition to the deep personalization of content, Ripple Effects implicitly promotes affective involvement through the use of compelling, true video stories, titles with “attitude,” and emotionally provocative illustrations. In addition, the program provides procedural training in identifying, understanding, regulating and expressing a whole range of specific emotions.

Finally, the continuous availability of a software-based system makes it possible for students to access learning at each one's most emotionally salient moment. The success of widespread use of Ripple Effects in ISS settings, where student feelings often run high, is consistent with this theory from brain science about the emotional components of learning.

### ***Problem solving***

If, as Dewey and followers suggest, knowledge is based on reconciling new information from the environment with prior personal understanding, then all learning is at least partly an active, idiosyncratic, problem-solving process to resolve dissonance. Learners test

hypotheses about what is most true through debate and argument, often internal. The extensive use of case studies in law and business schools is consistent with this model.

Ripple Effects' introduction of each topic as a case study that requires idiosyncratic problem solving also fits this model. Each of the 700 learning tutorials in the *Whole Spectrum Intervention System* begins with a case study, a situational statement of dissonance or problem-solving scenario, from the point of view of the person experiencing it. Direct engagement in a real world, problem-solving process precedes all other modes of learning offered in each tutorial, as seen in the screen by screen walkthrough at the end of Chapter 6.

### ***Reflective self inquiry***

Piaget refined Dewey's concept of how the individual construction of understanding proceeds. He described the adaptive processes of assimilation and accommodation. If new information from the environment is consistent with prior understandings, it is assimilated intact. If new information is inconsistent with prior understanding, it trimmed or stretched (or in the words of some cognitive psychologists when referring to delinquent offenders, “distorted”) to make it fit. Because the role of the individual is paramount in this process, thinkers who follow in the mode of Piaget emphasize the primacy of meta cognition (the mind becoming aware of itself) and self-reflection, as methods of learning within a problem-solving framework (Perkins, 1995). They favor learning activities in which the mind can become more aware of itself, where there are opportunities for dialogue, real or simulated, internal or external.

Reflective self-inquiry is the primary learning approach of the entire Ripple Effects program. Learners are actively guided to compare their prior life experience with new information and are guided in methods for reconciling the dissonance in way that allows them to construct a path to success. Specific tutorials are devoted to developing meta cognition. “Learning styles” and “intelligences” are topics under the broader unit “knowing yourself” for students and “self-understanding” for teachers.

### **Whole person transformation**

At the far end of the constructivist side of the learning continuum is a whole person, “transformational” model. It assumes that all learning involves a whole-person change in perspective. Learning is at every step a matter of autopoiesis, the making of “self” (Varela, 1998). That transformation is physical, psychological, social, emotional and cultural. The model is consistent with the evidence from brain science for the physically transformative nature of all learning.

The breakthrough moment when phonics make sense and the world of reading opens up has been transformative for many. Coming to a deep understanding of oneself, or another person, which is the heart of social-emotional learning, is unlikely to be anything but transformational. Mezriov, who articulated the transformational model for adult education (1994), posits that life crises are often the triggers for such transformational, social-emotional learning. Thus this model has special relevance for learners who face multiple levels of adversity and barriers to learning, including students at most risk for delinquent behavior and poor mental health outcomes.

Ripple Effects recognizes that a transformational approach has special relevance for young people whose life circumstances are chronically challenging, (such as crushing poverty), and/or who experience intensely disorienting personal events (sometimes as simple as being jilted by a boyfriend or girlfriend). During the early stage of development of the training software, students – and later teachers – provided lists of what these potentially transformative events and conditions are. Hundreds have been incorporated into the three versions of software (Kids, Teens, *Coach for Staff*).

### **Social-cultural context**

The Russian psychologist, Vygotsky, concurred with Piaget that understanding of the world is inherently subjective. However, Vygotsky argued that human understanding is more socially and culturally, than individually, constructed. He introduced the idea of reality as being defined by social agreement. In this respect he anticipated the concept of “cultural competence,” an increasingly important element of the instructional process, discussed at greater length on page 5.67.

Ripple Effects recognizes the contextual basis for all knowledge, with emotional experience, social relations and cultural framing all having a role in the construction of meaning. Ripple Effects promotes social construction of meaning through providing discussion questions that can be answered in class, providing extension activities that prompt discussion with friends and family, and by providing skill training in communication and group skills. It includes development of perspective taking and cultural competence as major thrusts of the professional development program and includes

diversity appreciation in the student program.

However Ripple Effects diverges from the social constructivist approach in that most often, the primary learning event happens in private, and then is transferred to a social setting.

This approach is consistent with substantial evidence that group discussion of personal, emotional and behavioral issues can generate much energy, but not equivalent measurable change in behavior; that group level counseling does not have the same positive effects as individual counseling (Wilson and Lipsey, 2007); and that there are comparatively better outcomes from differentiated learning, versus one size fits all techniques (Pintrich, 2000; Wolters, 2003). On the other hand, there is also evidence that negotiating social agreement (including through the use of technology in online learning) may be an effective way to support higher level thinking processes in cooperative settings (Ada, 2009).

Ripple Effects training software supports the process of negotiating social agreements, an important set of skills for team-based learning. It offers specific tutorials on participating in group discussions, including training students, as well as teachers, to increase wait time to maximize participation, so that a broader set of experiences can be part of shared group understandings.



The first pilot study of impact of Ripple Effects teen software in 1998 provided empirical evidence that it can be an effective tool for personal change in group, as well as private settings. A number of broken computers in the lab resulted in all students having to share, a divergence from the one computer per student protocol that had been part of the original design. Ninth grade students in very active groups of 2-5 members took

turns driving the program and played and argued over the correct answers to games and most accurate responses for interactive, personal profiles. The intervention group had significant higher gains in pre-to-post scores on assertiveness and lower scores on aggression, after a single 50 minute session, compared with a demographically matched comparison group, who had no differences at baseline. One of the most fascinating qualitative findings was that students did indeed negotiate agreement about the meaning of social communication, and strenuously argued their opposing points of view, especially about dating behavior, with strong gender differences very evident (Ray, 1999, personal notes).

### ***Language Development***

In Vygotsky's view the mechanism for social construction of meaning is language, in particular, everyday conversational language (1978). This is consistent with ethnographic data from anthropologists who recognize that cognitive categories carried in everyday language mediate reality for members of a cultural group. It is consistent with the historical development of consciousness-raising groups as a prelude to social action (Freire, 1978), and with the demand from marginalized groups to remove racist, sexist and homophobic language from all educational materials, as a necessary precondition for social justice, not as its eventual result (AERA Social Justice SIG). In Vygotsky's model, vocabulary building, training in grammar, journaling, conversation skills, negotiation skills, and cultural competence are all essential to effective learning.

### ***Journaling***

Vygotsky was among the first to identify journaling as an instructional method that

facilitates the process of internalizing dialogue to shape understanding (Vygotsky, 1962). Other researchers have demonstrated how journaling can reinforce the skill of reflecting what is being discussed with others (Beyerbach, 1992; Burnham, 1992; Reinersten & Wells, 1993).

### *Metaphor*

Another set of researchers (Lakeoff & Johnson, 1980) have identified metaphor as a specific link between existing knowledge, and its successor understanding. They argue that the full set of feelings, contexts and social meanings, as well as cognitive understanding associated with the metaphoric image, can have a potentially powerful impact on how new information is organized into patterns.

Ripple Effects incorporates Vygotskian principles in its emphasis on language development as a major tool for social-emotional growth, in its exclusive use of second person, conversational conventions, rather than formal tone and grammar to convey key concepts, and in the incorporation of peer narrated, conversational audio tracks matched to text. It includes extensive use of verbal and visual metaphors. Tutorials cover specific conversation skills, negotiation of understanding, vocabulary of social-emotional experience, and language structures of inclusion and cause and effect. All narrative is informal dialogue, as between peers, in non-scientific language. Journal writing for every lesson is designed to facilitate the internal dialogue that leads to understanding. It includes separate exercises for describing phenomena, identifying feelings about experience, brainstorming options, committing to goals and finding support in a wider community. Every tutorial includes an exercise

involving discussion with friends and family. There are consciousness-raising tutorials about social cultural context, including lessons on “class,” “gender,” “ethnicity,” “immigrant status” and “disabilities.”

### ***Learning differences***

Despite pronounced disagreement among educators about the nature of the learning process, there is now nearly universal agreement that – however it is defined – there are some differences in how various students learn. A growing mound of data from both testing and brain studies suggest that there is substantial variation in learning aptitudes, orientations, and developmental readiness to learn. Different kinds of learning occur for different people with different degrees of ease or difficulty, in different contexts (Gardener, 1983; Sternberg, 1988). There is not agreement on exactly what those learning differences are and how they are best addressed.

Ripple Effects includes an integrated set of lessons in the staff training program, on differences in learning orientation, learning styles, learning disorders, attention capacities, giftedness and testing. Both staff training and student programs recognize differences in cognitive capacity, with lessons on “cognitive impairments” and “giftedness” in the staff program and “special ed” in the student programs.

To address the need for leaning process differentiation without loss of standardization of content, Ripple Effects provides no fewer than 11 differentiated options for learning for every topic. The *Whole Spectrum Learning Platform* (Chapter 6) addresses sensory, cognitive, and attention differences, as well as differences in motivation and temperament.

### *Intelligences*

Howard Gardner presents a strong case for there being not only differences in level of learning aptitudes traditionally associated with intelligence, but in kinds of intelligence. He presents data to suggest that in addition to aptitudes for language and math, there are native intelligences in the areas of music, spatial abilities, physical prowess, intra-personal and inter-personal intelligence, and ability to connect with the natural world (1988). He cites brain plasticity studies as evidence that these are not fixed, but expandable aptitudes. Some brain scientists dispute the precision of the neuroscience behind Gardner's argument (Stahl, 1999), but laypeople, as well as educators, recognize the truth of the simple observation that people have different talents, and can leverage those talents to affect their environment differently. The latter is a key measure of Gardner's definition of intelligence (1983).

Ripple Effects training software for staff includes coaching in how to recognize, affirm, and leverage a broad range of intelligences across disciplines. The student software, under the topic "smarts" provides basic information to help students understand the range of ways in which they are smart. The entire program promotes the systematic development of both intra-personal and interpersonal aptitudes. Every lesson has a sports application to leverage the aptitudes of students who have a strong kinesthetic abilities, and interactive games to engage kinesthetic learners. Every lesson in the professional development program includes transfer-training opportunities for math, language arts, sports and advisory contexts.

### *Learning style preferences*

In contrast to Gardner's work on the *what* of intelligence, a variety of other researchers have focused on individual differences in *how* people learn (Keefe, 1979; Merrill, 2000). Some researchers focus on sensory orientation in learning, dividing learners into visual, auditory or kinesthetic groups (VAK). Others cite differences in information processing styles for different kinds of learning and memory (Atkinson & Shiffron, 1968). Still others have constructed typologies that assume some correspondence between aspects of temperament and learning tendencies. They include the original Meyer's Briggs Type Indicator (MBTI), and several others, usually built on two dimensional, bi-polar models, such as Keirsey's temperament sorter (KTS). Still others focus on how individuals approach, process, apprehend, manipulate and retain new information, using various combinations of sensory orientation, temperament, kinds of engagement, and processing styles as indices: Canfield (CLSI) Dunn and Dunn (LSI, Grasha and Reichmann Gregoric (GRSLSS), Hill (CSI), Kolb (LSI), and Witkin's (EFT).

Ripple Effects includes a series of interactive profiles that utilize orthogonal, bi-polar axes related to temperament, social-emotional skills and/or learning style preferences. Each of them have strong evidence of construct validity behind them; yet none can be considered as scientifically valid assessment tools, and they are not presented as such. Their value is not in providing a schema to add yet one more set of labels to learners, but in catalyzing an ever-deepening process of self-discovery. The program uses learner input to create a snapshot of a particular combination of factors, at a certain point in time.

Results that reflect learner input are provided instantly in graphical, narrative text, and audio forms. There are 37 such profiles in the teen program: four in the elementary program, six in the training software for staff. Together they create a composite picture, as well as separately providing individual snapshots. These moment-in-time images are not intended to be enduring. This combination of multiple, temporary profiles to estimate a variety of factors that impact learning, recognizes both that precise, universally reliable typing of a multi-dimensional reality is impossible, and also that having some means of systematizing, current learning strengths and preferences can be practically helpful in understanding and addressing those differences, both for learners and their teachers (Bates, 1994). At the least, it can increase self awareness, a first step in self-efficacy (Bandura, 1987).

Ripple Effects *Whole Spectrum Learning Platform* is designed with the assumption that learning style and temperamental differences exist, but are often malleable. Enabling students to choose from a wide range of learning modes each time they approach a new topic maximizes the flexibility of this system.

#### Critique of learning style typing

Critics challenge categorizing student by learning type on four levels. First, temperament and learning differences are so many and so nuanced that efforts to cluster them into two or a few categories may be simplistic to the point of being bad science. Secondly, with the exception of the Myers Briggs test and the Five Factor Point Personality Profiles (Goldberg, 1993; Costa and McCrae, 1992; Cattell, 1996) personality typologies have limited evidence of cross-cultural validation. Thirdly, personality, like the brain itself, is more plastic than pioneers in this field

theorized just a few decades ago. Thus learning profiles derived from personality typing cannot be considered fixed or static; they are in a constant state of flux. Because these are dynamically evolving preferences or types, and may change depending on physical, social and emotional contexts, some researchers suggest that to funnel all instruction into a form that a student express a preference for in a certain context, at a certain point in time, may be a disservice to them (Zarghani, 1998).

#### *Reconciliation of perspectives*

There is no doubt that if learning difference classifications become a lock-box for limiting student opportunities, then, using them does a great disservice. On the other hand, if learning difference “profilers” becomes tools for greater self-understanding, and for expanding the range of options available to each student, then they offer promise for enriching education for all.

The latter marks the Ripple Effects approach to addressing learning differences. Ripple Effects profiles are not static. Each time the learner completes the profile it can reflect a new reality. The temporary nature of each profile is consistent with the concept of brain plasticity, the neuroscientific explanation of the huge potential for human change. The notion of an ever present possibility of deep change has special relevance for students who have a history of academic and social failure. To allow for change and plasticity, the software does not use information drawn from student profiles to predetermine or limit options for learning modes. Each learner has full access to all of the available modes of learning, every time.



Qualitative research in the form of interviews with teachers and students indicates that which of the available modes each learner will make use of depends not only on learning preferences, but also on emotional connection to the topic being addressed. The greater the emotional connection, the more likely a student is to take advantage of all available presentation formats (Ray, Berg, 1999-2009, personal interviews.)

In addition to the learning styles profiler, Ripple Effects software includes some three dozen other self-profile exercises, spread across the three programs, with proportionally more in the teen program than in the two others. The scientific base for the profiles comes from three places. For medical conditions such as PTSD or ADHD, questions probe for “symptoms” taken from DSM IV. For social-emotional competencies such as empathy, questions probe for specific abilities researchers have identified as key components of that competency. For risk and protective factors, content is from NIH and CDC funded studies. Ripple Effects profiles have been vetted by a diverse group of child psychiatrists and psychologists, as well as educational specialists.

### ***Learning disorders and disabilities***

In addition to normal variations in learning, a range of learning-linked anomalies have been identified, including sensory, cognitive, attention, communicative, emotional and behavioral disorders, and “premature” development of certain sets of cognitive abilities (giftedness).

Ripple Effects *Whole Spectrum Learning Platform*, described in greater detail in the next chapter meets three major criteria for meeting the learning needs of

students with a wide range of learning differences: multiple means of representation, multiple means of expression and multiple means of engagement (CAST, 2008).

Ripple Effects provides training for teachers on how to recognize various learning disorders. It provides coaching in how to address these challenges both directly, and through the use of Ripple Effects student program in regular classrooms. That training includes coaching in specific instructional techniques that have been proven effective for students with different disorders.

### **Social-emotional learning as a specialized form of learning**

CASEL defines social-emotional learning as “the process of acquiring the (core) skills to recognize and manage emotions, develop caring and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively” (Zins and Elias, 2006; CASEL, 2007). The field of social-emotional learning rests on the belief that, even though people may have differing innate aptitudes for one or other of the competencies, all are learnable (Salovey, et al 2004; Weissberg & Elias, 1993).

### ***Social learning processes***

Just as the field of social-emotional learning can be described in terms of its knowledge base, it can also be described in terms of the learning processes that have been proven effective in developing these social-emotional skills and capacities. Bandura (1986) is credited with identifying the key elements of social learning to include modeling, rehearsal and reinforcement. Goldstein (1988) expanded

the model into the five-part process of teacher modeling, student role playing, group performance, feedback and transfer training (practicing the skills at home and in the community).

The structure of Ripple Effects *Whole Spectrum Learning Platform* provides opportunities for the key elements of modeling, rehearsal, reinforcement, feedback and transfer training, in every lesson, as described in greater detail in the next chapter.

## INSTRUCTION

It is impossible to completely separate the process of learning from models of instruction. Nonetheless, the art and science of teaching is its own discipline, covered by the umbrella term, “pedagogy.” Pedagogy is an ancient Greek concept, literally translated as “to lead the child.” Originally a pedagogue was the person, usually a slave, who took care of the non-academic factors that enabled young students to access their instruction, from walking them to school, to carrying musical instruments. The meaning of the word gradually evolved to focus more on teaching than on enabling preconditions, or assurance of access. However, the “more than instructional content” root has never been completely lost. Today pedagogy encompasses both the art and science of teaching. It includes academic instruction, but is not limited to it, incorporating also classroom orchestration, professional development models, assessment, and increasingly, the specialized field of social-emotional learning. The first area of focus here is instruction.

As with theories of knowledge and learning, instructional models can be represented on a continuum of instructivist

to constructivist understandings. Relative position on this continuum impacts understanding of educational goals, roles, instructional methodologies and classroom orchestration.

With Ripple Effects’ model of a continuum of color, rather than a series of discrete mathematical points, commitment to one position does not logically disallow incorporation of another.

## Goals

That schools exist to create literacy and competency is a given among educators; however, the nature of that literacy and competency is variously understood. The narrowest understanding limits the goals of schools to creating academic literacy and competency. The work of the school is the work of the mind, period.

Ripple Effects program explicitly promotes mental proficiency and academic achievement. Student software includes topics like “study habits,” “attention,” “testing,” “effort,” “reflection on performance,” “school – hate it”, and “success phobia.” *Coach for Staff* software explicitly rests on the assumption that with the right support, all students can succeed academically.

The Dewey-informed goal of socializing students for active participation in democracy and the real world of work implies creating political literacy, social competency, and work place skills as well. Douglas Kellner reflects this theory when he suggests that the goal of schools is to “promote multiple literacies appropriate to the novel, material conditions, transformation and subjectivities emerging in the contemporary era” (2004). This linking of pedagogy with community and democracy is a key theme in theoretical models of education toward social

liberation, from Paolo Freire (1970) to Betty Friedan (1963), and each of their ideological descendants.

Ripple Effects explicitly addresses the role of education in preparing citizens to actively participate in a democracy, and become productive members of the work force, through topics that promote civic engagement, such as “Democracy – doing it,” “Commanding respect,” “Standing up for a belief,” “Resisting pressure,” “Exercising rights,” “Patriotism,” “Loyalty,” “Dissent,” “Confronting injustice,” “Including others,” “Resolving conflict,” “Making a complaint,” “Making Decisions,” “Predicting Consequences,” “Honesty,” “Fairness,” “Respect,” “Justice,” “Responsibility,” “Resisting stereotypes,” “Appreciating diversity,” “Racial differences,” “Cultural differences,” “Ethnic differences,” “Disabilities,” “Gender differences,” “Personal preferences,” “Hate crimes,” “Immigrant,” “Lesbian/gay.” Any topics can be deleted to conform to local mandates.

A yet more expansive interpretation of schools’ goals for students includes the development of emotional literacy and competency as CASEL has articulated (2003). In this model, the goal of the school is to attend to and educate the “whole child.” Adherents of the latter approach cite recent research that links social-emotional literacy and competency to academic success (Zins et al. 2004, reduced criminal activity (Lipsey and Wilson, 1998), higher life time earnings (Hawkins, 2009), and better health and mental health outcomes (Greenberg et al. 2001); Wilson et al. 2003). While this expanded interpretation is a relatively recent development in American education, education of the whole person is not a new idea. It has been the explicit model for Jesuit education since the 16th century (Kolvenbach, 2005).

The goal of *Ripple Effects Whole Spectrum Intervention System* is to be an effective supplement for education of the whole child. In addition to providing universal social-emotional learning opportunities for students and teachers, Ripple Effects provides learners with opportunities to address individual concerns and risk factors from multiple domains that impact the whole child at school.

## Roles

Related to the goals of instruction is the role of teachers in achieving those goals. The traditional model is teacher centered and authority based. The instructor is a “sage on the stage,” content expert and sole trainer who determines what to teach and how to teach it. S/he is accountable for end results. Traditionally, all power resides in this teaching role. Teachers fulfill this role not by being liked by their students, but by being obeyed and ideally, respected as well.

Ripple Effects *Whole Spectrum Intervention System* incorporates a number of pedagogical roles. On the one hand, it is a “sage on the stage,” relieving individual teachers of the impossible burden of being depositories of all relevant knowledge for any group of students, especially within science and social science disciplines. It is the content expert on factual and procedural information. It sets out the groups of “best practice” methodologies from which students can choose.

An alternate, emerging model is of the role of teacher as “guide on the side.” It is learner-centered and responsibility-based. It focuses on the role of teachers as catalysts, rather than mediators, of students’ learning process. It recognizes educators’ major responsibilities as the primary agents

for socializing young people into a democratic society and also encourages the involvement of students in power sharing and decision-making.

In other parts of the Ripple Effects program, the software is a guide on the side that simply facilitates students' engagement in self-regulated learning. With Ripple Effects, students have the power to choose what they are interested in and choose the gender of their electronic guide. They can determine and self-regulate their learning process. Ultimately, as they agree to in writing in an opening screen, they are responsible for how they use the program and what they gain from it.

Ripple Effects professional development program provides specific training to help teachers share power without compromising their authority.

Even more fundamental a shift than that of sage to guide, is that which redefines teachers' primary identity, not as instructors at all, but as learners themselves, engaged in a continual process of gradually expanding understanding, in which students are not only co-learners in a mutual learning endeavor, at times they are their teachers' most effective guides as well (Wei, Hammond, Andree, Richardson and Orphanos, 2009).

At this farthest point along the continuum the role of teachers is not only to learn, support, and instruct, but to cross over the line from instructor to intimate friend, to enter into a personal relationship of equality as well as mutual trust and respect with each student.

Ripple Effects professional development program provides practical training for teachers in how to develop personal relationships of trust and mutual respect with their students.

In addition, the software itself becomes a partner in learning and sharing for many

students. In interviews with their teachers or counselors, as recorded on video, and/or reported by school staff to Ripple Effects, students talk about how the software respects them and listens to them, they say it "feels like a friend" to them. (Ripple Effects archives, 1998-2009).

## Methods

### ***Process: transmission***

The traditional model of instructional methodology is one of "transmission." It is aligned with the notion that there is a set body of facts and procedural knowledge that need to be passed on, generation to generation, from all teachers to all students. In this model "content is king." Each teacher is fully responsible for ensuring that a specific knowledge base is being transmitted with integrity. The most conservative model is one of every teacher directly dispensing that content, through didactic instruction, following a preset curriculum.

The Ripple Effects system is aligned with the transmission model in these ways: It includes a body of content expertise. The "info," "how to", and "model" screens provide direct instruction on both facts "info" and procedures ("how to," "movie models)". The training software builds formal sequencing into a table of contents, or course outline, for each software product. Supplemental manuals provide 60 preconfigured curricula with scopes and sequences for use in primary, secondary and tertiary prevention programs. Each and all draw on established best practices from the most relevant body of knowledge.

### ***Process: transaction***

Further along on the continuum is what could be called a "transaction" model

of instruction. Instructors still are in charge of setting learning objectives, but this model assumes some exchange of value. Instructors make a presentation, ideally providing both a conceptual framework and concrete examples, then ask probing questions. Students provide feedback, answer questions, complete assignments. The instructor uses this feedback to correct misunderstandings, provide opportunities for practice, and then assess learning. This mixed model of instruction is the most commonly used in the United States. It is widely incorporated into lesson plans on every subject.

In the Ripple Effects system, interactive profiles and games are marked by this *quid pro quo*. Ripple Effects presents information, checks for understanding, uses cues from learners to provide feedback, and tallies up points for completion of correct answers.

There is substantial data that *if* the content is presented in a clear and correct manner, and *if* students have opportunities to actively practice and provide feedback, academic achievement, as measured by scores on standardized tests, can improve. However, data also shows that as much as 90% of questioning in classrooms is directed to the most basic level of learning, rather than higher order thought, even among teachers who have as their goal to develop critical thinking. Most questions are answered by the same few students whose “boot time” is quick enough to fit into the average one second wait time, even when substantial research points to longer wait time as being a factor in both class participation and higher order thinking (Casteel and Stahl, 1973; Rowe 1972; Stahl 1990; Tobin 1987).

Ripple Effects reverses the proportion cited above of questions that require factual knowledge, versus higher order

thinking. Since the program is self-regulated there is no time pressure to come up with quick answers. Students who might ordinarily get closed out of classroom discussion, get a chance to reflect privately, with cues, at their own pace. The professional development software includes training for teachers in how to ask open ended questions that deepen thought and how to extend wait time beyond the average one second commonly granted, to 3-7 seconds, to increase both participation and higher order thinking.

### **Process: learning cycle**

Bridging some of the remaining distance between instructor-controlled, interactive instruction and pure constructivism is Bybee's model of a spiraling “learning cycle” of engagement, exploration, explanation, elaboration, and evaluation (1997). The difference from Bloom's taxonomy is not in the kinds of learning – and by default, instruction – that occur, as much as in their order and the more proactive role of the learner in the process. Bybee cites studies that indicate “the learning cycle as a model of instruction is far superior to transmission models of instruction in which students are passive receivers of knowledge from their teacher (Bybee, 1997), but does not present data that indicates it is the learning *sequence*, rather than learner *engagement* that accounts for that difference.

The Ripple Effects *Whole Spectrum Learning Platform* (Chapter 6) does not have a fixed order for different modes of learning. It does set the starting point for all of them with direct engagement in a case study scenario, during which learners are guided to take the perspective of the protagonist. This is consistent with Bybee's model of personal engagement as being the starting point of every learning cycle. With

the Ripple Effects system, however, after that first step, the learner selects the elements and drives the order of the instructional process by choosing to click on different buttons at the bottom of the screen, in any order. A left to right order approximates Bybee’s learning cycle, but there is no recommendation that students proceed in that order.

All tests of content mastery are in the form of engaging games that pull learners into the process of learning through trial and error, and thus restart the cycle. As noted earlier, Ripple Effects’ continuum of color metaphor for a logic model, does not prevent the inclusion of contrasting, even opposite instructional methodologies in any combination of orders in a single lesson.

#### *Four key instructional approaches for SEL*

In a 2008 analysis of which specific instructional procedures were correlated with positive school outcomes for social-emotional learning programs, Durlak et al identified four, with the acronym “SAFE”. Three are associated with traditional instruction: linear **S**equencing, teacher-defined **F**ocus, and **E**xplicit instruction; one is associated with constructivist methods – **A**ctive engagement of the learner in the process.

As described earlier, Ripple Effects has three different sequencing systems that operate simultaneously. Two of them are linear, one implicit in the hyperlink structure of the software, one explicit in implementer manuals. One is non-linear, comprised of millions of potential links that are formed in real time, based on random choices or personal associations of the learner.

Ripple Effects system also places a high premium on Focus. The hundreds of micro tutorials each are designed to develop a

very specific skill component and deliver a very focused piece of science-based information. The point of focus may be directed by the instructor, may be chosen by each learner, or may be determined jointly by them, or by a planning team.

Three of the 10 - 13 instructional modes offered in each lesson include explicit instruction: (“Info,” “How to,” “Modeling”). In development of the software a conscious decision was made to take background concepts and learning objectives that had formerly been segregated in teacher lesson plans and explicitly include them in the student program, in the “Info” and “How To” screens.



Qualitative data in the form of observation of students and interviews with them suggest that as few as 25% of students actually expose themselves to these fact-centered screens as part of their completion of teacher-assigned topics. Those who do, find it useful. Perhaps more importantly, even students who don’t routinely use the “Info” screens feel respected that they are trusted with explicit information about what they are supposed to learn.

Ripple Effects system requires active learning at every moment, from every student. Because of the computer-based structure, students can’t sit in the back of the class and not participate. Every one of the hundreds of tutorials provides a variety of active learning options at the desktop and beyond. Of particular relevance for social-emotional learning are the built in opportunities for participation in case-study discussions and behavioral skill rehearsal, including role plays.

The identification of effective approaches for universal, group-level instruction in SEL does not negate the value or importance of more calibrated, individualized instruction as well.

### Process: pure discovery

At the end of this continuum, are various “pure” interpretations of constructivist instructional models. The most controversial of these is “pure discovery.” Dewey’s intellectual descendent, Jerome Bruner argues that the knowledge gained through self discovery is somehow more accessible or useful for future problem solving than knowledge that is received through direct transmission. At the least, students are more likely to remember things that they discover on their own. A key element of this model is that discovery is not a purely cognitive, or even psychological event, it is heavily associated with “doing”—manipulating objects, performing experiments (Bruner, 1966).

As described earlier, brain research supports the general theses that personal search for meaning, and emotional and physical involvement, intensify learning experiences and make it more likely that those experiences will be embedded in memory. It doesn’t support the conclusion that what ends up embedded in memory is factually true, or consistent with academic standards by which students ultimately will be measured. Nor does it support the conclusion that because some people learn best by doing, all people share that predilection. Finally, it doesn’t support the conclusion that all students will be motivated to “discover” the same things that are grade level requirements in public schools.

Once more the Ripple Effects approach to instruction is a hybrid one. It includes specific tutorials on experimenting, and provides several instructional options for learning by doing, including games to assess content mastery that can be completed through a process of trial and error, rehearsal/role play opportunities, and real world exercises to engage in offline

with friends, family and in sports settings. However, as noted above, it does not presume that experiential learning is the only path to understanding in every context for every person. Explicit knowledge transfer and behavioral instruction are equally parts of the system. The program as a whole opens up a very large world for self-discovery (more than 1500 entry topics). However, Ripple Effects has not seen any evidence to support the fact that students will automatically engage in using the program to discover what interests them. In at least one instance, after the program was purchased and set out on a table, learners never ventured beyond the first scenario screens, partly because they didn’t naturally “discover” all the buttons at the bottom of the screen, which would have led them to their options.

Once learners are inside the Ripple Effects world, learning is explicitly self-regulated, but it is also implicitly guided through the expert system that decides which options to present at every given choice point.

### *Critique of discovery methods*

John Anderson, Lynn Reder, and Herbert Simon provide evidence that a discovery-based process is an inefficient learning and assessment procedure (1997). However, it must be noted that the context of their study is the hard science of mathematics, not the soft area of social emotional learning. Nonetheless, substantial research points to the fact that most learners need some formal guidance to meet learning objectives (Kirschner et al. 2006; Tuovinen and Sweller, 1999). Mayer makes the more specific critical point that discovery-based learning may be effective for experienced learners, but not for novice learners (2004). He presents substantial empirical evidence of the greater

effectiveness of use of “solved examples” for novices, and guided discovery over pure discovery-based instructional practices for all, as Vygotsky had earlier suggested.

This critique has special relevance for one group of students with multiple risk factors for failure: those already disengaged learners who have been assigned to alternative schools of last resort. In too many cases, they are stranded in school with their freedom, without the self-regulation, or decision-making abilities needed to take good advantage of it. Similarly, many students who have been mainstreamed into regular classrooms need far more direction than a discovery method of instruction would allow them (Kauffman, 1985).



Usage and compliance data from randomized controlled trials of Ripple Effects would support Mayer’s conclusion.

In special education settings, there is no data to support the belief that students will initiate use of the Ripple Effects program the first time, and discover what is relevant for them, if it is simply available as a resource, but not required or monitored. However, there is a growing body of qualitative research that supports the conclusion that once students are assigned a topic as part of an IEP, if they are encouraged, they subsequently will seek out and discover information that can be personally useful to them, including information on teasing, being bullied, and beaten. This is true even for students who have shown little ability to work independently.

Among students who have not been identified as Special needs, but have been faltering in school, in chaotic school situations when students were invited – but not required or trained – to use Ripple Effects as a tool for reducing school failure

and substance abuse, the majority completed neither the assigned lessons, nor any self-discovered tutorials. In more regulated schools, where compliance was required rather than merely invited, virtually all students participated. More than 96% of all students who had minimal exposure to the assigned tutorials, whether completely voluntary, or officially mandated, went on to pursue subjects of individual interest.

Students showed substantial and significant gains in GPA, from pre to post, compared to control groups. In some cases, the lowest performing students completed more than 150% of assigned dosage, sometimes missing the assigned topics in favor of their own discoveries. The mean, post intervention GPA gain for these was significantly higher than for control group students who were exposed to instructor led, life skill training during the same periods.

Some researchers have assembled evidence that challenges the usefulness of context driven programs at all. The data is more convincing when applied to fluency in reading, than to reading comprehension. There is neither empirical data nor neuroscientific research to support the transfer of this conclusion to social emotional learning.



Quantitative data compiled for more than 3600 students who used Ripple Effects in discipline settings to address behavior problems in the context of deeper issues they were facing in their personal lives suggest the opposite is true. Such personal context-driven use resulted in reductions in repeat in-school suspension referrals ranging from 30 to 50 percent (Patterson et al 2008).

In addition, neuroimaging evidence described earlier supports the contention that very personal contexts for

understanding can create chemical reactions that drive affective commitment that reinforces learning. (Damasio et al., 1994, 1995)

A final criticism of constructivism is that, in its commitment to subjectivity, it encourages, even foments, normlessness. This would be particularly problematic for youth who come from family settings where discipline is inconsistent, and/or neighborhoods where anti-social behavior is the norm, and/or belong to subcultural groups where negative stereotypes are often reinforced in the media. These students are in need of strengthened, not weakened prosocial norms.



*Quantitative data on reductions in discipline referrals, as well as qualitative data from student stories and teacher reports in schools that have used Ripple Effects, indicate the flexibility in the software is more likely to lead students to adopt norms that strengthen pro-social – not anti-social – behavior, once students begin exploring on their own.*

This may not be a contradiction, for Ripple Effects is not a completely unguided, normless program. Normative guidance is provided within the open structure of personal exploration. The guidance is delivered by peer voices, but the normative bias is toward pro-social behavior. A specific tutorial about norms is part of the program.

Some theorists believe that constructivist teaching too often elevates the importance of any behavioral activity at the expense of true cognitive engagement.

Data generated from use of Ripple Effects learning style profiles, suggest that this critique has some validity as well. For students who rely on observation as their entry point into learning (“watchers”), or those who are already adept at higher order

thinking (“thinkers”), being thrown into a mode of concrete experimentation without a frame of reference, or a model for how to systematically proceed, may provoke needless anxiety and is inefficient.

### Process: supportive guidance

If, as Dewey conceived, knowledge is a subjectively constructed thing and students are the principal agents of their own learning, it follows that the role of educators in this process must be a supportive one. While some pure cognitive constructivists see individual teachers as having virtually no meaningful role to play in learner-centered, discovery-based education, most argue that although teachers are neither the fonts of all knowledge, nor the sole directors of predetermined learning procedures, their role as supportive guides is a key one. Vygotsky’s research showed measurable differences in the reasoning ability between children who learned completely independently and those who learned with an adult guide. Those with the guide consistently showed an advantage. Lipsey’s research shows that personal guidance in counseling sessions is correlated with reduced anti-social and delinquent behavior (1998).



*A randomized controlled trial of the impact of Ripple Effects under two experimental conditions demonstrated better outcomes with completely private use, than with the addition of adult-facilitated group discussion and role plays to the computer program (Stern & Repa, 2000).*

At first glance these finding would seem to contradict those of Vygotsky. However, self-regulated use of the Ripple Effects program is far from an unguided experience. Both instructivist and constructivist forms of guidance are built

into the content and structure of the program, as described above.

## **Instructional differentiation**

### ***Zones of proximal development***

Vygotsky contributed the important concept of “zones of proximal development” (ZPD) as key to the success of constructivist instruction. A zone of proximal development is the difference between the level of problem-solving a learner can engage in without help, and what he or she can do with modeling and guidance toward discovery. Teachers provide cues or bridges that help connect one level of learning to another within these zones of proximal development. If there is too great a gap between the learner and the skill or behavior modeled, the learner is less likely to attempt to move to the next level (Vygotsky, 1978; Bandura, 1986). Psychologists posit that there are emotional as well as cognitive zones of proximal development.

Ripple Effects incorporates the concept of zones of proximal development by breaking skill training down into many hundreds of micro, one-step-at-a-time pieces. It narrows social and experiential distance between learner and guide in four main ways:

- Using peer guides who are no more than one developmental level ahead of the learner
- Having students who are not professional actors model specific behavior
- Using diverse peer voices, rather than adults, as the voices of authority
- Providing for each lesson a set of “related topic” links that could predictably fit within the same ZPD.

### ***Immediacy***

Beyond the proximal level of content, the emotional distance between the questioner and the learner affects the learner’s capacity to build new understanding from instructional cues. Mehrabian (1969) was the first to describe specific communication behaviors that promote “immediacy,” defined as physical or psychological closeness and interaction between individual people. Although Mehrabian did not frame the concept in terms of pedagogy, immediacy behaviors have since been found to result in positive affect within classroom contexts (Gorham, 1988).

Ripple Effects has designed the quality of immediacy into the content and structure of its software through specific choices about verbal and non-verbal components of the system. The opening scenario for every lesson takes a position of solidarity with the learner. Verbal components of immediacy include liberal use of humor – even “attitude” – in the title bars that introduce each screen, and the use of familiar, rather than formal language, with second person direct address for behavioral training.

Contemporary cultural imagery and peer voices taking the tone of a cousin or best friend sitting next to the listener further contribute a sense of immediacy, even intimacy. Non-verbal immediacy is promoted through physical availability of the program to learners at their self-chosen most teachable moments, through enabling learners to choose the gender of their guides, and through the use of contemporary cultural imagery in illustrations.

Training for staff addresses the potential and limitations of using humor to promote closeness. It also provides training in how to intentionally direct non-verbal modes of

immediacy, including physical proximity and caring body language.

### ***Scaffolding***

Building on Vygotsky's concept of Zones of Proximal Development, social psychologists coined the term "scaffolding" to evoke the image of the amount of instructional aid that is "just enough" guidance and direction to support the integrity of the knowledge edifice that is being constructed by each learner. It allows a learner to move from a current level of understanding and expertise, to the next level, without fail (Rosenshine & Meister, 1992; Wood, Bruner & Ross, 1976). It can gradually be withdrawn as each new level of learning is attained.

In this model, there is not one configuration of scaffolding that fits for all learner-constructed knowledge edifices, rather the scaffold is created for and matched to each learning endeavor, similar to the ways construction scaffolding is fit to the requirements of each building. This use of scaffolding as a metaphor for teacher support still assumes a linear "sky scraper" model of knowledge, rather than the construction of horizontal, or diagonal webs of understanding. It is likely that there are more apt metaphors in the days of the worldwide web; nonetheless the concept is a useful one, and a key part of much educational theory.

Ripple Effects software provides the building pieces for personal scaffolding through a Lego™-like content structure of more than 50,000 media pieces that can be assembled in literally billions of combinations, to support a positive, personal learning experience. To scaffold the learning process for diverse learners Ripple Effects offers motivating, framing, linking, directing, skill coaching, questioning, modeling, reinforcing, visual

clues, verbal clues, text and sound effect clues, opportunities for rehearsal, transfer training assignments, both linear and non-linear sequencing structures, and concept-checking options.

It is up to each learner to decide which aids s/he needs or wants, and which to do without. Ripple Effects scaffolds reading for English Language learners by utilizing precise combinations of basic vocabulary, rather than more complex words, in an easily apprehended conversational style, with liberal use of analogy and a sprinkling of humor; by offering optional peer narration matched to text; by providing a colorful visual illustration for every point, including metaphoric illustrations. It scaffolds writing by providing an organizational structure for critical thinking and writing; vocabulary suggestions and word prompts; as well as the open-ended option of writing in any language recognized by the computer.

It is the student software that is the primary scaffolding apparatus for teachers. It enables teachers to address students' individual social-emotional learning needs without requiring these first to master whole new areas of expertise. It relieves teachers of responsibility for content expertise in areas of psychology and prevention, for which they most often have not been trained, by putting that expertise in the box. Teachers are able to make as much or as little use of the student software as they choose.

The professional development software offers all the same instructional methods as are available in the student software. In addition, print and electronic resources, including preconfigured individual treatment plans, and scopes and sequences, make it easier for beginning teachers to direct students to potentially fruitful areas of learning. Live training and web-based implementation support provide

additional scaffolding for implementers. The staff training, whether live or electronic, provides step-by-step support for using the student software with learners across a wide range of settings.

Although the term “scaffolding” as an instructional concept arose out of constructivist theory, the idea of having a variety of means of support to better enable student learning is applicable whether the intended learning is objective knowledge, or subjectively construed understanding, or any step in between. The use of scaffolding, especially questioning to promote and provoke learning is not unique to constructivist approaches.

**Questioning as scaffolding:  
Bloom’s taxonomy**

Bloom’s taxonomy can be considered a paradigm for the calibrated use of various forms of questions as scaffolding (1956). It lays out the instructional methods most appropriate for achieving each of the six levels of learning identified earlier (p. 530). These are in the form of specific question types, recognizable by the kinds of language, that they employ. “Who? What? Where?” to elicit basic knowledge; “Retell . . . and Paraphrase . . . ” to facilitate comprehension beyond factual recall; “How does this apply to . . .” to elicit application of a concept; “What are the signs of . . . ” “Why might . . . ” to further analytical thinking; “How could she use this to?” “What if you put this with this . . . ?” to promote synthesis; “How could you decide . . . ?” Or “Do you agree with . . . ?” to elicit evaluation. This taxonomy was designed to address cognitive processes, not affective or behavioral ones. Bloom specifically identified affective and physical learning as also important in education (Krathwohl, Bloom & Bertram, 1973); however, the taxonomy for those two areas

was not completed by Anderson et al. until 2001 and has been somewhat superseded by the CASEL model for social-emotional learning, described on page 5.27.

Ripple Effects addresses all six levels of learning objectives and utilizes the whole range of question/statement types that Bloom identified. The proportion of questions or assignments that require factual recall is less than 20%, found in “got it” games; versus 80% devoted to meaningful comprehension (“info” and “how to” screen discussion questions); application (transfer training exercises, journal writing); analysis (case study, true story, info and how to questions); and evaluation (“scenario,” “info,” “how to,” “true story” questions, journal writing, “got its”). This is the reverse proportion of that in many traditional settings, even for younger students.

Different structures and built-in processes in Ripple Effects software are designed to support different kinds of learning:

- To support memory of declarative knowledge (facts, concepts, principles) Ripple Effects provides repetition in different parts of the lesson, and with different media: text, illustrations, narration, video, and basic level questions through interactive games.
- To develop procedural knowledge, Ripple Effects provides peer modeling, rehearsal, and transfer training opportunities.
- To develop perspective taking discussion, Ripple Effects offers questions that require them to take different points of view.
- To develop higher order thinking skills, Ripple Effects provides case studies that promote problem identification and analysis prior to actual problem solving. Discussion questions for “info,” “how to,” scenario and “true story”

screens require reflective consideration of the how and why behind each situation and its potential solutions. They cannot be answered by simple yes/no response, or even recollection of the facts of the case.

- To impact critical thinking and writing, Ripple Effects “brain” (journal) exercises provide sentence structures and word prompts to facilitate analysis and expression of personal experience.
- To facilitate generative, creation of products, users generate content/meaning through journals, and contribution of true stories.
- To impact motivation, Ripple Effects provides lessons in goal-setting, motivation, and self-understanding.
- To provide cues and reinforcement to guide answers to specific understandings, Ripple Effects rejects incorrect answers in games, and reinforces correct ones with forward movement in games.
- To further the links between past understanding and new experiences Ripple Effects uses visual and verbal metaphors, and includes a related topics box of linked subjects in every screen.
- To strengthen neural involvement, Ripple Effects uses interactive games and multi-sensory engagement in every lesson.

Chapter 6 includes a screen-by-screen description of how Ripple Effects *Whole Spectrum Learning Platform* provides these ten forms of scaffolding, beginning on page 6.21.

### **Structure: Universal Design for Learning (UDL)**

The intent of differentiating instruction is to maximize each student’s growth and individual success by meeting each student

where he or she is, and assisting in the learning process (Hall, 2009).

A scalable approach to differentiated instruction in response to the many differences in how students select and process information, their learning aptitudes, intelligences, special gifts and special needs, and their readiness and willingness to learn is called universal design for learning (UDL). It is built on the same basic conceptual model as universal design in architecture. That is, that the capacity for instructional differentiation, must not be dependent upon any one instructor’s personal ability to make necessary accommodations, but should be built into the very structure of every instructional setting, including the content, format and learning processes (CAST, 2008).

In terms of content, the UDL framework requires multiple means of representation to provide various sensory paths for acquiring information and to activate recognition networks for sorting knowledge. Within these representations there need to be multiple levels of content – both breadth and depth – so that instruction can be accelerated or slowed based on each learner’s most efficient pacing. In terms of process, the UDL framework requires multiple means of engagement to maintain interest, to leverage learning preferences, and to provide the appropriate kinds of mental challenges for different groups of learners. Most UDL proponents would argue that UDL has implications for assessment (“acceptable products of learning”) as well.

A growing number of educators believe that the capacity for universal, differentiated instruction implicit in the concept of UDL cannot be achieved without thoughtful, strategic, structural use of technology.

How Ripple Effects' *Whole Spectrum Learning Platform* leverages the potential of technology to individualize instruction through incorporating principles of universal design for learning (UDL) is covered more fully in the next chapter on technology.

However, one of the most powerful, universally accessible instructional methods at teacher's disposal is not dependent on technology at all, although technology, especially television and increasingly the Internet, has had a huge impact on how it is experienced. That method is storytelling.

### ***The role of story***

Story is an ancient instructional method. It has preceded every other mode of instruction, and has endured contemporaneously with all of them across time, space and culture. Story has a powerful cultural role in transmitting information and values, prompting emotional reactions, provoking analysis, motivating action, and supporting community identity. It blurs borders between classical and constructivist instructional methods. It combines instructional content, process and structure in myriad ways, for myriad settings, with myriad audiences. Yet there is little objective, quantitative research on the role of story as a pedagogical method in schools, and only a small body of qualitative research for any area except teaching reading itself.

Despite the relative paucity of research on the role of story in motivating achievement or changing behavior, Ripple Effects relies heavily on story as an instructional mode. It is too huge a part of cross-cultural legacy to ignore simply because it has not lent itself to RCTs. Ripple Effects includes two kinds of story in

the *WSIS*: The first is compelling first person, true videos, found by clicking the "true story" button along on the bottom of the interface window. These are modern morality tales or "hero journeys" (Joseph Campbell, 1968), in which peer learners describe an important, true life challenge, how they faced it, and what they learned from it, all in under one minute. In many cases, the learning comes from a mistake, rather than an instant success.

The goal of these true stories is threefold: First, it is to mirror back to learners, especially adolescents, a picture of their collectively held wisdom and capacity for change. This challenges and corrects distorted images of themselves that they see every day, whether through popular media, through the eyes of a biased teacher, or through the responses of an emotionally abusive or neglectful parent.

Secondly, the use of stories is intended to viscerally engage learners and prompt them to want to know more of what the person in the story has learned. This motivates them to take advantage of the other learning modes available for that lesson.

A third purpose for using stories is to redistribute "earned wisdom" so that novice learners, whether students facing a social situation for the first time, or inexperienced teachers coming into a culturally new situation, can have the benefit of other people's mistakes and avoid making similar ones of their own. Discussion questions prompt learners to take the protagonist's point of view and try to solve the problem from many directions. In addition to being included in the software, more than 50 True Video Stories by educators have been uploaded to *YouTube*, under the name Earned Wisdom Tech, a 501(c) 3 organization that Ripple Effects has helped sponsor.

The other kinds of stories used in the program are hypothetical scenarios that are the opening screen for every topic. They have a different form and purpose from the “true story” screens. They present hypothetical characters, settings and challenges that need to be met, but do not include a resolution of those challenges. This scenario-based introduction is common to many psycho-educational programs. The Ripple Effects scenarios are deliberately ambiguous, using still photographs that learners can project their own interpretation onto, rather than more literal videos. The end has to be supplied by the learner, who first must take on the perspective of the protagonist, and then engage in higher order thinking to predict emotions, weigh options, suggests solutions. As described above, this experientially-based, case-study method is at the core of constructivist education.

Providing such a wide range of content, process and structural instructional options, including culturally relevant story telling, in a single classroom, all at the same time presents a mind-boggling mound of challenges on many levels. Not the least of them is the harmonic orchestration of the participation of many different learners, engaged in many different kinds of learning in the shared space of a single classroom.

## CLASSROOM MANAGEMENT

### Classroom orchestration

Ask teachers to describe their role in classroom orchestration and they describe their responsibilities in competing metaphors that suggest a multiplicity of roles even more boggling than those associated with academic instruction. “Maintaining order” suggests the need for a

cop. “Motivating” evokes a cheerleader. “Orchestrating” suggests a symphony conductor. “Keeping students constantly working” evokes a road crew’s straw boss. “Helping teams work together toward a common goal” is the job of a coach. “Keeping many students occupied at the same time with differentiated learning activities” requires a master juggler. “Keeping attention streams constantly flowing – but not overflowing” – suggests the work of an ecologist. “Managing data” suggests something closer to a clerical worker or lab technician.

### Classroom management as pedagogy

For many years, instructional methods and classroom management have been viewed as two completely separate things. The latter has traditionally been about controlling the environment, especially student behavior, but also group identity, motivation, expectations, the physical learning space, cultural values, and how problems get addressed. The former describes various models for the processes (at least partly adult-mediated) by which some body of knowledge makes its way into the minds of some learners. Both fall under the heading of pedagogy. Although they were long considered separate elements, they are increasingly intertwined. From the student perspective, they can’t be separated. “Students have at least two cognitive demands on them at all times: academic task demands (understanding and working with content) and social task demands (interacting with others concerning that content)” (Evertson & Neal, 2006). This is true in the most conservative environments as well the most progressive ones.

In a best practice research report on classroom management compiled for NEA, Evertson and Neal (2006) propose a set of

strategic benchmarks for classroom management in a learner-centered context. They identify community building, establishing norms and rules, practicing classroom procedures, handling problems and locating authority as key markers of more or less effective classrooms. As in many other areas described above, they distinguish between traditional (“moving from”) and progressive (“moving toward”) approaches, with explicit recommendation of the latter (2006).

Ripple Effects *Staff for Coach*, software provides coaching from both “moving toward” and “moving from” perspectives, in each of these areas, through tutorials entitled “connectedness,” “empathy-showing,” “problem-solving,” “rules,” “authority” and “classroom management.”

In another research synthesis, the same researchers identified evidence-based classroom management strategies that positively impact academic outcomes for low achieving students whose life circumstance, especially poverty, increase their risk of failing in school. Their findings provide evidence that supports the use of both “old” and “new” classroom models: cognitively-oriented instruction (old); heterogeneous grouping (new); adult tutoring (old); peer tutoring (new); and computer-assisted instruction (new) (Evertson & Neal, 2006). Ironically, behavioral management models traditionally associated with classroom management are strikingly absent from this list. In a similar paradox, discussions of effective discipline practices increasingly stress the role of cognitive engagement and academic instructional models in maintaining a classroom environment conducive to good behavior (Kounin, 2003; Osher 2003).

### ***Integration of instructional and group management practices***

The consistently strong correlation between low-income students’ learning and behavioral outcomes, and their teachers’ instructional and classroom management practices, argues for the re-integration of instructional process with classroom management functions. There are other reasons to link them as well. The mainstreaming of special needs students and accompanying requirements to differentiate instructional styles to meet their individual needs; growing social and cultural diversity in the classroom with its heightened potential for sparking social conflict; growing incidence of limitations in individual student capacity to pay attention for extended periods of time; and the ubiquitous pressure to keep students constantly working so that they can pass standardized tests, have all forced changes in classroom organization and management practices, even in traditional schools. Recent, equal and opposite, school reform trends toward project-based, team learning and self-regulated, individual learning, complicate things even more. Over all of these factors is layered the persistent and pernicious influence of class, ethnicity and gender-based stereotyping about cognition and behavior, that find expression in disproportionate discipline referrals and academic failure discussed earlier. Thus it has become nearly impossible to separate learning, cultural, behavioral and classroom management issues.

It is because these forces are so closely braided together and yet also need to be carefully teased apart that Ripple Effects *Coach for Staff* professional development software addresses the three subjects of behavior management, differentiated instruction and cultural competence in a

single unit, entitled “Managing Diverse Learners.” The unit includes 29 tutorials divided into three sections: Learning Orientation, Learning-related Challenges

and Behavioral Challenges. Cultural competence training is woven into every unit and all 29 lessons of the lessons listed below:

<b>RE Managing Diverse Learners Unit</b>	
<p><b>Managing Diverse learners</b>                      Learning orientation                      Cultural background                      Socio-economic status</p>	<p><b>Learning styles-students</b>                      Feeler-doer learners                      Feeler-watcher learners                      Thinker-doer learners                      Thinker-watcher learners                      Balanced learners                      Bimodal learners</p>
<p><b>Learning styles-students</b>                      Feeler-doer learners                      Feeler-watcher learners                      Thinker-doer learners                      Thinker-watcher learners                      Balanced learners                      Bimodal learners</p>	<p><b>Intelligences</b>                      Learning-related challenges                      Academic disorders                      Attention disorders                      Giftedness                      Mental retardation</p>
<p><b>Behavioral challenges</b>                      Attention seeking                      Autism spectrum                      Defiance                      Disruptiveness in class</p>	

Table 5.2: Tutorials in Managing Diverse Learners unit

Earlier sections have described how Ripple Effects Staff Development and student training software work together to support a safe orderly environment, set high expectations, create a code of conduct, increase motivation, provide differentiated instruction and enhance student participation in decision-making. What hasn't yet been described is how it implicitly addresses the issues of maintaining smooth flowing streams of attention and engagement within the self-regulated student training software, and how it explicitly addresses both instructor-led and

self-regulated, electronic training for teachers.

***Orchestrating learning to prevent discipline problems***

Jacob Kounin is credited with coining the term “Ripple Effect” to describe how both pro and anti-social behavior spread through a kind of social contagion, especially in circumstances conducive to transmittal. He was the first to provide evidence that individual discipline problems could largely be prevented by teachers’ proactive

engagement in group-level strategies. He identified four of those strategies as key: “with-it-ness,” “overlapping,” “smoothing” and “momentum” (Kounin, J.,1970).

### **“With-it-ness”**

“With-it-ness” as Kounin used the term, refers to both a teacher’s constant mindfulness of what’s going on in the class group – and to continuing communication of that mindfulness to students, letting them know that very little gets past the person in charge.

In the leadership training unit of the staff development software, Ripple Effects provides tutorials on the use of voice, eyes, posture, proximity and message to communicate teacher awareness of student behavior. With Ripple Effects, the primary training focus is toward expanding awareness – and reinforcement – of what students do right. The secondary focus is on redirecting negative behavior, without interrupting class. Behavioral observation forms help hone that awareness. “Eagle Eye” postcards that can be sent to parents further communicate an “all seeing presence” and are designed specifically to call out pro-social behavior. The ability to direct students who are inattentive or disruptive to the Ripple Effects student program, reduces those students’ capacity to distract from the group learning experience. The use of a video game-style point system to track student progress enables teachers to easily ascertain whether students are on task.

From the student perspective, the software itself is “with it,” constantly monitoring what they are doing. It has built in sound, text and visual cues to help them stay focused.

A different kind of “with-it-ness” is also built into the software programs. Although Kounin defined “with-it-ness” in interpersonal terms, Ripple Effects software

consciously uses awareness of what’s going on in wider social-cultural contexts, in order to reduce students’ resistance to learning. Young people periodically review – and the company updates – the software for look, feel, language, and subject matter, to communicate awareness not only of students’ behavior but also of the social context for that behavior. For example, synonyms of the words “marijuana” and clothing styles for the electronic peer guides have a relatively short life within which they are perceived as “with it.” These have been changed several times in the decade since the program was first released.

### **“Overlapping” (Multi-tasking)**

Overlapping, as Kounin used it, refers to physical monitoring of behavior concurrent with doing other teacher tasks, such as giving directions, introducing new content, or completing administrative paper work. This meaning is closer to the current concept of multi-tasking, than to transitions between segments, which he separately identified as important.

With Ripple Effects, the software itself multi-tasks: providing instruction, modeling and storing records all at same time. Use of the student software as an instructional aid greatly increases teachers’ capacities to provide individualized tutoring to any child, while still attending to the needs of many others, or even filling out paperwork.

### **Smoothness**

The third key characteristic of Kounin’s model of preemptive and preventive, effective classroom management is “smoothness.” Smoothness is a quality of sequencing, of graceful entrances and exits.

Ripple Effects software smoothes entry into various content chunks simply by having each learner choose the door of entry and the

timing of opening it. The software smoothes transitions by building in hyperlinked sequences that allow both linear and non-linear, associative progression. There is no disjuncture between the end of one lesson element and the start of another, because they follow each student's natural interest. The professional development software devotes a tutorial to the process of smoothly introducing Ripple Effects to students, with special cautions about avoiding over-describing, and reminders for implementers to direct students to view the three minute intro ("?) video so they can move smoothly through the program.

### **Momentum**

The fourth characteristic in Kounin's group instruction-focused model for effective classroom management and reduced discipline problems is momentum, keeping things going.

The student software is designed to maintain momentum at the group level, by allowing pace to be controlled at the individual level. In general, each part of a lesson segment is short, 60 seconds or less, and students proceed at whatever pace keeps their interest. There is audio narration of text for all screens except the journal. The text scrolls at whatever pace the reader chooses, but the spoken voice stays at a conversational pace. Very fast readers can turn off the audio; very slow readers can repeat it as many times as are needed. There is no danger of students getting lost when a teacher veers off into an unexpected direction, because students themselves control the direction.

Ripple Effects *Coach for Staff* software provides coaching in simple techniques for maintaining momentum and maintaining the flow of instruction, including bundling student comments or questions before responding to any, so that the first questions

do not misdirect focus, checking for understanding through paraphrasing, keeping an eagle eye out for signs that a student is losing contact with the group, and using simple measures such as "the look" and physical proximity to bring students back into the group.

## **ASSESSMENT**

Separate from group management responsibilities, a growing part of every teacher's non-instructional responsibilities, is assessment. Assessment – of students, teachers, programs, schools and administrators – is one of the hottest topics in education today. As with every other area of education, philosophical differences about education are mirrored in pronounced differences in how educators view the assessment process.

Ripple Effects *Whole Spectrum Intervention System* includes software and web-based tools to enable diverse kinds of assessment to meet diverse needs in diverse settings. These are practical, real world measurement instruments, more like the ubiquitous Brannock™ foot size measurement device than sophisticated, diagnostic medical tests.

### **Pre-intervention assessment**

For decades, post-intervention testing of academic proficiency was considered sufficient to measure student outcomes; now there is general consensus that pre-intervention assessment is needed as well. This is true for math and reading; it is no less true, though far less widely acknowledged, for social-emotional readiness to learn. In the case of students with special needs, pre-intervention assessment is required by law (IDEA reauthorization, 2004). It is needed to determine readiness to learn and the best

entry point for continued learning. It is needed to document baselines against which individual and group level progress can be measured.

Wide variance in end of year scores for standardized tests and discipline referrals point inevitably to the conclusion that there will be wide variances at the beginning of the following years as well. Thus students must start at different points, even if they are in standardized classes. To come anywhere close to ensuring that “no child is left behind,” there needs to be a way to enable individualized intervention at the earliest possible point for struggling students to make it to the same starting line as their peers.

Ripple Effects offers seven, validated, computerized surveys to assess individual attitudes and self-perception. Three are designed for elementary students, four for adolescents. The survey instruments are all adapted from widely used, previously validated scales, now in the public domain.

The Ripple Effects Resiliency Assessment Survey (RERA) is adapted for multimedia delivery from the Resilience & Youth Development module of the California Healthy Kid Survey, a widely validated self-report survey. It assesses four components of resiliency: autonomy, empathy, connectedness and problem solving (Benard, 2002). The Ripple Effects Self-Determination Scales (RESD) are adapted from the Multi-dimensional Health Locus of Control scales (MHLC), another widely validated set of scales. They measure attribution of control over life events to internal factors, and external factors, with external factors including powerful others, social forces, and fate. Ripple Effects' Drug Norms and Perceptions (DNP) instrument is adapted for multimedia delivery from Monitoring the Future (MTF), an ongoing study of the behaviors, attitudes, and values of American secondary school students (as well as college

students, and young adults) funded primarily by the National Institute on Drug Abuse.

Ripple Effects Reading Self-efficacy Scale for Adolescents (RERSSA) is adapted from the Academic Self-Efficacy Scale (Gresham et al. 1988), developed for use with college students. In the case of each of these instruments, the adaptation has involved taking a text-based, traditional survey format and putting it into a multi-cultural, peer narrated, developmentally appropriate, reading independent, multimedia, game format. To encourage an answer to every question, each answer that is submitted results in forward movement in a game. No answer has any more weight than any other answer. Students who complete all of the questions are rewarded with an engaging animated sequence.

In addition to these pre-configured measures, Ripple Effects offers the capacity to put any validated survey, for which rights are owned or legally arranged for by the school client, into a multimedia game engine.

Ripple Effects also offers web-based, group level, school climate profilers to quickly assess initial needs from both student and staff perspectives. The school climate survey is based directly on criteria identified by the Office of Safe and Drug Free Schools (1998). In addition to providing direction for creating a safe school environment, the *School Safety Profiler* helps administrators meet needs assessment requirements for school safety funds.



See [www.rippleeffects.com/needs](http://www.rippleeffects.com/needs) for the complete set of questions and their rationales. The *Respect for Persons Profiler*, developed in collaboration with Partners Against Hate, uses a similar format to assess respect for persons.

### **Response to intervention (RTI)**

Response to intervention (RTI) is a specific, federally mandated policy (IDEA,

2004) that is designed to help instructors bring more students to success, before they experience academic failure, disciplinary actions, or assignment to Special Education. It is a capacity-building approach for instructors, built on early and often assessment of learners. The intent of RTI is “to increase instructional accountability and justification, improve the alignment between assessment information and intervention development, enhance use of limited resources and time, increase capacity to make decisions with accurate and relevant information, initiate important instructional decisions earlier and in a more timely manner, engage in regular and comprehensive screening for successful and at-risk learners, provide effective and relevant support for students who do not respond to core curricula, and enhance fidelity of instructional implementation” (Sugai, 2007).

Ripple Effects provides an RTI planning booklet, with electronic templates for reproduction, to easily align specific configurations of Ripple Effects intervention with identified students goals.

### **Observational assessment**

A variety of tools have been created and are widely used for pre-intervention assessment of academic proficiency. A much narrower set of resources are available to assess social and emotional proficiency. Most are built on adult observations of student behavior. The School Social Behavior Scale (SSBS; Merrell, 1993; Merrell, Cedeno, and Johnson, 1993; Worthen, Borg and White, 1993; updated to include the Home and Community Social Behavior Scale (HCSBS; Merrell, 2002) is the most widely used and has been norm-referenced with many populations. The most recent addition to this list is Functional Behavior Support Plan (F-BSP), a planning tool for use by school personnel who are building a behavior

support plan using function-based, behavioral assessment (Horner and Crone 2005).

Ripple Effects *Social Behavior Observation Form* (Stern, Ray, 1997) is a less widely used, but still useful, observational tool for measuring pro-social and anti-social behavior in school settings. It screens for both positive and negative behaviors. Face validity was established through review by graduate student observers. Content validity was established through expert panel review and by matching each test item to theory-based components of Ripple Effects lessons. Construct validity is established through convergent validation with SSBS, and through documenting strong trends in pre-post intervention changes on both pro-social and anti-social behavior. It is norm-referenced for diverse, urban middle schoolers, but not for other populations. Cronbach’s alpha coefficient of inter-rater reliability is .93.

### **Self-assessment**

Response to Intervention (RTI) as a public policy, typically assumes that there is for every student a single, objective, entry point along a straight line of preset points that are the metrics for academic and, increasingly, behavioral proficiency. However, constructivists believe that to most deeply engage every learner and create the buy-in that will enable learning to proceed with greatest commitment and chance of success, one often must look for entry points “outside the lines” of traditional measures of proficiency. Their model requires identifying a most teachable time and space within the whole circle of life experience for each learner. This is a much more difficult process with SEL than ascertaining pre-intervention levels of readiness for math. In many cases a particular trauma is a major part of the base of personal experience. It can be both a

starting point for learning, and a specific barrier to that learning (Cook et al. 2005; Delaney-Black et al. 2002).

For students who face trauma and hardship in their personal lives, school is often the one environment where they can experience an identity that is not circumscribed by that pain. Probing to identify that personal trauma in a school environment, however well intentioned, may violate an implicit promise of emotional safety on school property and pressure students into a level of self-revelation they would not freely choose. Not acknowledging that point of pain, however, may result in failing to address a major factor that interferes with school success.

The Ripple Effects approach for pre-intervention assessment of “where the student is” may offer a way out of this conundrum by encouraging students themselves to privately identify whichever factors may be impeding their school performance. It provides an emotionally safe place for students to recognize and begin to deal with these sensitive issues without exposing themselves, or being stigmatized (often only in their own mind) as being “carriers” of the problem. Within the program, they receive help identifying people in the community, including school counselors, who can help them address personal challenges. Ripple Effects specifically directs them to report issues that present threats to their safety or that of other students.

In nurses and counselors office, the process is often as simple as inviting students to “scroll down this list and see if you find something that interests you.” In classroom settings, it might be “scroll down and see if you can find something that may be a clue to why this (expected behavior, assignment, part of school) isn’t working for you.” In discipline settings, the mandate (not invitation) might be: “After you’ve completed

the tutorials on (specific offence) scroll down the list and see if you can find what you think might be causing you to act in this way.” Thus students can get the individualized help they need, without teachers needing to cross a protective, privacy boundary.

In the course of the training, students are encouraged to talk to an adult they trust about the challenges they are facing (and adults are trained in how to handle that disclosure). Often, but by no means always, students choose to share that information with school personnel. Whether they choose to reveal their personal point of entry or not, in every case, their identification of that point is the only input needed for the software’s expert system to automatically lead them to the skill training most relevant to coping with it.

In addition to the capacity to self-identify underlying barriers to learning, Ripple Effects provides 37 interactive, self-profiles to provide an immediate mirror of subjective assessments of personal strengths and opportunities for growth. Based on the responses the learners have entered, the expert system then suggests a set of tutorials to pursue that growth. These are thematic directions for growth, not calibrated by grade level, month and year. Reports from these profiles can be printed and/or electronically saved to share with a teacher or other trusted adult. However, to protect student privacy, the results are not saved within the program.

### ***Pre-intervention assessment of organizational readiness***

Just as students are at different points of readiness to learn, organizations have different points of readiness for change. The number of situations in which social-emotional learning programs fail to take hold, or are initially adopted but fail to be sustained or implemented with fidelity, is evidence of the importance of pre-

intervention assessment and individualized plans for schools, as well as students (Backer et al. 1993; Fixsen et al. 2005).

Ripple Effects provides site-based planning guides that lead administrators and implementers through a step-by-step process of assessing opportunities and barriers to successful use of Ripple Effects in their localized context. Training within the professional development software expands on this process to include training in how best to address all stages of the implementation process.

## Post-Intervention assessment

### *Assessment as measure of concept mastery*

A principle of classical education is that because reality is objective, fixed, divisible and describable, the most valid and equitable tests for understanding of it are standardized tests (Thorndyke, 1918). Multiple-choice tests, including those that can be graded by a computer, are the most common form of standardized tests. They are not vulnerable to charges of subjective interpretation of results. Traditionally, standardized tests have been used exclusively to test academic proficiency. To the degree that teachers, rather than students, are the active agent in the learning process, student test scores may validly be considered a measure of teacher effectiveness, as well as of student achievement. To the degree that social-emotional competency includes a knowledge base that is grounded in science, standardized tests are a valid measure of memory, comprehension, and mental ability to logically apply a basic principle to a concrete situation in these areas as well.

Ripple Effects includes direct, objective, standardized assessment of the particular content for each lesson in each lesson and identifies these built-in evaluations as core components of the intervention. The set of

tools utilize multiple choice, matching, and true false questions in the form of interactive games, as a method of assessing concept mastery. The emphasis is on social-emotional learning concepts and ability to apply the concept being studied in situational contexts. More than 700 such micro-assessments of concept mastery are included in the series of programs. A video game-style scoring system awards and keeps track of successful completion of each such “Got it” interactive games. 100 percent correct responses are required to complete the game/test and receive the points that signal progress.

### *Assessment as means to content mastery*

If, as constructivists believe, experimentation – the process of trial and error – is a key mechanism for learning, then, with appropriate feedback, the process of testing itself can become the means for mastery.

Ripple Effects employs this practice toward mastery approach to extensive use of multiple choice testing throughout the program. However, it is not a traditional model for multiple choice testing. Besides having game format, “Got it” assessment tools differ from traditional multiple choice tests in three ways.

- Because they are peer narrated, they are not dependent upon, or a proxy measure of, reading ability.
- Their goal is not to separate students into pass or fail, but to bring all students toward mastery. Spitting out wrong answers is part of the game; it is not finished until content is correct. The peer narrated questions are standardized, but the process is a physically engaging, playful one in which the system refuses to accept wrong answers, and students receive points only when all answers are correct.

- For students who have keen kinesthetic intelligence, the physical process of engaging in the game may lead to learning more easily than exposure to didactic instruction in other parts of the program. For this reason, Ripple Effects recommends making all interactive parts of the program mandatory, and didactic parts optional.

### ***Assessment of performance knowledge***

Conceptual understanding is not the same as “felt, or performance, understanding,” (Caine & Caine, 2004). Along most practical measures, from medical school to software engineering, scores on standardized tests fail to predict real world success or failure. This is true in academic areas; it is even truer in the highly nuanced area of social-emotional learning. Learners (adults as well as students) can often describe a best practice, social-emotional response, such as assertive posture or message, but often don’t demonstrate that understanding in their actions. Since the model of change for most social-emotional learning programs involves positively impacting these personal performance capacities as the means for creating positive change in schools, it make sense to measure the mediating competencies.

Self-report is a notoriously unreliable method for ascertaining competency in these areas. Nonetheless, when the goal is to assess gains in skill, as opposed to identify absolute values, subjective data can be useful. To date, a nationally normed, fully validated set of standardized test to assess performance knowledge of the full range of core social-emotional competencies is not widely accessible, although such measure are being currently being developed.

Ripple Effects encourages clients to use any evidence-based tools they have available to track impact of its interventions on well

documented, social-emotional mediators of behavior and achievement. The pre-intervention survey tools described above can be used as repeated measuring instruments to make pre- to post-comparisons on internal factors, such as empathy and problem-solving, which research has confirmed are mediators of social behavior.

If as constructivists insist, there are no possible universal understandings of subjectively known reality, rather there are multiple realities, and multiple understandings of reality, it follows that there is no standardized test – even of social-emotional competencies – that validly measures knowledge across all learners. Thus holders of this position argue that the best measure of understanding is student presentation of what is known, preferably in the form of a visible construction, or learning “product,” such as a portfolio.

The major personalized product universally generated through the Ripple Effects training software is an electronic journal in which students have applied each concept, lesson by lesson, to their own lives. By using the “save” and “print” options for each entry, students can create a step-by-step record of what they have learned and how they have applied that learning to their own lives. In addition, Ripple Effects offers opportunities for learners (adult and student) to make sense of and present their personal understandings through submission of first person, true story videos that can be incorporated into the software program, or uploaded to Earned Wisdom Tech on *YouTube*.

### ***Assessment of external outcomes***

Impact on research-validated mediators of school outcomes is a proximal measure of success. However, evidence of this performance understanding, although

helpful, still does not answer the question of whether an intervention has achieved its goals. A compelling portfolio product cannot guarantee good behavior or school success. Some experts insist the only valid measure of all knowledge is real-world outcomes.

Some schools use the teacher perception of deportment/social-responsibility/behavior to assess student proficiency in social-emotional areas, and assign grades based on those perceptions. Others use “more objective” observational forms, such as SBSS, as described above. Despite such observational measures having high scores for reliability within some groups of graduate students and educators, data on disproportionality suggest that some teachers’ perceptions of students’ behavior may be even more biased than students’ self-report.



When deportment grades are made available, Ripple Effects relies on third party evaluators to correlate those outcomes with dosed exposure to the software. In the one randomized, controlled trial where this information was available, students in the Ripple Effects group received significantly higher grades for personal and social responsibility than those in the control group, even though the adult facilitators were non-professionals, including a school janitor and cafeteria worker, and keep the classroom teachers, not these lay workers, assigned the deportment grades (Bass et al. 2008).

When pre-to post observational data is available, it can provide useful indices of change. Not surprisingly, both self-report and subjective judgments by teachers are vulnerable to charges of bias. Thus Ripple Effects recommends that all clients evaluate this objective and all programs for success in impacting external factors that have been identified in advance.

Truancy, grades and discipline referrals are key behavioral outcomes to track in school settings, because they can be derived directly from administrative data. Use of

alcohol and drugs is more difficult to measure, not only because it relies on self-report, but because many school districts prohibit questioning students about involvement in illegal activity.

Ripple Effects recognizes real world, group-level outcomes as valid tests of program effectiveness. Academic achievement, absenteeism and behavioral referrals are standard measures for effectiveness in real world evaluations of the program. A summary of Ripple Effects impact on school outcomes across 11 studies is summarized in Chapter 6.



See the complete summary of outcome data from eleven different studies, involving more than 4500 students, *Evidence of Effectiveness, Vols. I, II, III, IV, V.*

### ***Assessment of implementation process***

*The key to understanding how successful research can be translated into successful practice lies in understanding how programs and policies can be implemented so that quality is maintained and the programmatic objectives intended by the program developers are achieved.* (Dusenbury, Brannigan, Falco & Hansen, 2001).

Historically, the implementation process has been largely overlooked in evaluation studies. In the last decade there has been an explosion in interest in this area (Fixsen et al. 2005). The reason is simple: meta-analyses reveal that the implementation process may have more impact on objective outcomes than designed program quality (Lipsey & Wilson, 1998).

This is explained by the fact that gaps between the original design of “model” programs” and the actual delivery of those programs are often deep and wide. Dane & Schneider (1998) identified four primary characteristics to examine when assessing program fidelity:

- Adherence to the original design in terms of protocols, training, techniques and materials
- Exposure and dosage in terms of number and frequency of sessions
- Instructional skill level, including enthusiasm, preparedness and attitude
- Participant responsiveness, the extent to which participants are engaged by and involved in the activities and content of the program.

Ripple Effects provides an automated system for measuring three of the four implementation process components, and fidelity to the fourth measure, instructional quality, is built-in.

Because training protocols are hard wired into the software, the main adherence factor is simply ensuring that students get in front of the computer, successfully sign in, and understand the three minute animated video that describes how to use the program. The measure of that is the presence of a student record created at sign in.

Dosage, in terms of number of sessions, is automatically tracked. Time stamps on the Journaling activities can be a marker for frequency of use. Completion by educators of the interactive “got it,” for eight specific tutorials of the 136 available in the Professional Development software are a measure of their understanding of the concepts of recommended best practice for presenting the program, but not actual performance.

The degree of participant responsiveness, for both students and teachers, is measured by completion of the interactive parts of the program, the journal, assessment games, and interactive self-profiles. It is those scores that become the basis for dosage calculations that can then be correlated with outcomes.



*Nine experimental studies (seven randomized controlled trials, two quasi-experimental) have examined how various real-world content adaptations*

*of Ripple Effects WSIS have been made at primary, secondary and tertiary levels of intervention, and how those adaptations correlate with student outcomes.*

*Quantitative and qualitative analysis of compliance data across seven experimental studies examined the questions: to what degree did participants comply with the protocol? What factors most contributed to compliance rates?*



Summary results from those studies and a more thorough analysis of the implementation process can be found in Chapter 7.

## Data analysis

Federal state and local policies increasingly mandate data management and analysis as an integral part of program implementation. A data management function, built into the Ripple Effects system and described in detail in the next chapter, enables implementers to track student progress against assigned goals. It allows researchers to conduct dosage-correlated evaluations, and enables administrators to make data driven decisions to meet high standards of accountability.

## Interpretation of assessment results

Meaningful interpretation of assessment results is always contextual. It must take into account the particular characteristics of learners, teachers, and school setting, as well as national trends that may be consistent or inconsistent with data from each particular case.

For an additional fee that can be included in the original purchase price, Ripple Effects will provide a narrative interpretation of implications for practice of aggregated school data, in terms of identified needs and recommended corrective strategies. In most cases, this analysis and

interpretation of outcome results is prepared by a credible third party evaluator. Ripple Effects has special agreements with three highly credible research organizations, one which specializes in large scale projects, one which specialized in smaller scale projects, and one which specializes in analysis of innovative practices. Clients' in house researchers can also analyze and interpret correlations between dosage data and student outcomes.

### **Cultural competence**

Many students pass standardized tests; many complete impressive portfolios; many score well on behavioral assessments; however, by most measures whole groups of students don't measure up to expected competency levels, including behavioral competency. African American, Latino and Native American students are overrepresented in those left behind. In some urban areas these students are far more than a significant minority; they are the majority. In an effort to intervene with this thorny and pernicious dynamic, educators have borrowed from the field of public health the concept of cultural competence.

Within the constructivist model, cultural competence is equally important, whether the model of how knowledge is constructed is personal or social. The purely individualistic interpretation of the constructivist position that any common understanding of reality is impossible, argues for mastery of perspective taking and diversity appreciation as the most necessary personal capabilities simply to communicate in a diverse and democratic society. The social constructivist model explicitly recognizes that conscious and unconscious social-cultural agreement and disagreement about the meaning of things impacts all learning.

Within traditional models of education, demographic trends within a district have a major impact on whether educators and parents view cultural competence as a necessity for both teachers and students, to ensure school success; an enhancement to, but not requirement of teacher proficiency; or an irrelevant matter of "political correctness." In general, urban schools with large minority populations consider it more important than do rural or suburban schools. As the demographics rapidly shift toward greater and greater cultural diversity, all schools will eventually have to deal with this issue.

### ***Effective cross-cultural capabilities***

Cultural competence can roughly be defined as "effective cross-cultural capabilities" (Cross, Bazron, Dennis & Isaacs, 1989). While many people think of it as a personal characteristic, the practical ability to tune into and respond appropriately to people from different cultural groups than one's own is increasingly recognized as an institutional characteristic as well.

King, Sims and Osher (2008) describe five elements of a culturally competent educational system. "The system should (1) value diversity, (2) have the capacity for cultural self-assessment, (3) be conscious of the dynamics inherent when cultures interact, (4) institutionalize cultural knowledge, and (5) develop adaptations to service delivery reflecting an understanding of diversity between and within cultures. Frequently cultural competence training programs focus on individuals, and differentiate between awareness, attitudes, knowledge, and skills, but fail to look at policy implications. As with safety issues, Ripple Effects addresses cultural competence from the perspectives of schools, students, and teachers.

Similar to the *School Safety Profiler*, *Ripple Effects' Respect for Persons Profiler*, developed in collaboration with the national collaborative Partners Against Hate, enables schools to assess aggregated perception of cross-cultural dynamics from teacher and student perspectives.

*Promoting cultural competence in students.*

Ripple Effects explicitly raises students awareness of cultural differences about appropriate non-verbal behavior, such as “eye contact,” “body language,” proximity, and casual touch, as well as word choice, “message” and appropriateness of sharing personal information. Through the inclusion of specific training tutorials on issues such as “appreciating diversity,” “social justice,” “racism,” “discrimination,” “poverty,” “ethnic pride,” “hate crimes” and “confronting injustice”, students from diverse ethnic and social backgrounds experience Ripple Effects as relevant to and respectful of their experience.

At the same time, through tutorials such as “respect for authority,” “teacher conflict,” and “courtesy,” students receive training in how to take responsibility for their part in negative social dynamics and how to bring their personal behavior to accepted standards. By using diverse peer images, stories, and voices, including 30% Latino and African American youth in tutorials about “success,” “smarts,” “effort,” “achievement,” and all seven core social-emotional competencies, Ripple Effects directly counters stereotypes that can contribute to self-sabotage, and/or inter-ethnic conflict.

*Promoting cultural competence in teachers.*

On the other side of the equation, as described more fully on page 5.75, the professional development program provides teachers with a way to privately and honestly examine ethnicity-based attitudes,

expectation, perceptions and feelings, without blame or shame. Implementers receive positive, supportive training in how to assess their own unconscious responses, and deconstruct internalized stereotypes. In addition to specific PD tutorials on “culture,” “ethnicity” and “social class,” Ripple Effects promotes cultural competence within tutorials on topics such as, “expectations,” “effort,” and “learning orientation.” As with the student program, every part of the PD software uses diverse voices, and counter-stereotypical images to continuously promote positive, culturally competent and responsive consciousness and practice.

Cultural competence is one of the most critically needed, and sorely lacking capacities today, not only in education, but in health services and juvenile justice as well. However, in this area, as in many others, throwing money and workshop hours at the problem, does not solve it. Effective solutions to the problem of cultural ignorance and insensitivity, as well as the many other learning related issues raised in this chapter, require a whole new way of looking at the whole process of professional development.

## **PROFESSIONAL DEVELOPMENT**

As described above, today’s teachers are increasingly required to meet a whole spectrum of competing criteria. All teachers are asked to maintain a safe, well-managed classroom, know their subject content; document what they are doing, how they are doing it, and what the results are, both in terms of their own judgment (grades) and as measured by standardized tests. In addition, many teachers are asked to take on a much more sophisticated set of responsibilities: to identify individual learner needs, including those of students who have been identified as having “special needs” or are English

Language learners; implement the best matched set of practices for each learner from the wide array of what has been shown to work; continually assess learner outcomes as outlined in local, state, and national educational standards; and to do all of it in ways that are culturally competent and responsive.

In the most reform minded schools, teachers are asked to do even more: to ensure that for each student individual learning is personally meaningful and fully engaging; to initiate and maintain authentic, mutually respectful, culturally competent and responsive personal relationships with dozens, even hundreds of very diverse students who bring to those personal encounters a wide spectrum of attitudes, aptitudes and levels of readiness to learn; and to deepen their own distinctly personal learning processes at every step along the way. Increasingly, research suggest that the most leveraged way to improve educational outcomes, especially for underperforming students, is to dramatically increase the effectiveness of their teachers.

This is a huge order. It easily explains why professional development, or as it is more accurately described in terms of intended objectives, “professional learning,” has become a top priority not only for the school reform movement, but for education in general as well.

Ripple Effects *Whole Spectrum Intervention System* is designed to expand teachers’ capacity and lighten teachers’ loads. The student program, as has been described in several places earlier, extends teachers’ capacities to address student motivation, behavior and underlying risk factors, without requiring extensive, off-site training, or major disruptions in classroom focus and flow. The *Coach for Staff* program includes eight tutorials on how to use the student program; 128 more are intended to directly develop educators’ personal

leadership, abilities to manage diverse learners, and capacities to effectively implement and sustain any evidence-based SEL program, not just Ripple Effects. The entire program is designed to enable those educators to personalize and deepen their individual and collective learning process as professional learners.

## Major report on effective practices

In a groundbreaking report entitled, *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the U.S. and Abroad* (2009), Wei, Hammond, Andree, Richardson and Orphanos provide an extensive analysis of what works, what doesn’t, and what are the remaining big questions in professional development. Drawing directly from the databases from two recent major teacher surveys, as well as from both qualitative and quantitative data from their own prior work and that of dozens of other researchers and hundreds of studies, they have identified key elements of effective practice in terms of content, context, process and frequency. Their report is very well referenced. The remainder of this chapter will examine how Ripple Effects is consistent with and manifests key findings presented in that report. Unless expressly otherwise noted, the effective practices discussed below were identified and extensively referenced in the Wei-Hammond summary report. The page numbers cited are from the Status Report, not the original sources, which are cited at the end of the Wei et al. report.

## Effective Content

### *Grounded in the concrete*

In terms of content, research indicates that effective professional development is

more effective when it is grounded in the concrete, not in abstract theory (pp 11, 13).

This concept is central to the design of all Ripple Effects software and a major reason why this long and involved theory piece is separate from the training software, rather than woven directly into it. Ripple Effects' professional development – both live, instructor-led sessions and software-delivered – grounds every tutorial in a concrete, real-world challenge faced by a specific educator. A case study approach is used to prompt reflective inquiry on each case. An indexed list of the 136 concrete challenges in Ripple Effects professional development software can be found at the end of the next chapter.

### ***Focused on student learning processes and assessment***

Less effective professional development is focused on the teacher's role; more effective professional development is focused on students' learning processes and assessment (p 11).

Ripple Effects staff training software includes tutorials on student "learning orientations," "learning styles," "learning disorders", and "giftedness." It provides best practice guidance on use of Ripple Effects software-based surveys and interactive profiles, as useful supplements to help with student assessment. Within the staff development software there is specific training in how to use the student software for individual, indicated student interventions, following RTI assessment procedures.

### ***Includes expert presentations of best practices for specific challenges***

More effective professional development includes modeling best practices and providing opportunities for educator-learners to try them (p 16).

The electronic teacher guides in the Ripple Effects software – a pair of male and female characters who appear on the screen – provide direct instruction in proven best practices, for concrete pedagogical challenges. All content has been checked for consistency with best practices in implementing social-emotional learning programs as described in various CASEL-sponsored publications. Classroom teachers, district level trainers and administrators, learning specialists, and special education resource providers have vetted the content. In 2007, an expert panel of reviewers for the Software Industry Information Association nominated Ripple Effects for a CODIE award (Software industry's Oscar) for best professional development software.

The most influential expert in the Ripple Effects program is the expert system that operates behind the scenes to deliver the most relevant set of best practices to each professional learner, based on their selections within the program. A comprehensive description and diagram of how that expert system works can be found in the next chapter.

### ***Relevant/useful***

A challenge intrinsic to all standardized training programs is that what is useful and relevant to one person at any given point in time, may well have much less utility for a colleague. Fewer than half of teachers surveyed found the professional development they received in areas that were outside their primary content area, such as classroom management, to be of much value (p 34). This was despite the fact that they said they want more support in this area, as well as training in practical ways to provide best opportunities to learners with special needs.

Ripple Effects allows individual, felt perception of need to guide each educator's entrance into the training software. One

teacher may look up “disruptive student,” another look up “defiant student,” both will get immediate help and links to related topics in the “Managing Diverse Learners” unit, as well as links to less obviously related topics, such as “managing (their own) feelings.” Having different starting points does not preclude participating in themed group discussions. It may enrich that discussion.

According to Wei et al., “Teachers are not getting adequate training in teaching special education or limited English proficient (LEP) students. More than two-thirds of teachers nationally had not had even one day of training in supporting the learning of special education or LEP students during the previous three years, and only one-third agreed that they had been given the support they needed to teach students with special needs ” (page 33).

As described earlier, Ripple Effects software provides 29 multi-component tutorials related to managing diverse learners, including students with limited English proficiency and those with special needs. It is designed to help educators tease out learning issues from behavioral issues, from cultural issues, and to recognize the ways in which those issues are braided together. It combines classroom management and cultural competence training. In addition, the student software scaffolds *teacher* learning by also addressing issues such as English Language learners and special education directly with *students*. By directing students to topics in the student software, teachers are able to use the student program to bridge immediate gaps in their own expertise.

As described on (page 67), outcome data on the achievement gap and disproportionality in special education and discipline referrals points to the fact that teachers need intensive training in cultural competence. However, unlike with classroom management strategies, teachers

often report that they do not need or want more diversity appreciation training. A common reason is that their prior experiences with diversity appreciation training have been negative, even traumatic (Ray, personal interviews, 1988-2009). If content is not either a) delivered in a supportive community context, using methods that raise people up, rather than tear them down, and/or b) provided in a private setting, where people can explore their own experiences, attitudes and feelings, with no possibility of blame and shame, then, regardless of how theoretically useful it is, it may have little positive practical value, and even create negative value.

Ripple Effects addresses this by providing its training privately, enabling a “no blame, no shame” approach to addressing sensitive issues.

## Context

### *Situated in community*

The most effective context for professional development is an ongoing community of learning (pp 13, 15). A *de facto* group of collected individuals does not constitute community. Strong sense of shared purpose and shared responsibility for student learning are two markers of successful communities of professional learners (p 10).

As with the student software, Ripple Effects professional development software includes “connecting in community” as one of seven, key, social emotional capacities for teachers. The staff development software explicitly builds skills to strengthen teachers’ community identity and participation. The identified learning community includes students, parents, and administrators, as well as other teachers.

Ripple Effects *Coach for Staff* training program is comprised of a set of 136 tutorials, any configuration of which can be

used as a curriculum, or supplement, for shared investigation by a community of adult learners. As with the student program, it lends itself well to independent exploration followed by short sharing sessions. National trainer training and online implementer support resources connect users of Ripple Effects across time and space, strengthening the sense of membership in a distinctive community of learners. Like the student software, the staff software includes true stories from educators nationwide, which strengthens the sense of sharing in the earned wisdom of a whole community of educators.

### ***Job-embedded***

The most effective professional development is continuously embedded in teachers' everyday jobs (page 15), not found in one day (page 3), or isolated (page 5) seminars.

Ripple Effects software is specifically designed for job-embedded, practical training. An individual teacher, group of teachers, or instructional coach can find tutorials directly relevant to what they are experiencing as they are experiencing it, in real time. School districts have an option to receive the software on a flash drive, enabling teachers to easily carry it to and from home, where many teachers' jobs extend after the school doors close.

### ***Integrated into larger goals and assessment structures***

Professional development is more effective when it is aligned with larger group goals, whether the reference group is grade level, school, district, or community (page 6).

Ripple Effects provides a template for site-based planning that enables teachers to choose a particular scope and sequence for their use of the software, based on a shared sense of their goals and constraints as a

learning community. The same planning template can be used for configuring implementation of both the student and the staff training programs.

Professional development is also more useful when it is aligned with assessment structures. The slogan "what gets assessed, gets addressed," has become a cliché; but in fact, the context of teachers' professional development too often is isolated from assessment structures.

Whether the assessment that "counts" is teachers' rate of discipline referrals, or students' progress on standardized tests, Ripple Effects' scope and sequence can be configured to meet those goals, and to do so quite quickly.



*In various settings, use of Ripple Effects student software has had positive impacts on student aspirations (Ripple Effects client data, 1998-2009), assertiveness (Ray, 1998), empathy and problem solving (De Long-Cotty, 2008), attitudes about alcohol, absenteeism, tardiness, grade point averages, (Bass et al. 2008) discipline (Bass et al. 2008) and ISS referrals (Ray et al. 2008), depression scores (Koffman et al. 2008), teacher-student relationships (Ripple Effects, client case studies) and students seeking help in how to address personal risk factors (Ray et al. 2008). These outcomes were not all achieved at the same time in the same place. They were achieved in diverse settings, using diverse configurations of the program; however, all of them were achieved within no more than a ten-week time frame, and in many cases with just a few hours student exposure.*

There is a rather simple, most likely explanation: in each case, before the scope and sequence was configured, each site chose what it would assess, and the student training program was matched to that. Although there have not yet been comparable trials of the professional

development program, there is no *a priori* reason not to believe that a similar process would not result in similar assessment-matched outcomes.

## Learning Process

### ***Active engagement in students' learning cycle***

Student outcomes are higher when teachers are actively engaged in the "learning cycle" that students would complete in their classes (p. 10).

In Ripple Effects' instructor-led, in-person training sessions, teachers are given various student identities and assignments, based on their school settings. Teachers first use the software from the student point of view, before developing their plans to help students maximize value of that experience in particular context, and before experimenting with their own training software. Because the training software for staff uses the same informational and navigation structure as that for students, and because, as with the student software it includes both a sequenced curriculum to build core social-emotional competencies, and the personalized opportunity to address specific challenges, all teachers who engage in the electronic staff training automatically are exposed to the same learning cycle as students.

### ***Includes modeling***

One of the clearest findings of meta-analyses of professional development programs is that professional learning is most effective when teachers have a continuing opportunity to draw from the experience, and witness the modeling, of master teachers (page 14). For a variety of reasons, teachers in the United States don't often get these opportunities, and when they do, there is no guarantee that what they will see is what they

need. This lack of sensory access to earned wisdom of peers, more than almost anything else, is what separates professional development in the United States from that in countries that have stronger student outcomes. In Japan, Singapore, and England, use of video-taped models of experienced teachers, in conjunction with personal coaching, is linked to positive student outcomes (pp. 23-25). The technology is not what makes the modeling effective, but it is what allows much wider distribution of a proven training practice.

Ripple Effects professional development software includes expert video modeling of at least one skill component for every tutorial in the program. The experts are peers acting out scripts that demonstrate the skills. The software also distributes earned wisdom of other teachers, in unscripted, true stories. In each case, the modeling is linked to instructive, electronic coaching in specific skills.

### ***Includes learner-generated and peer-generated content***

Video true stories in Ripple Effects are first person narratives about personal experience of teachers across the country. They are posted on YouTube, as well as being included in the software. Professional learners are encouraged to share their own true stories and invited to submit them for inclusion in future versions of the software. Specifications for True Story production are included in the implementer resources section of Ripple Effect web site.

As with the student program, adult learners also have an ongoing opportunity to create content through a set of five, structured journal entries for every topic they explore. The entries are password protected, but can be printed or saved outside the program.

Finally, when the program is used as part of teacher preparation or continuing education accredited programs, Ripple Effect strongly recommends that professional learners be required to complete and report on a real-world, research project that involves its use.

### ***Self-regulated***

Self-regulation is an important construct in social-cognitive theory, and is linked both to motivational beliefs (Wolters, 2003) and to high levels of cognitive learning strategies. These in turn are linked to self-efficacy (Bandura, 1987). Self-efficacy among teachers is linked to better student outcomes (Pajares, 1996) and lower rates of referrals to Special Education for discipline related problems (Meijer & Foster, 1988; Podell & Soodak, 1993; Soodak & Podell, 1993, as cited in Henson, 2001, p. 5). Although not explicitly a part of the Wei & Hammond report, a substantial amount of research in the last three years has been focused on self-regulation in learning, especially with adult learners. The findings consistently show that learners who take a purposeful role in their own learning have better outcomes (Pintrich, 2000; Chunk, 2001; Zimmerman, 2000). Research also shows that self-regulation, like other proven effective methods, is part of the truth of what works, but not the whole.

Ripple Effects offers the capacity for (but need not be limited to) an entirely self-regulated program. The comprehensive knowledge base, multimodal learning platform, and sophisticated inference engine combine in an expert system to maximize opportunities for adult learners (as well as younger students) to choose what they learn, and when and how they learn it.

### ***Shared reflection***

Ongoing opportunities for shared reflection on experience is yet another key component of effective professional development (p. 10). It need not preempt self-regulated learning, but can build on it, providing an authentic way to come to the shared understanding that Vygotsky described as the social base of knowledge.

With Ripple Effects, questions that prompt deep sharing are built into the scenario screens with every situation including questions along the lines of “how do you think (the protagonist) feels in this situation”, and “how does this compare to your experience?” A handful of topics have interactive, self-assessment exercises, which teachers can complete to come to a deeper understanding of themselves, and which can provide a catalyst for further shared reflection. Teachers need only choose a topic for the week or month, explore the topic privately at their convenience during that period, then dedicate 15 minutes of a staff meeting to share their reflections with peers. As of March 2010, there will also an option for participation in a Ripple Effects moderated, online, reflective space for teachers as learners.

### ***Participatory planning and shared decision-making***

Another research-identified component of effective professional development is participation in collaborative planning processes and collaborative decision-making (page 26). Just as students have greater buy-in to policies that they help create, teachers also have better outcomes when they can participate in planning and decision-making about what they teach, learn, model and enforce.

As described above, Ripple Effects streamlines renewable, collaborative planning, through use of a structured planning template in a collaborative process. Plans can be developed around site-specific goals, human and technology resource capacities, and fixed constraints, without loss of fidelity to evidence-based content.

“School governance structures that support the involvement of teachers in decisions regarding curriculum and instructional practice” are correlated with better professional development outcomes (p18).

Ripple Effects training software includes specific tutorials to promote shared decision-making, not only about instructional practice, but also about institutional policies about expected conduct and discipline practices.

### ***Emotionally supportive***

For novice teachers, burn out is major reason for leaving the profession. While the stereotype for burn out is the aging “battle ax” of a teacher, beginning teachers drop out at much higher rates, with about 50% of teachers leaving within the first five years of teaching. That number is heavily weighted toward teachers in urban areas. Lack of support, especially in dealing with behavioral problems, is a commonly cited source of burn-out.

When interviewed, burnt out teachers talk about lack of connection with their students and lack of support from their administrators in dealing with student problems (Haberman & Post, 1998). Not all burnt out teachers leave the profession. Those who stay, with decreased sensitivity, engagement and hope for their students, may ultimately do the most harm.

Ripple Effects *Coach for Staff* provides three levels of emotional support for teachers. The training software takes their point of view in every case-study scenario. It

provides training in how to identify sources of support and ask for it. It provides specific training for dealing with feelings of frustration, anger and accompanying burn out (including with a tutorial by that name). Perhaps most importantly, the student software provides a structural support that can remove the emotional charge from potentially problematic, teacher-student interaction.



Qualitative evidence from dozens of sites suggest that the student software reduces teacher-student conflict, provides teachers with a bridge to better communication and problem solving with students, and strengthens teacher-student relationships (Ripple Effects client records, 1998-2009).

### ***Non-blaming***

A non-blaming approach to sub-optimal performance, which maintains the dignity of the learner, is more effective than a judgmental one (Curwin & Mendler, 1988). Unfortunately some of the very same educators who are convinced that blame and shame will never work to bring under-achieving students up to standards, also believe those strategies can somehow be highly beneficial in professional development sessions, especially when it comes to sensitive social issues, including cultural competence. Many white teachers report that they have been traumatized by diversity appreciation and cultural competency training that has devolved into rites of public shaming, where the only correct answer seems to be “I am guilty.” Many teachers of color in the same trainings wonder how their colleagues can be so tone deaf to alternate cultural experiences. The perspective of some diversity appreciation trainers is that resistance to understanding personal complicity in cultural imperialism is pervasive among white teachers, and must be

broken through “by whatever means necessary” for real change to occur.

All of these perspectives have some validity. Cultural competence must become a non-negotiable requirement in a multi-cultural society *and* middle class, white teachers have a right to be protected from what they experience as emotional abuse. The question isn’t whether change must occur, but how.

Ripple Effects’ perspective is that whether the topic is ethnic bias, emotional bullying or abuse of students, or any other potentially “shameful” attitude or behavior, the most effective path to change is to assume positive intent. Ripple Effects approaches every problem from the “unenlightened” learner’s point of view. It then leads learners through a supportive, rather than judging process of self-examination as a step toward change. Most of the opening case stories in the software revolve around a situation that is at the least uncomfortable, and often embarrassing and potentially shameful for the protagonist. In every case, probing questions invite learners to take the perspective of the learner and move from there.

### ***Personalizes and supports each teacher’s own SEL process***

Recent research in the field of social-emotional learning has focused on the need for professional development opportunities to directly address the social-emotional needs of teachers. Preliminary research suggests that inclusion of techniques such as mindfulness in teacher training, reduces perceived stress and burn out, and may lead to better student outcomes (Simon, Harnett, Nagler & Thomas, 2009). This is consistent with research from other care giving professions, especially medicine, and from studies about adult caretakers of parents with diminished mental capacities. The

HeartMath™ program provides some evidence to substantiate the connection between providing supportive training in emotional regulation through use of biofeedback techniques and technology and improved student and teacher outcomes. (Bradley, McCraty, Atkinson, Arguelles, Rees & Tomasino, 2007).

As with the student program, a key part of Ripple Effects’ professional development program is getting teachers to notice, reflect upon and express their own emotional experience. It includes effective strategies for developing emotional regulation, including internal mindfulness, to match the training in external awareness that is promoted by classroom management experts, such as Kounin.

### **Frequency and amount**

#### ***Sustained, not episodic***

One time training workshops have consistently been shown to be ineffective as tools for long-term changes in practice. In fact teachers complain about “workshop overload” from a barrage of “flavor of the month” trainings page ).

Upon request, Ripple Effects offers short (3.5 hour), one-time training sessions, to orient teachers to the software, walk them through their site specific plan, make sure they know how to track data, and familiarize them with supplemental learning resources. Those sessions can be in-person, provided by regional trainers who have been certified by Ripple Effects, or can be completed entirely within the staff development software. However, these first sessions are merely an introduction. The additional training within the software, with its wide breadth of content and diverse learning options, is designed to be sustained and continue over time. In addition, Ripple Effects provides sustained implementation and technical support free of

charge for the first year and for a minimal maintenance fee after that.

### ***Sufficient dosage***

Wei et al. point out that although 1400 studies have attempted to measure the impact of professional development dosage on student outcomes, fewer than one percent of them meet criteria for well designed, objective studies (p. 9). The nine that do comprise a bi-modal group: “six involved substantial contact (30-100 hours over 6-12 months), and three involved limited contact (5-14 hours).” The former resulted in significant student gains; the latter did not. “Across the nine studies, the levels of professional development offered — an average of 49 hours in a year — boosted student achievement by approximately 21 percentile points.”

Unfortunately, with this body of studies, there is too little comparable data to draw any firm conclusion about what is an ideal amount of training, much less about how that amount might fluctuate according to how closely each element of the training matches each professional learner’s needs. Nonetheless, the trend is clear; in general, longer term, sustained training is more effective than short-term courses. One shot courses that are less than five hours may have little long term impact on students at all. More than half of all US teachers currently receive no more than 16 hours of training in their subject area (p. 8).

Within the software, Ripple Effects professional development program provides 45 direct contact hours of content in 136 tutorials. Approximately 68 hours of additional, extension activities (one half hour per lesson) include directed opportunities for skill rehearsal, transfer training to academic instructional situations, and participation in reflective inquiry with peers. Teachers can repeatedly access lesson components that

they find useful, such as peer modeling of specific skills.

### ***Tiered intervention for staff***

Education has borrowed from public health the tiered model of intervention. It recognizes three levels of service delivery: “universal” (also called primary), “selected” (secondary), and “indicated” (tertiary).

In schools, this model most often assumes that the proper focus of intervention is school policy and/or student services, rather than supportive interventions with teachers. However high rates of young teacher burn out, and discipline and special education referrals that not only disproportionately affect students of color from low income families; but are also disproportionately initiated by teachers who share certain group level and personal characteristics, suggest that tiered intervention is the most appropriate model for delivering professional development to staff as well. That professional development is needed not just to train them in program delivery, but also, in some cases to keep them from becoming one more risk factor for vulnerable students in their care.

Ripple Effects system offers three levels of computer-based professional development for staff, designed to build their capacity to facilitate, reinforce, sustain and expand student learning.

#### *RE Universal intervention for staff*

Primary prevention for staff promotes the social-emotional abilities that comprise effective leadership. Personal leadership, especially principals, but to some degree for all teachers, is the single factor that most affects school climate and students' behavioral outcomes (Devaney et al, 2006).

### *RE targeted intervention for staff*

Secondary prevention for staff may target first and second year teachers, who are least likely to have developed the skills needed for effective behavior management in the classroom. It may target staff whose social-cultural background is very unlike that of their students. The training modules most useful for these educators, as well as for their paraprofessionals would be in the second module, "Managing Diverse Learners."

Among the groups of teacher identified by their peers as sharing group level risk are those who: teach across a cultural divide, have different social-economic background and status from their students; have religious and value differences, have a wide generational gap (Data from Ripple Effects training workshops, 2009).

In collaboration with teachers and instructional directors, Ripple Effects is currently developing recommended scopes and sequences for secondary interventions with each of these groups.

### *RE individualized intervention for staff*

Tertiary prevention for staff consists of providing "just in time, just for you" embedded coaching to help teachers respond to problems as they come up.

Ripple Effects supports teachers ability to effectively respond to student behavior problems through tutorials such as "insubordination," "defiance," "disruption," and "attention-seeking" behavior. It also provides a way for teachers to constructively respond to accusations of discriminatory behavior or expectations. Individualized tutoring in the context of a personal development plan provides teachers positive, differentiated, behavior-changing support in a private, non-judging environment.



For a full description of this training, see the *Ripple Effects Coach for Staff User Guide*.

## **Time and resource distribution**

In most countries with high achieving students as measured by standardized tests, about 15 to 20 hours per week is spent on non-instructional tasks related to teaching, such as preparing lessons, meeting with students and parents, and working with colleagues. By contrast, U.S. teachers generally have from 3 to 5 hours a week for independent lesson planning (p. 49), and almost no time for working with colleagues. The biggest barrier to new learning of all kinds, for almost all teachers, but especially in the US, is time. There aren't enough hours in the day to cram in all the academic instruction, assessment, behavioral management and documentation that educators are currently required to do, let alone to learn and incorporate into their repertoire whole new bodies of understanding and skills in emerging areas of social-emotional learning. Much less is there time to master mounds of new knowledge about the hundreds of social issues that come up on a short-term basis. Much less than that is there time to develop the multi-domain expertise needed to deliver informed, appropriate, nuanced responses and training to effectively impact the many dozens of risk factors that impact students' everyday lives.

Even if their professional development time were increased seven times over and they could spend half of each week shadowing a master teacher, the chances that they could receive in that time and carry back and deliver with fidelity the exact dose of earned wisdom, about the exact issue that is most interfering with each student's learning in their class, is about as likely that they could find for each of the diverse students under their care an exact bone

marrow match, simply by soliciting the small community of experienced teachers to whom they have direct, live access.

If education of the whole child is to become more than an extension of privilege of the educationally, emotionally and/or economically well off, it must somehow leverage the use of technology to provide broader access to new understanding as it is unfolding, and to more equitably and efficiently scale and sustain delivery of best practices to students who most need them.

How Ripple Effects integrates the use of technology and what it can – and can't reasonably be expected to add to the process of scaling social-emotional learning for students and teachers is the subject of the next chapter.

## APPENDIX B: PRECONFIGURED SCOPES AND SEQUENCES

Ripple Effects provides preconfigured Scopes and Sequences for universal, targeted and indicated interventions and therapeutic sanctions in the following topic areas:

### Universal Promotion

- Academic achievement (41 lessons)
- Doin' democracy curriculum (28 lessons)
- Promoting respect curriculum (42 lessons)
- Health promotion (19 lessons)
- Service learning (24 lessons)
- Service learning (18 lessons in JJ manual)
- Career preparation (45 in JJ manual)

### Targeted Prevention

- Child abuse: physical, emotional, sexual (20 lessons)
- Bias offenses (30 lessons)
- Bullying (34 lessons)
- Sexual harassment (30 lessons)
- Youth violence (61 lessons)
- Dating abuse (63 lessons)
- Online exploitation ((10 lessons)
- Tobacco prevention (31 lessons)
- Alcohol & drug abuse prevention (35 lessons)
- Eating disorders and obesity (23 lessons)
- Depression and suicide (43 lessons)
- Post traumatic stress (27 lessons)
- STDs/Pregnancy/HIV-AIDS (45 lessons)
- Academic failure (53 lessons)

### Indicated Interventions

- Angry – cold and predatory (40 lessons)
- Angry – reactive (47 lessons)
- Attention seeking/needy (11 lessons)
- Bias Activity/hate crimes (30 lessons)
- Bullying (21 lessons)
- Communicative disorders (16 lessons)
- Cultural alienation (16 lessons)

- Defiant (28 lessons)
- Disrespectful (14 lessons)
- Disruptive in class (14 lessons)
- Disruptive on playground (12 lessons)
- Hyperactive (11 lessons)
- Impulsive (33 lessons)
- Isolated/loners (17 lessons)
- Poor judgment (30 lessons)
- Rejected by peers (25 lessons)
- Sexually harassing (30 lessons)
- Spaced out/inattentive (10 lessons)
- Stalking (28 lessons)
- Traumatized (32 lessons)
- Truant (39 lessons)

### Therapeutic Sanctions

- Shoplifting/theft (37 lessons)
- Property destruction: vandalism & graffiti (34 lessons)
- Fire setting (22 lessons)
- Assault and battery (34 lessons)
- Bias crimes (33 lessons)
- Domestic violence (61 lessons)
- Sexual offenses (26 lessons)
- Prostitution (30 lessons)
- Drug possession and use (36 lessons)
- Drug dealing (26 lessons)
- Truancy (39 lessons)
- Weapons violations (27 lessons)
- Alcohol-related offenses (36 lessons)
- Gang activity (41 lessons)
- Legal rights (19 lessons)
- Academic success (56 lessons)
- Language Arts supplement (29 lessons)
- Social studies (54 lessons)

## REFERENCES

- Ada, W. (2009). Computer supported Collaborative Learning and Higher Order Thinking Skills. *Interdisciplinary Journal of E-Learning and Learning Objects*. Volume 5, 2009 Retrieved Sept 7, 2009 <http://ijello.org/Volume5/IJELLOv5p145-167MA657.pdf>
- Albert, L. (1996, 2003). *Cooperative Discipline*. New York. AGS.
- Anderson, J. R., Reder, L. M. & Simon, H. A. (1997). Situative versus cognitive perspectives: Form versus substance. *Educational Researcher*, 26(1), 18-21.
- Anderson, L. W. & Krathwohl, D. R. (Eds.). (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's Taxonomy of educational objectives: Complete edition*, New York : Longman.
- Askildson, Lance. Effects of Humor in the Language Classroom: Humor as a Pedagogical Tool In Theory and Practice. *University of Arizona*. downloaded, June 15, 2009. [www.Arizonaw3.coh.arizona.edu/AWP/AWP12/AWP12/Askildson.pdf](http://www.Arizonaw3.coh.arizona.edu/AWP/AWP12/AWP12/Askildson.pdf)
- Atkinson, R. & Shiffrin, R. (1968). Human memory: A proposed system and its control processes. In K Spence & J Spence (Eds.). *The Psychology of Learning and Motivation: Advances in Research and Theory (Vol. 2)*. New York: Academic Press.
- Azar, B. (2002, January). At the Frontier of Science: Social Cognitive Neuroscience Merges Three Distinct Disciplines in Hopes of Deciphering the Process Behind Social Behavior. *APA Monitor*, 33(1), 40-43.
- Backer, T., David, S., Saucy, G. (1993) Eds. "Reviewing the Behavioral Science Knowledge Base on Technology Transfer." NIDA Research Monograph 155
- Backer, T. (1993) "Assessing and Enhancing Readiness for Change: Implications for Technology Transfer." In Backer, T., David, S., Saucy, G, Eds. *Reviewing the Behavioral Science Knowledge Base on Technology Transfer*. NIDA Research Monograph 155
- Battistich, V. and Horn, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health*, 87(12): 1997-2001.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman
- Barley, Lauer, Arens, Aphthorp, Englert, Snow, Akiba (2002) *Helping At-Risk Students Meet Standards; A Synthesis of Evidence-Based Classroom Practices*; Regional Educational Laboratory, Office of Educational Research and Improvement; U.S. Department of Education, Washington, D.C.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of a Computer-Based, Social-Emotional Intervention on Outcomes Among Latino Students When Adult Monitors of the Student Training Are Non-professionals: A Randomized Controlled Trial. San Francisco: Rockman et al.
- Bass, K., Perry, S., Ray, A. & Berg, S. (2008). Impact of a Self-Regulated, Computerized, Social-Emotional Learning Intervention on Disengaged and Delinquent Students at a Continuation High School. San Francisco: Rockman et al.
- Bateson, G. (1979). *Mind and Nature: A Necessary Unity*. Great Britain: Fontana, Collins.
- Battistich, V. & Horn, A. (1997). "The Relationship Between Students' Sense of

- Their School as a Community and their Involvement in Problem Behaviors." *American Journal of Public Health*, 87 (12), 1997-2001
- Beed, P.L., Hawkins, E.M. & Roller, C.M. (1991). Moving learners toward independence: The power of scaffolded instruction. *The Reading Teacher*, 44(9), 648-655.
- Benard, B. (2004). *Resiliency. What we have learned*. San Francisco: WestEd.
- Bennett, A., Bridglall, B. L, Cauce, A. M., Everson, H.T., Gordon, E. W., Lee, C. D., et al. (2004). *All students reaching the top: Strategies for dosing academic achievement gap. A report of the National Study Group for the Affirmative Development of Academic Ability*. Naperville, IL: Learning Point, North Central Regional Educational Laboratory.
- Benson, P., Scales, P., Hawkins, J.D., Oesterle, S. and Hill, K. (2004) "Successful Young Adult Development" A report submitted to: The Bill & Melinda Gates Foundation , Search Institute and Social Development Research Group, University of Washington.
- Berg, S. , Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Berg, S. & Ray, A., (2008). Factors in compliance rates with self-regulated use of Ripple Effects computer-based intervention for social-emotional learning. Accepted for the 2010 Annual Meeting of the American Educational Research Association (AERA)
- Berndt, T. J. (1984). Sociometric, social-cognitive, and behavioral measures for the study of friendship and popularity. In T. Field, J. L. Roopnarine & M. Segal (Eds.), *Friendships in normal and handi-capped children* (pp. 31-52). Norwood, NJ: Ablex.
- Beyerbach, B. A. (1992). Developing a profile of preservice teachers' thinking using concept mapping, stimulated recall, discourse analysis, and reflective journals. *Journal of Research in Education*, 2(1), 60-67.
- Bloom, B. S. (Ed.) (1956). *Taxonomy of Educational Objectives: The Classification of Educational Goals*; pp. 201-207; Susan Fauer Company, Inc.
- Bloom, Benjamin S., *Taxonomy of educational objectives*. Published by Allyn and Bacon, Boston, MA. Copyright (c) 1984 by Pearson Education.
- Blum, R. (1998). Healthy youth development as a model for youth health promotion: A review. *Journal of Adolescent Health*, 22, 368-375.
- Blum, R. & Rinehart, P. (1997). *Reducing the Risk: Connections That Make a Difference in the Lives of Youth*. Minneapolis: University of Minnesota, Division of General Pediatrics, Adolescent Health.
- Blum, Robert W. 2005. "A Case for School Connectedness," *Educational Leadership*, April 2005.
- Boekaerts M & Corno L, (2005). "Self-Regulation in the Classroom" in M. Boekaerts, S., Maes & P. Karoly (eds). *Self-Regulation across domains, Special Issue of Applied Psychology: An International Review*.
- Brackett, M. A., Maurer, M. & Rivers, S.E. (2007). *Curriculum: Emotional literacy in the classroom*. Cary, NC: SELmedia
- Bradley, R. T., McCraty, R., Atkinson, M., Arguelles, L., Rees, R. A. & Tomasino, D. (2007). *Reducing Test Anxiety and Improving Test Performance in America 's Schools: Results from the TestEdge National Demonstration Study*. Boulder Creek , CA : HeartMath Research Center, Institute of HeartMath, Publication No. 07-04-01. Retrieved August 28, 2009 <http://www.heartmath.org/research/scientific-ebooks.html>
- Bransford, J. (1979). *Human cognition: Learning, understanding, and remembering*. Belmont, CA: Wadsworth.

- Bridgeland, J., Dilulio, J. Jr., and Balfanz, R. (2009), *On the Front Lines of Schools: Perspectives of Teachers and Principals on the High School Dropout Problem*, A Report by Civic Enterprises, Washington, D.C.
- Brophy, J.E., (1983), Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology* 75:55, 631-661, American Psychological Association, 1983.
- Bruner, J. S. (1966). *Toward a theory of instruction*. New York: W. W. Norton & Company, Inc.
- Burnham, C. (1992). Crumbling metaphors: Integrating heart and brain through structured journals. *College Composition and Communication*, 43(4), 508-515.
- Bybee, R.W., (1997). *Achieving Scientific Literacy*. Heinemann, NH.
- Caine, G., and Caine, R. (1991). *Making Connections: Teaching and the Human Brain*. Menlo Park, CA: Addison Wesley.
- Caine, R. & Caine, G. & Crowell, Sam. *MINDSHIFTS: A Brain-based Process for Restructuring Schools and Renewing Education*. Tucson, Arizona: Zephyr Press. 1994.
- Caine, G. (2004) "Theoretical Foundations for Systemic Transformation of K-12 Education. Paper presented at AERA Annual Meeting, April 13, 2004.
- Caine, G., and Caine, R. (2001). *The Brain, Education and the Competitive Edge*. Lanham, MD: Scarecrow Press.
- Caine, R. N. & Caine, G. (2002). *Beyin temelli öğrenme*. (Interpreter Edt.: Gulden Ulgen). Ankara: Nobel Yayinlari.
- Caine, R. (2004) *How systems principles can serve as foundation for constructivist learning and teaching*, downloaded [www.casel.org](http://www.casel.org).
- Caine, R. (March/April, 2006). "Systematic Changes in Public Schools through Brain-Based Learning." *TechTrends*. Vol. 50, No. 2, pp. 52-53.
- Caine, R., Caine, G., McClintic, C. & Klimek, K. (2005). *12 Brain/mind learning principles in action: The field book for making connections, teaching, and the human brain*. Thousand Oaks, CA: Corwin Press.
- Cattell, H. E. P. (1996). The original Big-Five personality factor structure/I Big-Five originali: Una prospettiva storica. *Bollettino di Psicologia Applicata*, 219, 15-29.
- Campbell, Joseph. *The Hero with a Thousand Faces*. Princeton: Princeton University Press, 1968.
- Canter, L. & Cantor, M. 1976. *Assertive Discipline: A Take Charge Approach for Today's Educator*. Seal Beach California. Lee Cater and Associates.
- Canter, L., and Canter, M.m 1993. *Succeeding with Difficult Students: New Strategies for Reaching Your Most Difficult Students*. Santa Monica, CA: Lee Canter & Associates.
- CAST, 2006. *A Practical Reader in Universal Design for Learning*. Edited by David H. Rose and Anne Meyer. Harvard Education Press. Cambridge, MA.
- Charles, C.M. *Building Classroom Discipline*, 8th ed. Pearson Education. 2005.
- Christophel, D. M. (1990). The relationship among teacher immediacy behaviors, student motivation. *Communication Education*, 39, 323-340.
- Coffield, F., Moseley, D., Hall, E. & Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning: A systematic and critical review*. [www.lsdc.ac.uk](http://www.lsdc.ac.uk): Learning and Skills Research Centre. Retrieved January 15, 2008: <http://www.lsdc.ac.uk/files/PDF/1543.pdf>
- Collaborative for Academic, Social and Emotional Learning. (2003) *Safe and Sound: An educational leader's guide to evidence-based social and emotional learning programs*. Retrieved March 2008 from <http://www.casel.org>.
- Collaborative for Academic, Social and Emotional learning (CASEL) (2007).

- Background on Social and Emotional Learning (SEL)*, in CASEL Briefs, December, 2007.
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M.; Cloitre, M, DeRosa, R., Hubbard, R., Kagan, R., Liataud, J., Mallah, K., Olafson, E. & van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals*, 35, 390-398.
- Costa, P. T., Jr. & McCrae, R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-factor Inventory (NEO-FFI): Professional manual. Odessa, FL: Psychological Assessment Resources Inc.
- Cotton, K. and Wikeland, K.R., (1989) Parent Involvement in Education, School Improvement Research Series, Close-Up #6, Northwest Regional Educational Laboratory.
- Cotton, K. (2001). New small learning communities: Findings from recent literature. Portland, OR: Northwest Regional Educational Laboratory.
- Cross T., Bazron, B., Dennis, K. & Isaacs, M. (1989). Towards a Culturally Competent System of Care, Volume I. Washington, D.C.: Georgetown University Child Development Center, CASSP Technical Assistance Center.
- Curwin, R. and Mendler, A. 1988. *Discipline with dignity*. Alexandria, VA. Association for Supervision and Curriculum Development. Revised editions 1992, 1999, 2001. Upper Saddle River, NJ: Merrill.
- Data Accountability Center, (2009), *Part B National Trend Data, Table B2A*, operated by Westat and, Louisiana State University Health Sciences Center–Human Development Center with funding from the Office of Special Education Programs, US Department of Education.
- Covington C., Delaney-Black V., Ondersma S.J. et al. (2002) Violence exposure, trauma, and IQ and/or reading deficits among urban children. *Archives of Pediatric and Adolescent Medicine*. 156:280-285.
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason and the human brain*. New York: Avon Books.
- Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Darkenwald, G. G. & Merriam, S. B. (1982). *Adult education: Foundations of practice*. New York: Harper & Row.
- Darling-Hammond, L. (2005). Developing professional development schools: Early lessons, challenge, and promise. In L. Darling-Hammond (Ed.), *Professional development schools: Schools for developing a profession* (pp. 1-27). New York: Teachers College Press.
- De Long-Cotty, B. (2008). *Can computer-based training enhance adolescents' resilience? Results of a randomized control trial*. (Unpublished manuscript expanded from poster presented at the 2007 Annual Meeting of the Society for Prevention Research). West Ed.
- Denkla, M.B. (1999) "A theory and model of executive function: A neuropsychological perspective." In Lyon, G. and Krasnegor, N. (Eds.) *Attention, memory, and executive function*. Baltimore, MD: Brookes.
- Developing Self-Directed Learners* (2004). Topical Summary: Northwest Regional Educational Laboratory. <http://www.nwrel.org/planning/reports/self-direct/>
- Dewey, J. (1965). *Experience and Education*. New York: Collier.
- The Essential Dewey*, 2 vols., Larry Hickman and Thomas M. Alexander, eds. (Bloomington, IN: Indiana University Press, 1998).
- Diamond, M. C. (1988). *Enriching Heredity: The Impact of the Environment on the Anatomy of the Brain*. New York: The Free Press.

- Doll, B. (1996). Children without friends: Implications for practice and policy. *School Psychology Review*, 25, 165-183.
- Durlak, J.A., Weissberg, R.P. & Pachan, M. (in press). A meta-analysis of afterschool programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*.
- Dusenbury, L., Brannigan, R., Falco, M. & Hansen, W. B. (2003). A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. *Health Education Research*, 18(2), 237-256.
- Dymnicki, A., Weissberg, R., Durlak, J., (2009). "The Impact of School-Based Social and Emotional Development Programs on School Performance." Paper presented at 2009 annual meeting of American Educational Research Association, San Diego, CA.
- Edelman, G.M. (1992). *Bright air, brilliant fire: On the matter of the mind*. New York: Basic.
- Elias, M. J., Zins, J. E., Weissberg, R P., Frey, K. S., Greenberg, M. T., Haynes, N. M., et al. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Elias, M.J. & Bruene-Butler, L. (1999). Social decision-making and problem solving: Essential skills for interpersonal and academic success. In J. Cohen (Ed.), *Educating minds and hearts: Social emotional learning and the passage into adolescence*. New York: Teachers College Press.
- Elias, M.J., Gara, M., Ubriaco, M., Rothbaum, P. & Clabby, J. (1986). "The impact of a preventive social problem solving intervention on children's coping with middle-school stressors." *American Journal of Community Psychology*, 14, 259-275.
- Elias, M.J., Gara, M.A., Schuyler, T.F., Branden-Muller, L.R. & Sayette, M.A. (1991). "The promotion of social competence: Longitudinal study of a preventive school-based program." *American Journal of Orthopsychiatry*, 6, 409-417.
- Elias, M. & Arnold, H. *The Educator's Guide to Emotional Intelligence and Academic Achievement*. Corwin, 2006.
- Elliott, S.N. (1996) *The responsive classroom approach: Its effectiveness and acceptability in promoting social and academic competence*. University of Wisconsin, Madison, WI.
- Ellsworth, Elizabeth. (August 1989). "Why doesn't it feel empowering? Working through the repressive myths of Critical Pedagogy." *Harvard Educational Review* 59: 3, 297-324.
- Epstein, J.L. (1994). *Theory to practice: School and family partnerships lead to school improvement and student success*. In C. Fagnano & B. Werber (Eds.), *School, family and community interactions: A view from the firing lines* (pp. 39-52). Boulder, CO: Westview Press.
- Epstein, J. L. & Lee, S.(1995) *National patterns of school and family connections in the middle grades*. In B. A. Ryan, G. R. Adams, T. P. Gullotta, R. P. Weissberg & R. L. Hampton (Eds.), *The Family-School Connection: Theory, Research, and Practice* (pp. 109-154). Thousand Oaks, CA: Sage Publications.
- Evertson, C.M. & Harris, A. H., 1999. "Support for Managing Learning-Centered Classrooms: The Classroom Organization and Management Program." *In Beyond Behaviorism: Changing the Classroom Management Paradigm*, ed. H. Jerome Freiberg. Boston: Allyn and Bacon.
- Evertson, C.M. & Weinstein, C.S., the *Handbook of Research on Classroom Management: Research, Practice, and Contemporary Issues*, (Lawrence Erlbaum Associates, 2006).

- Evertson, C.M. & Neal, K. 2006 *Looking into Learning-Centered Classrooms: Implications for Classroom Management*, NEA Research, Best Practices. Retrieved [www.nea.org/assets/docs/mf\\_cmreport.pdf](http://www.nea.org/assets/docs/mf_cmreport.pdf) Jun 8, 2009
- Ronald F. Ferguson. 2002. "Community Revitalization, Jobs and the Well-being of the Inner-City Poor." Chapter 12 in *Understanding Poverty* (edited by Sheldon H. Danziger and Robert H. Haveman). New York and Cambridge: Russell Sage Foundation and Harvard University Press.
- Ferguson, R. *Toward Excellence with Equity: An emerging vision for closing the achievement gap*. Harvard Education Press. 2006.
- Ferguson, Ronald. "Helping Students of Color Meet High Standards." *Everyday Anti-Racism: Getting Real About Race in School*. Ed. Mica Pollock. Harvard Education Press, 2008, 78-81.
- Ferguson, Ronald. "What We've Learned about 'Stalled Progress' in Closing the Black-White Achievement Gap." *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap*. Ed. Katherine Magnuson and Jane Waldfogel. Russell Sage, 2008, 320-344.
- Ferguson, Ronald. "Within-School Variation in the Quality of Instruction Across Course Levels and Racial Groups." Paper for Annual Conference of the American Economics Association, New Orleans, January 4, 2008.
- Ferguson, Ronald. "Raising Achievement and Closing Gaps in Whole School Systems: Recent Advances in Research and Practice." *Report on the Annual Conference of the Achievement Gap Initiative at Harvard University*, December 2008.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).
- Flook, L., Repetti, R., Ullman, J. (2005). Classroom Social Experiences as Predictors of Academic Performance. *Developmental Psychology*, 41(2), 319-327.
- Freire, Paulo (1970) *Pedagogy of the Oppressed*. New York. Continuum Books.
- Freire, Paulo (1978) *Pedagogy of Freedom, Ethics, Democracy and Civic Courage*, Lanham: Rowman & Littlefield Publishers, Inc. <http://www.preservenet.com/theory/Illich.html> Lanham: Rowman & Littlefield Publishers, Inc.
- Freire, Paulo and Shor, I. (1987) *A Pedagogy For Liberation: Dialogues on Transforming Education*. Westport: Bergin & Garvey.
- Friedan, B. (1963) *The Feminine Mystique*. New York, Harmondsworth: Penguin.
- Fullan, M., Hill, P. & Crévola, C. (2006). *Breakthrough*. Thousand Oaks, CA: Corwin Press.
- Fullan, M. (2006) "Change the terms for teacher learning." *Journal of Staff Development*, 28(3), 35-36 Retrieved August 10, 2009 from [www.michaelfullan.ca/Articles\\_07/07\\_term.pdf](http://www.michaelfullan.ca/Articles_07/07_term.pdf)
- Gardener, H. (2006) *Five Minds For The Future*. Boston: Harvard Business School Press.
- Gardener, H. (1983) *Frames of Mind*. New York: Basic Books.
- Gardner, H. & Hatch, T. (1989). Multiple intelligences go to school: Educational implications of the theory of multiple intelligences. *Educational Researcher*, 18(8), 4-9.
- Gardner, H. (1991). *The Unschooled Mind: How Children Think and How Schools Should Teach*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory into practice*. New York: Basic Books.

- Gardner, H. (1999) *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books.
- Gendlin, E. T. (1982). *Focusing*. New York: Bantam
- Goldberg, L.R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48(1), 26-34. Goldberg, E. (2001). *The Executive Brain: Frontal Lobes and the Civilized Mind*. New York: Oxford University Press.
- Goldman-Rakic, P. (1995). "Cellular Basis of Working Memory." *Neuron*, 14, 477- 485.
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books
- Gopnik, A., Meltsoff, A. N. & Kuhl, P. (1999). *The scientist in the crib: Minds, brains, and how children learn*. New York: William Morrow.
- Gordon, E. W., American Educational Research Association, "Closing the Gap: High Achievement for Students of Color," *Research Points*, Fall, 2004, Vol. 2 (3).
- Gorham, J. (1988). The relationship between verbal teacher immediacy behaviors and student learning. *Communication Education*, 37, 40-53.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H. & Elias, M. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58, 466-474.
- Greenberg, M.T., Domitrovich, C.E. & Bumbarger B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment*, 4, Article 1. Retrieved March 1, 2009, from <http://journals.apa.org/prevention/volume4/pre0040001a.html>.
- Greenough, W. T., Black, J. E. & Wallace, C. S. (1987). Experience and Brain Development. *Child Development*, 58, 539-559.
- Gresham, F., Evans, S., Elliott, S., (1988) Academic and Social Self-Efficacy Scale: Development and Initial Validation. *Journal of Psychoeducational Assessment*, Vol. 6, No. 2, 125-138.
- Gruneberg, M. M. and Morris, P. E. (1979). *Applied problems in memory* / edited by M. M. Gruneberg and P. E. Morris Academic Press, London ; New York : 1979.
- Gottfredson, D. C. (1986). An empirical test of school-based environmental and individual interventions to reduce the risk of delinquent behavior. *Criminology* 24:705-731.
- Gottfredson, G. D. & Gottfredson, D. C. (2001). What schools do to prevent problem behavior and promote safe environments. *Journal of Educational and Psychological Consultation*, 12, 313-344.
- Gottfredson, D. C. & Gottfredson, G. D. (2002). Quality of school-based prevention programs: Results from a national survey. *Journal of Research in Crime and Delinquency*, 39, 3-35.
- Gottfredson, G. D., Jones, E. M. & Gore, T. W. (2002). Implementation and evaluation of a cognitive-behavioral intervention to prevent problem behavior in a disorganized school. *Prevention Science* 3, 43-56.
- Gottfredson, G. D., Gottfredson, D. C., Czeh, E. R., Cantor, D., Crosse, S. B. & Hantman, I. (2004). Toward safe and orderly schools - The National Study of Delinquency Prevention in Schools. *Washington, DC: National Institute of Justice, U.S. Department of Justice*.
- Guild, P.B., and Garger, S (1998). What Is Differentiated Instruction? Marching to Different Drummers 2nd Ed. (ASCD, p.2) <http://www.ascd.org/pdi/demo/diffinstr/diffrentiated1.html>
- Gutierrez, Gustavo. *A Theology of Liberation: History, Politics, and Salvation*, Orbis Books. 1988
- Haberman, M. and L.Post.1998. Teachers for multicultural schools: The power of

- Selection. *Theory Into Practice*, V. 37, No. 2, Spring, 1998.
- Hammond, C., Linton, D., Smink, J. & Drew, S. (2007). Dropout risk factors and exemplary programs: A technical report. Clemson, SC: National Dropout Prevention Center/ Network. Retrieved March 31, 2009, from [http://www.dropoutprevention.org/resource/major\\_reports/communities\\_in\\_schools/Dropout%20Risk%20Factors%20and%20Exemplary%20Programs%20FINAL%205-16-07.pdf](http://www.dropoutprevention.org/resource/major_reports/communities_in_schools/Dropout%20Risk%20Factors%20and%20Exemplary%20Programs%20FINAL%205-16-07.pdf)
- Hanson, T., Austin, G. & Lee-Bay, J. (2004). *Ensuring no child is left behind*. San Francisco: WestEd.
- Haskel, R. (2000). *Transfer of Learning: Cognition, Instruction, and Reasoning*. Burlington, MA: Academic Press.
- (Hall, T., Strangman, M. and Mayer, A. (2009) , Differentiated Instruction and Implications for UDL Implementation [http://www.cast.org/publications/ncac/ncac\\_diffinstructudl.html](http://www.cast.org/publications/ncac/ncac_diffinstructudl.html)
- Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R. & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatric and Adolescent Medicine*, 153, 226–234.
- Hebb, D.O. (1961). "Distinctive features of learning in the higher animal". In J. F. Delafresnaye (Ed.). *Brain Mechanisms and Learning*. London: Oxford University Press.
- Henson, R. (2001) *Teacher Self-Efficacy: Substantive Implications and Measurement Dilemmas* University of North Texas Keynote Address, retrieved from [www.des.emory.edu/mfp/EREkeynote.PDF](http://www.des.emory.edu/mfp/EREkeynote.PDF), July 14, 2009
- Hickman, C. W., Greenwood, G. E. & Miller, M. D. (1995). High school parent involvement: Relationships with achievement, grade level, SES, and gender. *Journal of Research and Development in Education*, 28, 125-134.
- Horner, T. & Crone, D. (2005). *Functional Behavioral Support (F-BSP) Plan*. Eugene, OR: University of Oregon
- Huitt, W. (1999). Conation as an important factor of mind. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved [date], from <http://chiron.valdosta.edu/whuitt/col/regsys/conation.html>
- Huitt, W. (1992). Problem solving and decision making: Consideration of individual differences using the Myers-Briggs Type Indicator. *Journal of Psychological Type*, 24, 33-44
- Huitt, W. (1999). Conation as an important factor of mind. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved [date], from <http://chiron.valdosta.edu/whuitt/col/regsys/conation.html>
- Huitt, W. (2003). The information processing approach to cognition. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved 8/3/09 from, <http://chiron.valdosta.edu/whuitt/col/cogsys/infproc.html>
- Huitt, W. (2004). Bloom et al.'s taxonomy of the cognitive domain. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved May 26, 2009, from <http://chiron.valdosta.edu/whuitt/col/cogsys/bloom.html>
- Huttenlocher, P. (2002) *Neural plasticity: The effects of environment on the development of the cerebral cortex. Perspectives in cognitive neuroscience*. Cambridge, MA, US: Harvard University Press.
- Illich, I. (1970) Deschooling Society. <http://www.preservenet.com/theory/Illich/Deschooling/intro.html>
- Illich, I. (1973) Tools for Conviviality. [http://www.davidtinapple.com/illich/1973\\_tools\\_for\\_conviviality.html](http://www.davidtinapple.com/illich/1973_tools_for_conviviality.html)
- Immordino-Yang, M. H. and A. Damasio (2007). We feel, therefore we learn: The

- relevance of affective and social neuroscience to education. *Mind, Brain, and Education* 1(1).
- Jencks, C., Phillips, M., (1998). *The Black-White Test Score Gap*. Brookings Institution Press Washington, DC.
- Jerold, C.D., (June, 2006), *Identifying Potential Dropouts: Key Lessons for Building an Early Warning Data System: A Dual Agenda of High Standards and High Graduation Rates*; A white paper prepared for Staying the Course: High Standards and Improved Graduation Rates, a joint project of Achieve and Jobs for the Future, funded by the Carnegie Corp. of New York.
- Johnson-Laird, P. (1983). *Mental Models*. Cambridge, MA: Harvard University Press.
- Johnson, Kirk A. "The Peer effect on Academic Achievement among Public Elementary School Students" Center for Data Analysis Report. #00-06. Heritage Foundation. May 26, 2000.
- Kauchak, Donald P. & Eggen, P. D. (1998). *Learning and Teaching: Research-Based Methods*. Boston: Allyn & Bacon.
- Kaufman, A.S. (1985). *Major Psychological Assessment Instruments*. Boston, MA. Allyn & Bacon
- Keefe, J. W. (1979) Learning style: An overview. In NASSP's Student learning styles: Diagnosing and proscribing programs (pp. 1-17). Reston, VA. National Association of Secondary School Principles.
- Kellner, D. (2003 )*Toward a Critical Theory of Education*, downloaded <http://www.gseis.ucla.edu/faculty/kellner/papers/edCT2003.htm>
- Kellner, Douglas (2004). "Technological Transformation, Multiple Literacies, and the Re-visioning of Education." *E-Learning*, 1(1): 9-37.
- Kerka, S. (1994). Self-directed learning: Myths and realities (Report). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 365 818)
- King, M., Sims, A; Osher, D. (2008). How is cultural competence integrated in education? [http://cecpc.air.org/cultural/Q\\_integrated.htm](http://cecpc.air.org/cultural/Q_integrated.htm)
- Kirschner, P.A., Sweller, J. & Clark, R.E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry based teaching. *Educational Psychologist*, 41, 75-86.
- Koffman, S., Ray, A., Berg, S., Covington, L., Albarran, N., Vasquez, M. (2009). Impact of comprehensive Whole Child Intervention and Prevention Program among Youths at Risk of Gang Involvement and Other Forms of Delinquency. *Children & Schools, A Journal of the National Association of Social Workers*, vol. 31, #4, pp 239- 246.
- Kolvenbach, Peter-Hans S.J., Jesuit Education and Ignatian Pedagogy; September 2005, Association of Jesuit Colleges and Universities.
- Kounin, Jacob S. *Discipline and Group Management in Classrooms*. Holt, Rinehart and Winston, Inc. 1970.
- The Kounin Model (2003). Approaches to Discipline, <http://www.solwebs.net/sgfl/teaching/discplan/koun1.htm>.
- Kozol, J., (1991). *Savage inequalities: Children in America's schools*. NY. Crown.
- Krathwohl, D. R., Bloom, B. S. & Bertram, B. M. (1973). Taxonomy of Educational Objectives, the Classification of Educational Goals. Handbook II: Affective Domain. New York: David McKay Co., Inc.
- Lakoff, G. and M. Johnson (1980). *Metaphors We Live By*. Chicago: The University of Chicago Press.
- Lakoff, G. (1987). *Women, Fire and Dangerous Things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lakoff, G. and Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its*

- challenge to western thought*. New York: Basic Books.
- LeDoux, J. E. (1996). *The Emotional Brain*. New York: Simon and Schuster.
- Lee, V.E., Smith, J.B., Perry, T.E. & Smylie, A. (1999). *Social support, academic press, and student achievement: A view from the middle grades in Chicago*. Chicago: Consortium on Chicago School.
- Lewis, M.B. (1999) *Are age-of-acquisition effects cumulative-frequency effects in disguise? A reply to Moore et al*. *Cognition*, 72, 311-316.
- Lipsey, M.W & Wilson, D.B. (1998). Effective intervention for serious juvenile offenders: A synthesis of research. In R. Loeber & D. P. Farrington (Eds). *Serious and violent juvenile offenders: Risk factors and successful interventions*. Thousand Oaks, CA: Sage.
- Lipsey, M.W., Hawkins, D. (2007, May) Prevention Of Antisocial Behavior: The Most Effective Interventions For Changing The Most Predictive Risk Factors. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Lipsey, M.W., Wilson, S. J. & Noser, K.A. (2007). Linking the most predictive risk factors for antisocial behavior with the most effective interventions for changing those risk factors. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Magnuson, K., Duncan, G. *The Role of Family Socioeconomic Resources in the Black-White Test Score Gap among Young Children*, Forthcoming in *Developmental Reviews*.
- Malone, B.G., Bonitz, D., and Rickett, M. (1998), *Teacher Perceptions of Disruptive Behavior: Maintaining Instructional Focus*, *Educational Horizons* 76 no4 189-94 Summer, '98.
- Marshall, H. H. 1990. "Beyond the Workplace Metaphor: Toward Conceptualizing the Classroom as a Learning Setting." *Theory into Practice* 29: 94–101
- Maturana, H.R., Varela, F. J. & Paolucci, R. (1998). *The Tree of Knowledge: The Biological Roots of Human Understanding*. Boston, MA: Shambhala Publications.
- Mayer, R. (2004). Should there be a three-strikes rule against pure discovery learning? The case for guided methods of instruction. *American Psychologist*, 59, 14–19.
- McCall, M., Hauser, C., Kronin, J., Kingsbury, G. , Houser, R., (2006). Achievement gaps: An examination of differences in student achievement and growth. Research Brief: Northwest Evaluation Association.
- McLaughlin, M. & Talbert, J. (2001). *Professional Communities and the Work of High School Teaching*. Chicago: University of Chicago Press.
- McEvoy, A. & Welker, R. (2000). Antisocial behavior, academic failure, and school climate: A critical review. *Journal of Emotional and Behavioral Disorders*, 8(3), 130-140.
- McNeely, C.A. (2004). Connection to School as an Indicator of Positive Youth Development. In Lippman, L. and Moore, K., (eds.) *Indicators of Positive Youth Development*. Search Institute Series on Developmentally Attentive Community and Society, Kluwer Academic/Plenum Press.
- Mehrabian, A. (1969). Methods and Designs: Some referents and measures of nonverbal behavior. *Research Method and Instruction*, 1 (6), 203-207.
- Meier, D. (2002). Just let us be: The genesis of a small public school. *Educational Leadership*, 59(5), 76-79.
- Meijer, C.J.W & Foster, S.F. (1988). The Effect of Teacher Self-Efficacy on Referral Chance. *The Journal of Special Education*, Vol. 22, No. 3, 378-385.
- Merrell, K. W., (1993). School Social Behavior Scales' Austin, TX. PRO-ED
- Merrell, K.W., Ceden, C.J. & Johnson, E.R. (1993). The relationship between social

- behavior and self concept in School settings. *School Psychology Review*, 22, 115-133.
- Merrell, K. W., (2002). School Social Behavior Scales, Second Edition (SSBS2) Merrell, Brooks Publishing. Baltimore.
- Merrill, D. (2000). Instructional Strategies and Learning Styles: Which takes Precedence? In Robert Reiser and Jack Dempsey (Eds.) Trends and Issues in Instructional Technology. Prentice Hall.
- Mezirow, J. (1994) Understanding transformation theory. *Adult Education Quarterly*, 44(4), 222-23.
- Murphy, J. & Hallinger, R (1985) "Effective High School: What are the Common Characteristics?" NASSP Bulletin, Va., Reston. pp. 18-22.
- Murray, C., and Malmgren, K. (2005). Implementing a teacher-student relationship in a high-poverty urban school: Effects on social, emotional, and academic adjustment and lessons learned. *Journal of School Psychology*, 43 (2005), 137-152.  
National Center for Education Statistics, NCES. [www.nces.ed.gov](http://www.nces.ed.gov) retrieved, (January 2008 through September 2009).
- Oakes, J. (1985). Keeping track: How schools structure inequality. New Haven, CT: Yale University Press.
- Oakes, J., Mendoza, J. & Silver, D. (2004). California opportunity indicators: Informing and monitoring California's progress toward equitable college access. Retrieved March 29, 2004, from the UC ACCORD Web site: <http://www.ucaccord.gseis.ucla.edu/publications/pubs/Indicators2004.pdf>.
- Office of Safe and Drug Free Schools, Early Warning, Timely Response: A Guide to Safe Schools, Washington, D.C., 1998.
- Osher, D. (2000). Breaking the Cultural Disconnect: Working with Families to Improve Outcomes for Students Placed at Risk of School Failure. In I. Ira Goldenberg (Ed.), *Urban Education: Possibilities and Challenges Confronting Colleges of Education* (pp. 4–11). Miami, FL: Florida International University.
- Osher, D., Dwyer, K., Jackson, S. (2003). *Safe, Supportive, and Successful Schools: Step by Step*. Longmont, CO: Sopris West.
- Osher, D., Dwyer, K. & Jackson, S. (2004). *Safe, Supportive, and Successful Schools Step by Step*. Longmont, CO: Sopris West.
- Osher, D. and Fleischman, S. "Research Matters/Positive Culture in Urban Schools," *Educational Leadership*, March 2005, Vol. 62(6), 84-85.
- Parajes, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66, 543-578.
- Partnership for 21<sup>st</sup> Century Skills.
- Patterson, V., Ray, A., & Berg, S. (2008) Impact of a district-wide individualized, computerized, positive behavioral intervention on discipline referrals, in-school suspensions and out of school suspensions. *Ripple Effects*. San Francisco, CA.
- Payne, A. A., Gottfredson, D. C. & Gottfredson, G. D. (2003). Schools as communities: The relationship between communal school organization, student bonding, and school disorder. *Criminology*, 41, 3, 749-778.
- Perkins, David (1991). Mindware and the metacurriculum. *New Horizons for Learning*. Retrieved 4/15/09: [http://www.newhorizons.org/future/Creating\\_the\\_Future/crfut\\_perkins.html](http://www.newhorizons.org/future/Creating_the_Future/crfut_perkins.html).
- Perkins, D.N. (1995). *Outsmarting IQ*. New York: Free Press.
- Perry, B., Szalavitz, M., (2007). *The Boy Who Was Raised As a Dog: And Other Stories from a Child Psychiatrist's Notebook: What Traumatized Children Can Teach Us About Loss, Love and Healing*. Child Trauma Academy, Houston, TX.
- Perry, Bruce (2003). Relationship of chronic stress, extreme stress, to neural adaptation. Retrieved from [http://teacher.scholastic.com/professional/bruceperry/abuse\\_neglect.htm](http://teacher.scholastic.com/professional/bruceperry/abuse_neglect.htm)
- Pert, C. B. (1997). *Molecules of Emotion*. New York: Scribner.

- Piaget, J. (1972). *The psychology of the child*. New York: Basic Books.
- Piaget, J. (1976). *To Understand is to Invent: The Future of Education*. New York: Penguin.
- Pinker, S. *How the Mind Works*. New York, N.Y.: W.W. Norton and Co. 1997.
- Pintruck, Rachal, J. R. (1994). *Andragogical and pedagogical methods compared: A review of the experimental literature* (Report). Hattisburg: University of Southern Mississippi. (ERIC Document Reproduction Service No. ED 380 566).
- Pintrich, P. (2000). The role of goal orientation in self-regulated learning. In M. Broekaerts, P. Pintrich & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp 452-502). San Diego, CA. Academic.
- Podell, D. M. & Soodak, L. C. (1993). Teacher efficiency and bias in special education referrals. *Journal of Educational Research*, 86(4), 247-253.
- Ray, A., (1999). Personal notes from 1998 Pilot Study , San Francisco, CA.
- Ray, A., Berg, S. (1999 -2009). Personal interviews with educators and researchers either using or evaluating Ripple Effects programs. San Francisco, CA.
- Ray, A. (1999). *Impact on passivity-assertiveness-aggression of short term, computer-based, skill building in assertiveness: A pilot study*. San Francisco: Ripple Effects. (First presented as peer reviewed poster session at *Division of Adolescent School Health Annual conference*. 1999.
- Ray, A., (2002-2007). Data collected from school district use of Ripple Effects web-based *School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA.
- Ray, A., Patterson, V., & Berg, S. (2008) *Impact of a district-wide individualized, computerized, positive behavioral intervention on discipline referrals, in-school suspensions and out of school suspensions*. Ripple Effects. San Francisco, CA.
- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 - 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects Coach for Staff (Implementers)*. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.
- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects for Targeted Prevention: Risk Reduction*. Ripple Effects, Inc., San Francisco, CA. 2007
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.
- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Raywid, M.A. (1999). Alternative Schools: The State of the Art. *Educational Leadership*, 52(1): 26-31

- Reinertsen, P. S. & Wells, M. C. (1993). Dialogue journals and critical thinking. *Teaching Sociology*, 21(2). 182-186.
- Rosenshine, B. & Meister, C. (1992). The use of scaffolds for teaching higher-order cognitive strategies. *Educational Leadership*, 49 (7), 26-33.
- Rowe, Mary Budd. Wait Time: Slowing Down May Be a Way of Speeding Up. *American Educator*. 11 (Spring 1987): 38-43, 47. EJ 351 827.
- Rowe, Mary Budd. *Wait-time and rewards as instructional variables, thier influence in language, logic, and fate control*. Paper presented at the National Association for Research in Science Teaching, Chicago, IL, 1972. ED 061 103.
- Saigh PA, Mroueh M, Bremner JD. Scholastic impairments among traumatized adolescents. *Behavior Research and Therapy*. 1997;35:429-436.
- Salovey, Peter et al. *Emotional Intelligence: Key Readings on Mayer and Salovey Model*. Port Chester, NY. National professional Resources, Inc. 2004. New York, NY: Basic Books, 1997.
- Sanders, J. A. & Wiseman, R. L. (1990). The effects of verbal and nonverbal teacher immediacy on perceived cognitive, affective, and behavioral learning in the multicultural classroom. *Communication Education*, 39, 341-353.
- Sarason, S.B. (1996). *Revisiting the culture of the school and the problem of change*. New York: Teachers College Press.
- Schon, D.A. (1990). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.
- Schunk, D. & Ertmer, P. (2000). Self regulation and academic learning: Self-efficacy enhancing interventions. In M. Broekaerts, P. Pintrich & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp 631-649). San Diego, CA. Academic
- Seligman, M.E.P., Sethi, S. (1993). Optimism and fundamentalism. *Psychological Science*, 4, 256-259.
- Siegel, D. (1999). *The Developing Mind: Toward a Neurobiology of Interpersonal Experience*. New York: The Guilford Press.
- Simon, A., Harnett, S., Nagler, E., Thomas, L., 2009. "Research on the effect of the Inner Resilience Program on Teacher and Student Wellness and Classroom Climate". Paper presented at 2009 Annual Conference of American Education Research Association.
- Singer, T. et. al. (2004). "Empathy for Pain involves the affective but not sensory component of pain." *Science*, 303, 1157-1162.
- Skinner, B.F. (1954). *Science and human behavior*. New York, MacMillan.
- Skinner, B.F. (1983). *A matter of consequences*. New York, Knopf.
- Smith, L.M (1999) "B. F. Skinner," *PROSPECTS: quarterly review of comparative education (Paris, UNESCO: International Bureau of Education)*, vol. XXIV, no. 3/4, 1994, p. 519-32.
- Society of Neurosciences, (2007). *Proceedings of the Neurosciences in Education Summit*, June 22 -27, 2007. Washington, D.C.
- Solomon D, Battistich V, Watson M, Schaps E, Lewis C 2000. A six-district study of educational change: direct and mediated effects of the Child Development Project. *Social Psychology of Education* 4: 3–51.
- Soodak, L.C. and Podell, D.M., 1993. Teacher efficacy and student problem as factors in special education referral. *The Journal of Special Education*, Vol. 27, No. 1, 66-81.
- Spier, E., Cai, C. & Osher, D. (2007, December). School climate and connectedness and student achievement in the Anchorage School District. Unpublished report, American Institutes for Research.
- Spier, E., Cai, C., Osher, D. & Kendziora, D. (2007, September). School climate and connectedness and student achievement in 11 Alaska school districts. Unpublished report, American Institutes for Research

- Squire, L. and Kandel, E., (1999). *Memory: from Mind to Molecules*. New York: W.H. Freeman.
- Stahl, Robert J. Using "think time" behaviors to promote students' information processing, learning, and on-task participation. An instructional module. Tempe, AZ: Arizona State University, 1990.
- Stahl, S.A., 1999, Different Strokes For Different Folks? A Critique Of Learning Styles, *American Educator*, Fall 1999, American Federation Of Teachers.
- Stern, R. & Repa, J. T. (2000). *A study of the efficacy of computerized skill building for adolescents: Reducing aggression and increasing pro-social behavior*. Unpublished manuscript.
- Sugai, G. (2007) School-Wide Positive Behavior Support and Response to Intervention. University of Connecticut, Storrs, OSEP Center on Positive Behavioral Interventions and Supports, Center for Behavioral Education and Research
- Sternberg, R. (1988) *The Triarchic Mind*, New York, Viking Adult.
- Thayer, J. F., A. L. Hansen, et al. (2009). "Heart rate variability, prefrontal neural function, and cognitive performance: the neurovisceral integration perspective on self-regulation, adaptation, and health." *Ann Behav Med* 37(2): 141-53.
- Thorndike, E. L. (1910). The contribution of psychology to education. *Journal of Educational Psychology*, 1, 5 - 12.
- Thorndike, E. L. (1918). "The nature, purposes, and general methods of measurements of educational products." *In The measurement of educational products* (Seventeenth Yearbook of the National Society for the Study of Education, Part 2, pp. 16-24). Bloomington, IL: Public School Publishing Company.
- Tomlinson, C.A. & Allan, S. D., (2000). Leadership for differentiating schools and classrooms. Association for Supervision and Curriculum Development.
- <http://www.ascd.org/readingroom/books/to nlinson00book.html>
- Tuovinen, J. E. & Sweller, J. (1999). A comparison of cognitive load associated with discovery learning and worked examples. *Journal of Educational Psychology*, 91, 334-341
- A Taxonomy for Learning, Teaching, and Assessing — A Revision of Bloom's Taxonomy of Educational Objectives*; Loren W. Anderson, David R. Krathwohl, Peter W. Airasian, Kathleen A. Cruikshank, Richard E. Mayer, Paul R. Pintrich, James Raths and Merlin C. Wittrock (Eds.) Addison Wesley Longman, Inc. 2001
- Tobin, Kenneth. "The Role of Wait Time in Higher Cognitive Level Learning." *Review of Educational Research* 57 (Spring 1987): 69-95. EJ 371 356.
- Tomlinson, C. A. (2001). How to differentiate instruction in mixed-ability classrooms. (2nd Ed.) Alexandria, VA: ASCD.
- United States Code, (2004). Reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 (P.L. 108-446). Washington, D.C.
- U.S. Department of Education, Report in Brief: NAEP 1996 Trends in Academic Progress (Washington, D.C.: U.S. Government Printing Office, 1997),
- U.S. Department of Education, National Center for Education Statistics. (2004). Dropout rates in the United States: 2000, NCES 2002-114, by P. Kaufman, M.N. Alt & C.D. Chapman. Washington, DC: Author, p. 2. [http://nces.ed.gov/pubs2002/droppub\\_2001/](http://nces.ed.gov/pubs2002/droppub_2001/)
- U.S. Department of Education, Office of Special Education Programs, Data Accountability Unit, (2009). *State Level Data Files parts B and C*. Washington, DC
- Vail, P. (1996). *Learning as a Way of Being*. California: Jossey-Bass.
- Varela, F., Thompson, E. & Rosch, E. (1991). *The embodied mind: Cognitive science and*

- human experience. Cambridge, MA MIT Press
- Varela, F. & Doughty, C. (1998). Communicative focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 114-138). New York: Cambridge University Press
- Vygotsky, L. S. (1962), *Thought and Language*, Cambridge, MA: The M.I.T. Press.
- Vygotsky, L. S. (1978). *Mind in society*. Cambridge: Harvard University Press.
- Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX. National Staff Development Council.
- Weiler, Kathleen. 1991. "Freire and a Feminist Pedagogy of difference". *Harvard Educational Review* 61: 4 (N)
- Weinstein, Rhona S. (2008), *Teacher Expectations, Classroom Context, and the Achievement Gap*; *Journal of School Psychology*, v46 n3 p235-261 Jun 2008.
- Weisband, S. & Kiesler, S. (1996). *Self-Disclosure on computer forms: Meta-analysis and implications*. In M.J Tauber, V. Bellotti, R. Jeffries, J.D. Mackinlay, J. Nielsen, (Eds.), *Proceedings of the ACM CHI 96 Human Factors in Computing Systems Conference*. Vancouver, Canada. p.3-10.
- Weissberg, R.P. & Elias, M.J. (1993). Enhancing young people's social competence and health behavior: An important challenge for educators, scientists, policy makers, and funders. *Applied and Preventive Psychology: Current Scientific Perspectives*, 3, 179-190.
- Wentzel, Kathryn R., (1991), *Social Competence at School: Relation between Social Responsibility and Academic Achievement*, in *Review of Educational Research*, v61 n1 p1-24 Spring, 1991.
- Wentzel, K. "Social Relationships and Motivation in Middle School: The Role of Parents, Teachers, and Peers," *Journal of Educational Psychology*, Vol. 90 (1998), pp. 202-209
- Wiggins, G. (1998). *Educative Assessment: Designing Assessments to Inform and Improve Student Performance*. San Francisco: Jossey-Bass.
- Wilten, William W., 1987 ed. *Questions, Questioning Techniques, and Effective Teaching*. Washington, DC: National Education Association. ED 310 102.
- Willis, S. & Mann, L., (2000). *Differentiating instruction: Finding manageable ways to meet individual needs* (Excerpt). Curriculum Update. <http://www.ascd.org/readingroom/cupdate/200/1win.html>
- Wilson, D. B., Gottfredson, D. C. & Najaka, S. S. (2001). School-based prevention of problem behaviors: A meta-analysis. *Journal of Quantitative Criminology*, 17, 247-272.
- Wilson, S. J. & Lipsey, M. W. (2007). School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *American Journal of Preventive Medicine*, 33 (Supplement 2), S130-S143.
- Wilson, S.J., Lipsey, M. W. & Derzon, J.H. (2003). The effects of school-based intervention programs on aggressive behavior: A meta-analysis. *Journal of Consulting & Clinical Psychology*, 71, 136-149.
- Wilson, S. J., Lipsey, M.W. & Noser, K.A. (2007). *Meta-Analysis Of Longitudinal Studies To Identify The Risk Factors Most Predictive Of Later Antisocial Behavior*. Organized Paper Symposium, Society for Prevention Research Annual Meeting, Washington, D.C.
- Wimberly, George L. 2002. *School Relationships Foster Success for African American Students*. ACT Policy Report.

- Winn, W.D. (1993). A constructivist critique of the assumptions of instructional design. In T. Duffy, J. Lowyck & D. Jonassen (Eds.), *Designing environments for constructive learning*. New York: Springer.
- Wittrock, M.C. (1974). Learning as a generative process. *Educational Psychologist* 1(2), 87-95.
- Wittrock, M.C. (1990). Generative processes of comprehension. *Educational Psychologist* 24, 345-76.
- Wolters, C. (2003). Regulation of Motivation: Evaluating and Underemphasized Aspect of Self-Regulated Learning. *Educational Psychologist*, 38 (4) 189-205.
- Wood, D., Bruner, J. & Ross, G. (1976). The role of tutoring in problem solving. *Journal of child psychology and psychiatry*, 17, 89-100.
- Worthen, B.R., Borg, W.R. & White, K.R. (1993). *Measurement and evaluation in the schools*. White Plains, NY: Longman Publishing Group.
- Zarghani, G. H. Z. (1988). *Identification of learning style strategies which enable college students with differing personality temperament to cope with learning blocks*. Unpublished doctoral dissertation. University of Nebraska, Lincoln
- Zimmerman B. (2000). Attaining self-regulation: A social-cognitive perspective. In M. Broekaerts, P. Pintrich & M. Zeidner (Eds.), *Handbook of Self-regulation* (pp 13-39). San Diego, CA. Academic.
- Zins, J.E. & Elias, M.E. (2006). Social and emotional learning. Zins, J.E. & Elias, M.E. (2006). In G.G. Bear & K.M. Minke (eds.).
- Zins, J. E., Weissberg, R. P., Wang, M. C. & Walberg. H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press.
- Assessment: from Linda Darling Hammond slides <https://sites.google.com/a/wascsenior.org/darling-hammond/Home>

**Chapter 6: Technology**  
**What it can and cannot offer social-emotional learning**

The Challenge..... 1  
     Too much competing knowledge.....1  
     Complexity of SEL..... 1  
 The possibilities..... 1  
     Differentiation.....1  
     Domain expertise..... 1  
     Scaling personalized guidance..... 2  
     Solution to thorny political problems..... 2  
 What technology can't do..... 2  
     Can't make up for ineffective school policies..... 2  
     Can't undo socialization and structural injustice..... 2  
     Can't unilaterally undo gross media distortions..... 3  
     Can't replace human interaction.....3  
 Shift in paradigm..... 4  
 What does the research say? ..... 4  
     Platforms and formats not the issue..... 4  
     Information transfer..... 4  
     Assessment..... 4  
     Direct intervention to change behavior..... 5  
         Psycho-social interventions in general..... 5  
         Outcome research on Ripple Effects..... 6  
             Summary of research designs..... 6  
             Process evaluations..... 7  
             Outcome evaluations..... 7  
             Summary of significant positive findings for Ripple Effects WSIS..... 7  
 Ripple Effects technology..... 8  
     Expert systems: simulated good judgment..... 8  
         Not artificial intelligence..... 8

Expert system for SEL - necessarily “fuzzy” .....	9
Ripple Effects’ knowledge base.....	10
Factual information.....	10
Practices and procedures.....	11
Media formats.....	11
RE heuristics: rules of thumb.....	11
Getting a good “shoe fit” .....	11
RE inference engines.....	12
Enforce and execute the rules.....	12
Hundreds of concurrent logic models.....	13
Main engine.....	13
Subsidiary engines.....	13
Journal writing engine.....	13
Engines to assess content mastery.....	16
Self-profile engine.....	16
Content customization engine.....	16
Data tracking engine.....	16
External assessment engines.....	16
Group level (external) school survey engine.....	16
Individual survey engines.....	16
Data output.....	17
RE interface design.....	17
The Ripple Effects look.....	17
The Ripple Effects feel.....	17
Usability universal design for learning (UDL) .....	18
Ease of use.....	18
Instructional design – embedded pedagogy.....	19
<i>Whole Spectrum Learning Platform</i> .....	20
Appendix C index of topics in Ripple Effects for teens (grades 6-11).....	44
Appendix D index of topics in Ripple Effects for kids (grades 2-5).....	53
Appendix E index of topics in Ripple Effects for staff .....	56
References.....	58



## Chapter 6: Technology

*What it can and cannot offer social-emotional learning*

### THE CHALLENGE

#### Too much competing knowledge

As evidenced in the previous four chapters, the problem isn't that there isn't good data about students' or teachers' needs, or about what works to meet those needs in terms of psycho-social practices, pedagogical methods, educational systems, or social policy. The problem is that what collectively *is* known presents a huge mound of competing ideas, information and expertise. That ever-expanding mound of knowledge is comprised of several major domains, each of which is beyond the scope of most individuals to master in fewer than ten years (Gardner, 2006).

#### Complexity of SEL

Social-emotional learning is, by itself a domain within a domain, and a domain that straddles domains. It is one in which the collective knowledge base is rapidly expanding, where nuance can and does make the difference between an effective, evidence-based response, and an ineffective one. Despite this complexity, it is a domain that all teachers are expected to have fully mastered, often with little or no training, before the first day of school. It is one from which all teachers are expected to quickly extract the precise set of proven strategies that can most closely meet their own needs, the needs of each of their diverse students, and the group of those students as a whole, in their first classrooms and in every class thereafter. The challenge can be, and often is, overwhelming. It calls out for the application of technology to lighten teachers'

burden and extend better services to students.

### THE POSSIBILITIES

Technology offers the possibility of greatly expanding the capacity of schools to meet social-emotional learning needs of both students and teachers. It can be a way to integrate theory and research that has been widely dispersed. Proven strategies that have been scattered in different academic or treatment settings can be brought together under one virtual roof. This includes both psycho-social and pedagogical strategies. The computer has no intellectual loyalties so intellectual turf issues can be overridden.

#### Differentiation

Technology offers a greater capacity to differentiate instruction and appeal to multiple senses than most teachers do. To do so for multiple students in multiple ways, *at the same time*, is beyond the capacity of even the best live instructor.

#### Domain expertise

Technology has the potential to relieve teachers of the burden of needing to become domain experts in social-emotional learning in order to teach effectively. It potentially can separate content expertise - within the computer - from the role of program facilitation - outside the computer. Theoretically, through the use of technology, not only teachers but also paraprofessionals with very limited training, could deliver best-practice interventions to students (Bass, Perry, et al, 2008). In addition, teachers

could move toward domain expertise in the order of their greatest felt practical need.

### Scaling personalized guidance

Technology has the potential to scale personal guidance and indicated, skill-based, personalized interventions – for both students and teachers - without loss of fidelity. Until very recently, individual, social-emotional interventions have been passed down like secret oral traditions, from professional therapist, behavior specialist, or school counselor to student-client. That process is vulnerable to uneven quality and more suited to a tiny, homogenous society, than to a large industrial one marked by mass communication. As more and more students are identified as having special needs that require specialized interventions, it is hard to imagine how such a constantly growing requirement can be met without the use of technology to expand capacity.

### Solution to thorny political problems

Technology, in particular, database structure as a delivery platform, could help solve the thorny political problem of how to be responsive to diverse local opinions about the appropriateness of social content without either losing fidelity to best practice, or offending whole groups of clients. Local administrators could delete what they don't like, without limiting choices for other users.

### WHAT TECHNOLOGY CAN'T DO

Despite these potential advantages, just because technology theoretically *could* do these things, does not mean that in practical terms it *can*, and certainly not that it usually does. Nor can it be assumed that what works to transfer hard information can be effective in developing soft skills. Despite the potential advantages described above, many people

are skeptical about applying technological solutions to “wicked”<sup>1</sup> social and emotional challenges and problems, and not without good reason. Common sense requires tempering hope with practicality and accepting some *a priori* limitations of the potential of technology.

### Can't make up for ineffective school policies

As discussed on page 5.13, school culture and policies strongly impact student outcomes. Technology can support organization-wide commitment to a fair, nurturing environment; it can't replace that environment. The most enlightened computer-based program in the world cannot be effective if it is introduced into a chaotic, undisciplined or uncaring environment.

How Ripple Effects software supports, but does not supplant enlightened school policies is discussed on page 5.13.

### Can't undo socialization and structural injustice

Social influences outside the school, from gender socialization, to neighborhood violence, to structural injustice, penetrate

---

<sup>1</sup> "Wicked problem" is a phrase used in social planning to describe a problem that is difficult or impossible to solve because of incomplete, contradictory, and changing requirements that are often difficult to recognize. Moreover, because of complex interdependencies, the effort to solve one aspect of a wicked problem may reveal or create other problems" (Wikipedia, downloaded 7/2/09) This is not far from the dilemma schools face in trying to deliver best practices in social-emotional learning in a school environment, where there is incomplete information about each child, constantly changing legal requirements, moving accountability targets and potentially competing interests between individual and group needs.

school walls and affect each student's capacity to learn and change. Technology can't single-handedly counteract the cumulative impact of socialization and structural injustice even on one student, let alone on whole groups of them, although in the age of Twitter, it can spread social-consciousness in remarkable ways. It may also be effective in building social-emotional abilities that individuals need in order to effectively press on institutions to make them more just and humane.

Ripple Effects software identifies active justice-making as a key "life skill" in a democratic society. It also gives learners skills for managing their feelings and actions in the face of social injustice, thus reducing the chances that it will defeat them.

### **Can't unilaterally undo gross media distortions**

Technology – through television, film, video, music, games, and social networking sites - is *the* vehicle for mass-market distribution of commercially created images of young people. Taken as a whole, those images have resulted in massive distortions that cause many young people to question every part of their existence, from their given body type, to their ability to speak a sentence at a party without the help of a drug or drink, to their ability to interpret the danger posed by a red bandana instead of a blue one.

A software program can't undo that cultural programming. However, technology has enabled the democratization of media in unprecedented ways. Today young people – and increasingly older people as well – are creating a massive mosaic of self-impressions and impressions of each other. That collective endeavor both challenges and reinforces media distortions that are already in place. There may be no more important

cultural work than to breathe greater honesty into this process.

Ripple Effects is contributing to this collective effort to re-present people and experience in more honest ways through continually soliciting, encouraging, producing and distributing - both inside its software and out - true stories, from young people and their teachers. It presents a richly diverse universe of real young people in the voices, faces, peer models, and hand drawn illustrations that convey its content.

### **Can't replace human interaction**

Personal relations with a trusted adult are a key factor in reducing risk of delinquency, school failure, substance abuse and mental health problems (VanderVen, 2008; and Beier et al, 2000). These relationships cannot be packaged in a box. The jury is still out on whether, for some people, online communities can serve the same positive functions as offline, intentional communities of purpose. What isn't up for debate is that school communities are comprised of real time, social relationships. If the impact of a computer-based, SEL program is to convince users that they no longer need to relate to other live people, it has horribly failed its primary mission. The goal of computer-based SEL must be not to replace human interaction, but to strengthen it.

The capacity to provide access to a wide range of evidence-based practices under a single electronic roof does not suggest that the nuanced judgment of professional mental health professionals in live settings can be replaced and is no longer needed. In a time of rapid social and economic upheaval, professional mental health services may be more needed than ever. Technology-based interventions should augment their work, providing a bridge to more productive communication, not attempt to supersede it.

Some student learners say that the Ripple Effects program is like a friend to them. The adults who have monitored their experience, describe these students as *more* positively engaged with their peers and their teachers after using the program, not less.

## SHIFT IN PARADIGM

Despite – and within – the *a priori* constraints outlined above, the last decade has seen a major paradigm shift in envisioned uses of emerging technologies to address social-emotional awareness, motivation and behavior. The question has steadily been shifting from *whether* to use technology to *how* to use it. One reason for this shift is consistent evidence that people of all ages are more comfortable seeking help from a computer than from a live interviewer (Karabenick & Knapp, 1988; Turner et al, 1998; Weisband et. al., 1996). But does the technology they trust actually work?

## WHAT DOES THE RESEARCH SAY?

Over the past two decades, new fields of research have grown up around efforts to evaluate the potential and limitations of technology for social-emotional and behavioral learning.

## Platforms and formats not the issue

Much recent research has centered on Internet-based applications, but increasingly games, mobile devices and multimedia software are also the subjects of scientific study. In many cases, the lines between platforms have so blurred as to make them impossible to definitively separate. Now there are phones with email, games that can involve thousands of players simultaneously, disk delivered programs that have Internet connections within them (such as Ripple

Effects), and mixing of media formats within single applications. A plethora of new research about these formats can be summarized in the simple statement that there is no one platform or delivery format that works to achieve every objective, and no platform that can summarily be excluded as ineffective for any objective.

## Information transfer

Evidence to date suggests computer-based delivery is a very effective method to transfer information. The explosion of information transfer through the Internet is unparalleled in human history. It has broken open the lock on knowledge previously controlled by closed circles of professionals. Two out of three teens have used the Internet to find information about physical, mental and emotional health issues. Unfortunately, a substantial amount of the information they can get on the Internet is not accurate. Most often, they cannot evaluate the accuracy of the information, and usually do not evaluate the credibility of its source (Kaiser Family Foundation, 2001).

By containing a large, scientifically accurate knowledge base within closed parameters Ripple Effects addresses this challenge.

## Assessment

Computer technology offers a very fast and cost effective method to deliver surveys and other standardized tests, with greater protections for confidentiality and less chance of distorted results due to the influence of the test mediator. Research consistently has shown that learners are more likely to respond honestly to survey questions on the computer than with a live interviewer (Karabenick & Knapp, 1988; Turner et al, 1998; Weisband et. al., 1996). Computerized testing is becoming the norm, rather than the

exception, for many screening purposes. Many, if not most, clinically validated assessment surveys are available via the Internet. Most of that group of tests are text-based, and thus require at least middle-school level, reading ability. This limits accessibility and reduces reliability of results for participants with low reading skills and/or visual impairment. However, with today's technology, the technical requirements for adding audio to survey engines is negligible. Lack of widespread appreciation of the value added from a non-reading dependent environment, rather than lack of technical capacity, has kept this practice from yet becoming ubiquitous.

### **Direct intervention to change behavior**

There remains the issue that, in most cases, neither accurate assessment, nor science-based information, is sufficient to change behavior, especially if it involves learning complex new social skills, or changing patterns that are deeply entrenched. As described in the previous chapters, a large body of evidence points to the fact that behavior needs to be not only rationalized and intended, but also witnessed and rehearsed in real world settings with real people, to take hold. In most cases, technology-enabled programs do not provide an environment for physical rehearsal of new skills. On the other hand, they may provide an ideal environment for visualizing new behavior, a process that has been associated with higher performance. With video-based peer modeling on the computer, learners can see behavior modeled with 100% fidelity, 100% of the time. There is also an emerging body of literature on the potential and limitations of immersion in three dimensional, electronic realities to change behavior, but since Ripple Effects does not

include that kind of experience, it is omitted here.

### ***Psycho-social interventions in general***

Most of the effectiveness studies on technology-based, SEL interventions have been published within the last five years. Several studies show that computerized delivery of mental health interventions for adults works in some circumstances. The best evidence is for internet-delivered, cognitive behavioral therapy for anxiety disorders (Carlbring et. al.; 2005; Farvolden, et. al. 2005) and substance abuse treatment (Carroll, Ball, Martino, et al., 2008; Brendryen & Kraft, 2008), as well as internet-delivered cognitive behavior therapy and psycho-education for depression (Clark et. al. 2005; Christensen et. al., 2004). These studies examined standardized, not individually customized protocols. Other studies show promising positive outcomes for disorders such as uncontrollable anxiety, anorexia, and social-cognitive deficits related to autism (Andersson, et al., 2005; Bernard-Opitz et al , 2001; Pull, 2006; Whalen et al, 2006; Ybarra et al, 2005; Zabinski et al, 2003).

Children have been participants in a much smaller body of studies. Of those studies that do not involve Ripple Effects, research shows that computerized delivery of science-based, health information is effective in transferring accurate understanding about substance abuse to adolescents (Marsch et. al., 2006; Schinke 2006). Computerized delivery of social skill training is also effective in promoting self-reported assertiveness and decision-making skills in children, the former at a level of a widely validated instructor delivered program (Marsch et. al., 2006). One earlier study showed that a school-based health promotion/behavior change CD-ROM-based program (*BARN*) resulted in reductions in

risk-taking behavior in adolescents (Bosworth, et. al., 1994).

In 1998 the first of a series of studies of effectiveness of Ripple Effects were undertaken.

### **Outcome research on Ripple Effects**

Over a period of 10 years (1998-2008), eight randomized, controlled trials, and three quasi-experimental, school-based evaluations examined the impact of Ripple Effects expert system on internal and external outcomes for more than 4,700 students. The studies also examined implementation process outcomes. Government agencies and private foundations funded the studies done by third party researchers. Participants in these studies were heavily weighted toward students who had a history of behavior problems, or who had multiple risk factors for behavior problems and academic failure.



See *Evidence of Effectiveness, Volumes I, II, III, IV, V* for complete write-ups of all of these studies.

### *Summary of research designs*

Each study examined effectiveness of different, culturally competent configurations of Ripple Effects *Whole Spectrum Intervention System (WSIS)*, which were adapted – without loss of fidelity – to specific cultural contexts and physical, social and educational constraints. Each was conducted in “real-world” circumstances. With the exception of the first pilot, Ripple Effects was not directly involved in any aspect of the implementation of the program, and did not mediate any data collection. Teachers, social workers, and nonprofessional school staff, with no more than three hours of training, delivered the intervention in some of the most challenged schools in the United States.



4700 students from 51 elementary, middle, and high schools, in urban, rural, and suburban settings, in three regions of the United States participated in the evaluative studies. These students represented all ethnic/racial groups, and included special education students. The demographics were skewed toward low income, African American and Latino adolescents.



Two quasi-experimental studies tested the impact of Ripple Effects as a tertiary intervention. The first measured impact on depression scores among youth involved in, or at risk of, gang activity, using the Beck Depression Inventory (Koffman et al., 2009). The second measured impact on disciplinary referrals and in-school suspension rates, using school administrative data (Ray et al., 2008). That study also used computer generated usage data to measure voluntary use of Ripple Effects to access guidance on personal issues. Both used time periods as comparison conditions.



Seven longitudinal, randomized controlled trials (RCTs) examined the use of Ripple Effects for secondary prevention among students with multiple risk factors, negative mental health outcomes, delinquent behavior and school failure (Bass et al, 2008). Six, two-armed studies used the Monitoring the Future survey data to assess attitudes about alcohol and drug use, and the Multi-Dimensional Health Locus of Control (MHLC) scale to measure perceived locus of control (Perry et al, 2008). They also used district administrative data to assess outcomes related to school behavior and academic performance. The seventh, a three-armed study, analyzed data collected by blind observers with high inter-rater reliability, to measure social behavior, and administrative data on remedial summer school referrals to measure academic impact (Stern & Repa, 2000).



One quasi-experimental, study, and one RCT, measured impact of Ripple Effects for primary prevention, as a self-regulated, group-assigned tool for universal promotion of core social emotional competencies. The first, a pilot evaluation, measured impact on short-term assertiveness scores on the Children’s Assertiveness Behavior Scale, after a one-hour intervention (Ray, 1998). The second examined impact on resilience assets, before and after a seven week intervention, and again at five months, using the California Health Kids Survey as a measure (De Long-Cotty, 2008).

*Process evaluations*

One meta-analysis evaluated process factors, using data from eight studies that included calibrated quantitative measures of attrition, compliance and dosage and three studies that included only qualitative process measures (Ray & Berg, 2008). Outcomes of process analyses are summarized in Chapter 7, *Implementation Science*.

*Outcome evaluations*

Statistically significant positive impacts on grades, behavior, and social-emotional capacities are documented in the table below. All findings have significance levels between <.05 and <.001. (Koffman, S., Ray, A., Berg, S., Albarran, N., & Vasquez, M., 2009; Bass, K., Perry, S. M., Ray, A. & Berg, S., 2008; De Long-Cotty, B., 2008; Perry, S. M., Bass, K., Ray, A. & Berg, S., 2008; Ray, A., 2008; Ray, A., Patterson, V., & Berg, S., 2008; Ray, A., Patterson, V., & Berg, S., 2008; Ray, A., & Berg, S., 2008; Stern, R. & Repa, J. T., 2000; Ray, A., 1999.)



See eighteen manuscripts in *Evidence Effectiveness* Volumes I, II, III, IV, V, with descriptions of the theory, research design, conditions of use, participants, methods of data collection and analysis, and primary, secondary, and tertiary outcomes, summary findings across multiple studies, and implementation process evaluations. A summary of the research methods and results, by study, is also available.

**Summary of significant positive findings for Ripple Effects WSIS**

Primary Intervention: Universal strength-building	Secondary Intervention: Targeted, group-level	Tertiary Intervention: PBIS
Greater assertiveness	Fewer out-of-school suspensions	Reduced depression
Reduced aggressiveness	Reduced absenteeism	Fewer in-school suspensions
Greater empathy	Less tardiness	High rates of voluntary use for personal guidance
Improved problem solving	Greater retention in school at 1-year follow-up (after previous failure)	
Higher grades	Stronger attitudes against alcohol	

Table 6.1

## RIPPLE EFFECTS TECHNOLOGY

Ripple Effects has used a wide spectrum of technology-enabled systems to get these results: from automation of simple pre-intervention surveys, to use of 3<sup>rd</sup> party, off-the-shelf software programs to provide real time, technical support direct to clients' desktops, to data management systems to manage content and support customers. The technology tools are supplemented by a comprehensive set of print resources and limited live training, more fully described in the volume, *Ripple Effects Whole Spectrum Intervention System*. However, the core technology that defines the Ripple Effects approach is the *Whole Spectrum Learning System*, the learning platform and the database management system. It is an Expert Problem Solving System that powers the delivery of primary, secondary and tertiary, individualized, evidence-based, social-emotional learning interventions for children, adolescents and adults.

### Expert systems: Simulated good judgment

The idea that machines could teach people to feel, control thoughts, and change behavior is counterintuitive on its face. Machines themselves are unfeeling, not self-aware, often lack nuance, and miss non-verbal cues. Facts may be easy to program into a computer, but wisdom is not. Nonetheless, the growing mandate to match best-practice training in SEL to individual student need is driving development of "expert systems" to accelerate scaling that process without loss of fidelity. An expert system is a computer program that rivals the judgment and behavior of the best human experts in a given domain (Feigenbaum, E. 1990, 1992, 2003; Wagman, M., 1993).

It generally includes three parts:

- A knowledge base containing information and accumulated experience in a particular domain, along with a set of set of heuristics for applying the knowledge base to each particular situation that is described to the program
- An inference engine, the processing algorithms that derives conclusions from the facts and rules contained in the knowledge base using a programmed logic
- Interface design, the combination of information structure and "look and feel" that is the learner's door into the knowledge base

Depending on the intended end use, the intended end user, and the kinds of knowledge that are being manipulated, any of the three parts can have more or less importance.

### ***Not artificial intelligence***

Although involving a potentially massive knowledge base, expert systems are not primarily knowledge retrieval systems; they are problem-solving mechanisms. As such, they are designed to "imitate human decision-making, using detailed understanding of a particular knowledge domain and rules for applying facts to specific scenarios, which are programmed in, and then suggesting a solution" (Feigenbaum, E., 1990, 1992, 2003; Wagman, M. 1993). Depending on the domain, the decision-making process is more, or less, predictable.

In the early development of expert systems, there was an assumption that true artificial intelligence could be programmed in to solve almost any human problem and every solution could be presented in some alphanumeric form. The belief was that if one could identify all the rules that govern

each decision, and every node at which a decision was made, a computer-program could be “content agnostic” and apply the minutely calibrated rules to any situation. In that case, the particular database of content would be less important than the sophistication of the inference engine. This model holds true for systems that are characterized by hard data, including those for solving very sophisticated financial problems, making auto parts, or even repairing a telescope in space. It does not hold true for social-emotional learning.

***Expert system for SEL - necessarily “fuzzy”***

Since all expert systems are judgment-based systems, they can only be “guaranteed right” for things about which there is no possibility of valid disagreement. The area of social-emotional learning and teaching is not such an area. It is one in which subjectivity is valued. Practitioners have a wide range of opinions, based on researchers’ varying interpretations of results from testing many different practices under many different conditions. Learners’ own feelings, attitudes, motivation and background are important variables. Thus, there is never a single right answer to be extracted from it. Rather, at best an expert system for SEL can present a set of plausible suggestions, within a range of which each learner’s personal solution is likely to lie, similar to set of solutions for a quadratic equation, or a confidence interval in statistics.

For these reasons an expert system for comprehensive social emotional learning is necessarily a “fuzzy” system (Zadeh, L.A. 1999, 2001, 2002). This doesn’t mean that it lacks rigor, only that the system must allow for fuzzy concepts – concepts that cannot be expressed as “true” or “false,” but rather as “partially true”, and, in the case of SEL, “sometimes true.” Although fuzzy systems have been designed to bring great precision

to processes for dealing with a wide range of imprecise unknowns, including such things as balancing unequal objects placed upon each other, the imprecise unknowns in the human heart cannot be forced into perfectly precise logic statements, no matter how numerous the nested and branching levels of logic. This combination constrains the theoretical models for expert systems to match best SEL practices to each learner’s need. The “key, and indeed central, component of such an intelligent system is its large knowledge base” (Feigenbaum, E. 1992), rather than an inference engine, even one of “12 million rules” (Lenat, 1989).

Artificial intelligence has been largely disappointing in many contexts because of what has been called the “common sense problem” or “what everyone knows.” An individualized SEL program inherently includes not only the common sense problem that has short circuited most attempts to program artificial intelligence, but also the difficult notions of “common decency” (character) and cultural competence. When programmers try to encode all the variants that make up “what everyone knows” they inevitably fail.

Common sense, may be common, but like the Buddha’s “great emptiness,” when a programmer tries to nail it down, it also appears to be vast and fathomless. Common decency may be universally prized, but it is far from universally defined. Cultural competence – recognition of and response to cultural differences without resorting to stereotype – is a matter of thousands of subjective judgments, not of rigid applications of cultural rules. In addition, idiosyncratic learning differences, ambiguous learner feelings, intractable social problems, and cultural “air” – all factors in social-emotional learning – don’t have tractable algorithmic solutions.

To add to the complexity, SEL is a domain in which the knowledge base about *how* people learn – what they see, feel, hear and do - directly affects *what* they learn. Thus to reach all learners, a full range of proven-effective, pedagogical practices for delivery of SEL need to be directly programmed into the system.

For these reasons, in an expert system for SEL, the knowledge base has to take precedence over the inference engine. Much expert judgment has to be built into the singular data units, rather than being dependent upon programmed rules for extracting it.

Adding more complication, whereas once programmable data was restricted to alphanumeric symbols, the widespread adoption of object-oriented programming has made it possible to include pictures, sounds, movies, and whole subsidiary inference engines as data elements to be manipulated by the main inference engine, and displayed through an interface design. This has been a crucial development for the relevance of computer programming to social-emotional learning, where behavioral modeling is a requirement, and non-verbal language development is part of the curriculum. It partly explains why, in the domain of social-emotional learning, the three parts of the expert system often overlap.

Despite these sometimes overlapping functions it is useful to describe an expert system, including Ripple Effects *Whole Spectrum Learning System*, in terms of these separate main functions, beginning with the knowledge base.

### **Ripple Effects' knowledge base**

The key component of RE expert system for SEL is a knowledge base, which combines a database of facts, practices and procedures in multimedia formats, as well as heuristic logic to govern their use in the program.

### ***Factual information***

The most straightforward part of the expert system knowledge base is verifiable, *factual information* about topics that some subgroup of intended software users - adults, teens, children - have identified as important to them, or some arbiters of “best practice” have decided should be included. For second graders, it may be bullying or divorce; for adolescents it may be gangs or acne; for teachers it may be demographic trends in urban, suburban, or rural areas. Ripple Effects content developers drew almost all of this information from government web sites operated by some agency of the Departments of Health, Human Services, Education, and/or Juvenile Justice, as described in Chapter 1.

Ongoing development of the Ripple Effects knowledge base has involved incorporation of written content provided by educators and mental health professionals, expert panel review prior to three externally funded research projects, incorporation of critiques that have led to many hundreds of small content changes; and vetting by individual child psychiatrists, psychologists, counselors, social workers, nurses, administrators, teachers, trainers, prevention coordinators, probation officers, parents and, most importantly, student users of the program who all are experts on their own lives.

Under the direction of Alice Ray, the “synthesizer in chief,” a team of young writers has translated that professional expertise into more user-friendly language. Peer expertise widens and deepens the expert instruction. It is found in the true stories, and movie models. The complete lists of which specific, factual content areas are included in each software program is indexed at the end of this chapter.

### ***Practices and procedures***

The more complex part of the Ripple Effects knowledge database is that which is summarized in chapter four of this book: a large body of psycho-educational *practices and procedures* that have been successfully applied to solve problems and build skills in the realm of social-emotional experience. These have been derived not from studying a single expert's performance, but from culling hundreds of experts' published work and hundreds of practitioners' practical experiences. These are the cognitive, behavioral, affective, social skill, and political organizing strategies that can be applied to a multitude of topic areas.

### ***Media formats***

The body of included practices has been translated into user friendly, age appropriate language. In addition, it has been transferred from simple text to a variety of media formats: photos, illustrations, audio files, videos, graphic text, charts, graphs and interactive games. No fewer than three media formats – sound, text and graphic image - operate simultaneously on every content delivery screen in the system.

### ***RE heuristics: rules of thumb***

In addition to specific information about what works with SEL, how it works, when, and why – the knowledge base includes rules that apply to that information. In the Ripple Effects expert system, many of these rules are written directly into the content data. For instance, the rule that “anytime the topic directly bears on personal safety, students will receive guidance on who and how to ask for help” is written into the data for each of those safety topics. The rule of thumb that “users should always end up feeling stronger and smarter” is codified in specifications for

the data that require all written content to be simple and maintain a stance of respect toward the learner. The specifications of these kinds of rules of thumb are explicit. The execution of many of those specs is written directly into the knowledge base. Quite a few others are coded into the interface design. The rest are programmed into the inference engine, see below.

### *Getting a good “shoe fit”*

The most important rule set is that which governs how to match each learner's interest with a particular set of most relevant, effective practices. It defines each set of meaningful links between elements from the first category of factual content, elements from the second category of best practice, and elements from learner preferences expressed through concrete actions.

The metaphor of a bone marrow matching system to describe the desired fit between student need and expert solution is an attractive one, but it is unrealistic. A better one is more pedestrian. Picture it as the good “shoe fit” than can be made when a very wide range of styles and brands and colors and sizes are equally available to anyone who walks in the door, and without any cost differential for accessing them. The smart clerk, the “inferer” (see below) brings out the shoes in the size that has been volunteered or measured, and in the colors and styles that have been stated as preferences. The client chooses between them, based on a whole host of factors that may or may not be obvious to the sales clerk. Personal interest and pressing events may make a less than perfect fit even more attractive or useful than an exact one. Once a client has tried one model, it may become immediately apparent that his or her real need or interest is something entirely different.

The “good shoe fit” metaphor suits Ripple Effects’ expert system. It stores in attractive little, well marked boxes all manner of best SEL practices, in a wide variety of styles: affective, cognitive, behavioral, social skill. It provides an electronic clerk to instantly find the set that fits each learner’s unique criteria and it delivers that set up for her or him to try.

Heuristics written into the knowledge base enable *Ripple Effects Whole Spectrum Learning System* to address individual learners’ diverse, social-emotional goals, challenges and personal risk factors, using a relevant set of evidence-based practices that are accessible through an array of instructional techniques, from which each learner can choose the subset of learning modes that work best for her or him.

These if/then links (If this is the problem, then do this) bundle sets of possible solutions that all have been shown to work with some students, some of the times, for display in groups of three to five.

For instance, these rules of thumb set the content links between “tobacco” and “relaxation” in the teens program, or between “disruptive” behavior and “assertiveness” in the teacher training. These solution sets are frequently drawn across boundaries between cognitive, behavioral and social skill approaches. The links sometimes reflect logical sequences, sometimes they express simple cultural associations. Sometimes, they are a “top three” approach to an issue that has dozens of proven potential solutions. The first three suggestions then have more embedded links to go farther up or down the tree. This is the most judgment-ridden part of the knowledge base. Because the decision of what to include or exclude is as much art as science, each case must be written into the data, rather than generated by a completely rule-bound inference engine. The embedded links represent only a small portion of the possible

combinations or sequences of screens. Approximately 10,000 screens (5,000 in the teen program alone) are included in the software programs. Theoretically, they are all available to be mixed and matched in literally billions of sequences and configurations, based on user actions.

In many “exact match” systems, finding the most relevant set of materials requires the learner to first answer a long set of questions. In the Ripple Effects “good shoe fit” system, the user simply scrolls down the cell phone and selects a first topic. This one choice narrows the practical range of the next set of choices to as few as five and no more than ten directly related screens accessible from that first click. At least three screens provide direct “what to do” suggestions to solve the particular challenge: one direct behavioral instruction, one interactive writing with word prompts as suggestions, and one multiple choice, learn-by-doing game. Learners can explore them in any order, or go “off track” and explore something completely different. The available subsequent choices increase with each click of the mouse.

## **RE inference engines**

### ***Enforce and execute the rules***

An inference engine is the link between the knowledge base and what the learner sees. In technical sciences it is often described as the brain of the expert system. Ripple Effects inference engine actually executes the links established by rules in the knowledge base, as well as its own set of heuristics. It is where the algorithms lie, the specific directions for specific actions under specific circumstances. With the “fuzzier science of SEL, it acts less like a brain, than a role somewhere between a cop and a delivery agent. It is the enforcer of the whole body of rules that are extrinsic to the data, but that govern its organization, calculation

and graphic presentation. This engine actually delivers the knowledge data elements to the screen for the user.

### ***Hundreds of concurrent logic models***

The Ripple Effects nested and branching intervention is comprised of more than 10,000 screens. Hundreds of logic models operate concurrently and change based on user decisions. For instance, the tobacco intervention tutorial may encourage students to identify motivation and triggers for smoking, from at least 50 that are in the programs. These will differ by student. Whichever choices each student makes will lead to a skill-based topic that addresses it, such as managing feelings. These in turn may prompt selections to address the sources of intense feelings – personal risk factors that may range from body weight, to attention deficit, to family violence.

A diagram of the content paths that four different users might take, after each beginning at the same point is found on the page 14. The conceptual map of the possible choice points for one topic, “self-awareness,” reached from four different starting places, is found on page 15. The description of all the screens available after making each of those content choices is found in the screen-by-screen walk through that begins on page 23.

In terms of mechanics, Ripple Effects inference engine is comprised of a main engine and seven smaller engines. Five are integrated into the main engine; two operate completely outside it.

### ***Main engine***

The main engine holds and executes the logic of Ripple Effects’ client-server architecture. It maintains the shell of the interface, creates user files, password protects them to ensure learner confidentiality, provides the structures that invite learner

input, including initial topic selection, executes the matches that are written into the data, allows for global commands, such as audio on or off, privacy screen on or off, web access on or off. It displays categories of screens as those commands are triggered by user selections, and tells which content elements to show up where and when. Because so much exercise of judgment is written into the data and so many pedagogical decisions are embedded in the design of the interface, there are relatively few decision-making rules left for the main inference engine to enforce. Thus it is small – just 32 MB – in comparison with more than 2 gigs of memory needed for the knowledge base for the teen program alone. This smaller processing requirement translates into very fast, near instantaneous display.

The subsidiary engines include one for journal writing, several for assessment of concept mastery, and one each for interactive profiles, content customization, and progress tracking.

### ***Subsidiary engines***

#### *Journal writing engine*

The Journal writing engine (“Brain” icon) retrieves options from the knowledge base and displays them, accepts input in any language recognized by the computer, writes it to a user file, time stamps the file, provides a way to save it outside the system and/or to print it, and encrypts it to protect user confidentiality, then saves it at a pre-designated location. It unlocks encryption when learners who have signed in with the correct password choose to see their personal, written entries.

## FOUR USER'S EXPERIENCE OF EXPERT SYSTEM

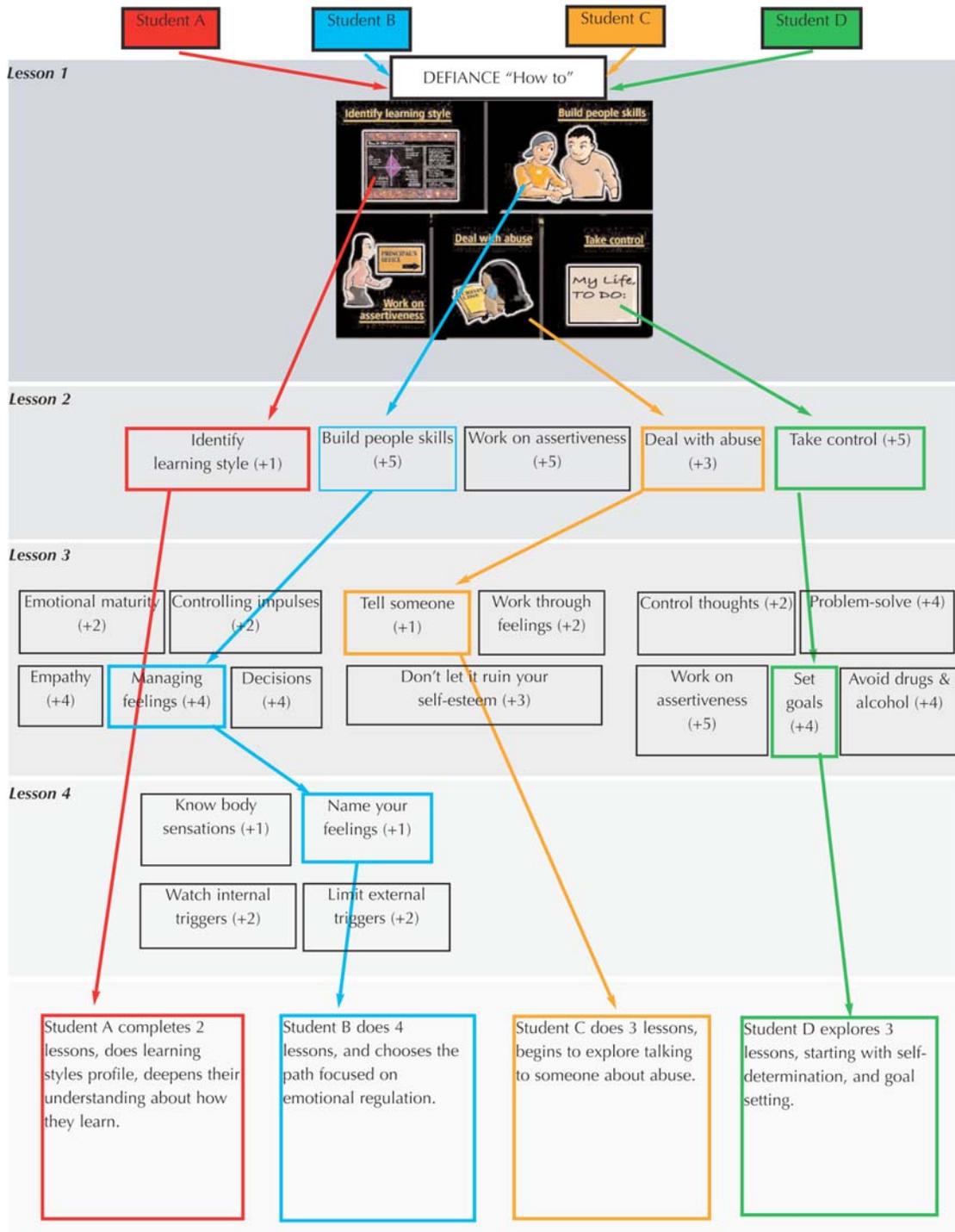


Figure 6.1

**SAMPLE CONCEPT MAPPING FOR ONE TOPIC**

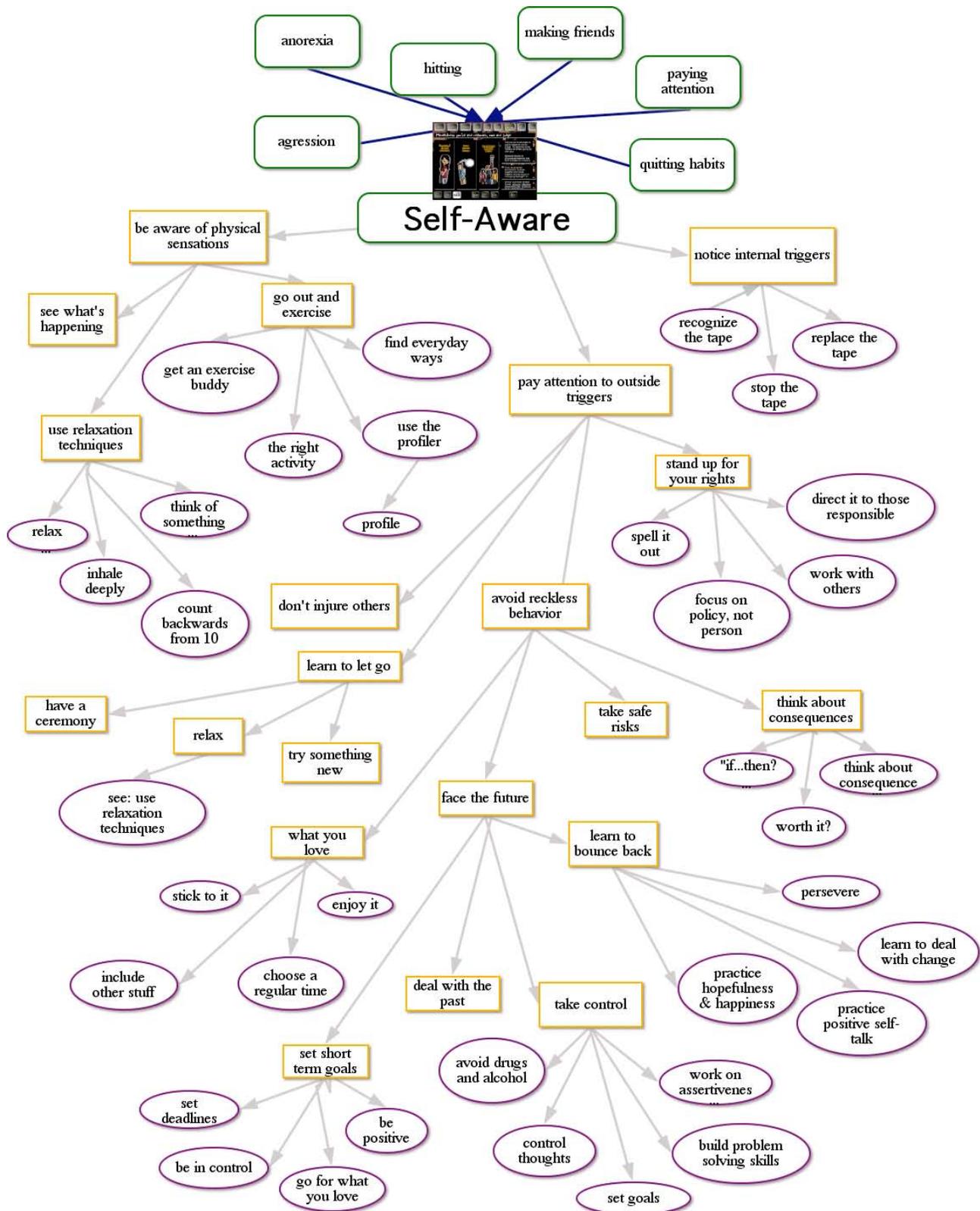


Figure 6.2

### *Engines to assess content mastery*

The content mastery assessment engines (“Got it” icon) present multiple choice questions in game formats, using text, audio, and animation; accept learner input; provide sound and visual feedback; spit out incorrect answers; and continue the game until all answers are correct. Upon completion of each game, this inference engine awards 100 points.

### *Self-Profile engine*

The Self-profile engine (“Profile” icon) presents survey questions in text and audio formats, provides a structure for dragging markers to indicate an answer, calculates scores for answers, utilizes a simple algorithm to display the calculated scores as points in a quadrant, selects from a group of prerecorded, interpretive summaries, presents the one that matches the range of values within which each learner’s score fits, provides a method to print both the graphical and narrative versions of the personal report, and adds 100 points to the learner’s score when completed. It saves the scores but does not save the user answer files within the program. Instead, it creates a new profile each time learners engage in the exercise.

### *Content customization engine*

The content customization engine (“Customize content” icon on admin screen) executes decisions that enable administrators to delete any topics that they choose. It removes access to all data elements for the identified topics (13-17 screens per topic) by removing the topic names on the cell phone display and/or the “keys” (TOC) display.

### *Data tracking engine*

The data tracking engine (“Progress tracking” icon on admin screen) creates a file

for each user, awards 100 points for completion of each interactive exercise (journal, profile, “got it” games described above), displays a list of which interactive exercises have been completed, calculates and displays the point total for each learner. When an administrative password is used, upon a click command, it displays completion records for all students by name.

### ***External Assessment engines***

The external engines power survey tools to enable repeated measures/pre and post data collection at the group and individual levels. They can be used with Intranet or Internet configurations. Because they are simple calculations, unlike the main engine for the training software, these inference engines are truly content agnostic and can be easily customized to include content supplied by clients.

### *Group level (external) school survey engine*

The group level survey engine sets up an overall school file for each school based on administrator input, separates that into files for staff and those for students, displays programmed survey questions, calculates values for responses, aggregates values to the group level, saves scores to the school file and displays them in graph form. In some versions, it plays an audio track so participants do not need to be able to read to participate.

### *Individual survey engines*

The individual survey engines (desktop and Internet versions) combine survey and game functions. They set up records for each learner, display programmed survey questions and makes audio available through a mouse click, start a game that moves forward with the answer of each question, calculate scale values for responses, and save

them to the proper files. When all questions have answers, they instigate an animated reward sequence.

### *Data output*

Data output from Ripple Effects takes various forms: text, numeric and graphic. All text files are student information format (SIF) compatible and can be cross-correlated with school or district administrative data to assess objective outcomes. Some data sets, such as group level data from the web-based surveys, are automatically aggregated at the school level and can be viewed instantly, displayed in simple bar charts. Data from the personal surveys can be exported and aggregated at multiple group levels, as well the individual level, with appropriate protections for student confidentiality. Student scorecards include dosage levels by topic, for each student. These files can be exported to any spreadsheet program, and then analyzed. Depending on whether installation is at the network or desktop level, it is a more - or less - labor intensive process. Clients can contract with Ripple Effects to do all or part of the data formatting and analysis.

## **RE Interface design**

Interface design refers to how information and navigation structures are displayed for the user. The three most commonly recognized quality factors in interface design are “look and feel,” engagement and usability. Look and feel are widely associated with graphic design, and indeed they are closely connected, but audio choices as well as visual ones can profoundly affect how a program feels.

### ***The Ripple Effects look***

Ripple Effects’ flagship program, the teen software, has a decidedly hip hop look and

feel. That look comes from the use of graffiti style lettering, a streetscape home page, darker colors, and at-the-edge-of-mainstream clothing, hair style, and body art choices for the electronic guides. The authentic, yet finished look of the interface was achieved by having graffiti artists from San Francisco’s Mission district create backgrounds and illustrations, and then a world class, formally educated, graphic designer show them how to use technology-based tools to bring those first renderings to commercial quality. Equally important to the hip hop “feel” is the text narration throughout the program, by diverse voices, with an urban flavor, using informal language.

Hip hop as a layer of style is restricted to the teen program; the younger children’s software, and the staff training versions look and feel different from the teen program and different from each other. The kids’ program uses brighter colors, and more animation style characters. The adult program has a more sophisticated *New Yorker* cartoon style for the electronic guides.

### ***The Ripple Effects feel***

Despite these differences in visual style, the programs have many more similarities than differences. They share design features that evoke a sense of friendliness, comfort, even intimacy. All three versions of the software incorporate multi-ethnic figures as electronic guides, so that all learners have at least some visual elements through which they can see themselves when opening the program. All three programs take the side of the learner in every situation. All three have privacy screens that can be invoked with a click. In all three, human voices (always diverse *peer* voices, never outside authority figures) in conversational, direct address style (as opposed to authoritative, broadcast voice) use what they say and how they say it to

reduce social distance between learners and guide. In all of the programs, the size of the picture window is much larger relative to the whole screen than was thought necessary, or even possible by most technologists 12 years ago, when the program was first developed. This design choice was based on field observations, which suggested that this is the smallest size at which the facial image displayed in the space would feel almost like a mirror, prompting greater identification between the learner and the person in the window. The use of humor in title bars, illustrations and sound cues – silliness for young students, “attitude” for adolescents, a sardonic, but never sarcastic edge for adults – contribute to the learner’s sense of being “in the know.”

Of course, the sense of emotional comfort, friendliness, even intimacy is not derived from the design alone. It is also conveyed in the knowledge base, with its compelling true stories and topics that reach into sensitive areas. It is further developed through the logic executed by the interactive profile inference engine, through which learners come to believe the software program doesn’t just talk, it listens to them, and respects who they are. The protections for confidentiality, encryption and passwords, programmed into the inference engine reinforce a feeling of emotional safety within the program.

### **Usability**

#### *Universal Design for Learning (UDL)*

Besides ensuring emotional comfort, software should be practically usable as well. Usability in software refers both to ease of use and utility. They are interrelated concepts that are both included in the umbrella term, Universal Design for Learning (UDL). UDL is a broad, integrated approach to differentiated instruction in response to the many differences in how students select and

process information, their learning aptitudes, intelligences, special gifts and special needs; and their readiness and willingness to learn, all of which are discussed more fully in Chapter 5. It is built on the same basic conceptual model as universal design in architecture. That is, *the capacity for instructional differentiation, is not dependent upon any one educator’s capacity to make necessary accommodations, but is built into the very structure of every instructional setting*, so that instruction is more universally accessible to widely diverse learners (CASE, 2008). These structural adaptations to allow built in capacity for instructional differentiation often require the use of technology.

This structural adaptation approach has implications for content, as well as instructional processes for helping students to engage with that content. Most UDL proponents would argue, it also has implications for “acceptable products of learning” as forms of assessment. In terms of content, instruction within the UDL framework should include *multiple means of representation* to provide various sensory paths for acquiring information and knowledge, *multiple levels of content*, in terms of both breadth and depth. In terms of process, it requires *multiple means of engagement* “to tap into learners’ interests, challenge them appropriately, and motivate them to learn.” It also requires the *capacity to accelerate or slow instruction*, based on each learner’s most efficient pacing (CAST, 2008).

#### *Ease of use*

Except for the first time sign in, which can be challenging for some learners, and may require implementers’ assistance, Ripple Effects is extremely easy to use. Students with special needs who have failed with every other school-based assignment, have been

able to succeed with it. Because of the peer narration, the program is mostly reading independent and every screen has visual cues to make the content more accessible. Every content selection by every learner is an acceptable one. The first time they enter the home screen learners are presented with a simple direction on how to use the program: "Pick a topic from the cell phone, then use any lit up button on the bottom to explore it however you like." An always-available "questions" button ("?" icon) leads to an animated movie that gives more detail about how to move easily through the program, turn off the sound, etc.

These are all ease-of-use elements, but they are surface ones. They don't address the usability of the software *as a learning experience*.

*Instructional design – embedded pedagogy*

The true usability of the interface comes from the pedagogical theory that is embedded in the elements of the interface design.

The Ripple Effects interface design as a whole exemplifies universal design for learning (UDL), meeting the CAST criteria of "multiple means of representation, multiple means of expression, and multiple means of engagement".

## WHOLE SPECTRUM LEARNING PLATFORM

The following overview diagram and screen-by-screen descriptions demonstrate how Ripple Effects *Whole Spectrum Learning Platform* integrates the three elements of knowledge base, inference engine and interface in a multi-award winning, pedagogically sound, design for social-emotional learning.

This overview diagram introduces the learning system elements. Following the diagram is a screen-by-screen walk through of the system, from the student learner's point of view, beginning with the first step: signing into the program. The staff and younger children's program uses the same structure for information delivery and navigation, but has a different look and feel.

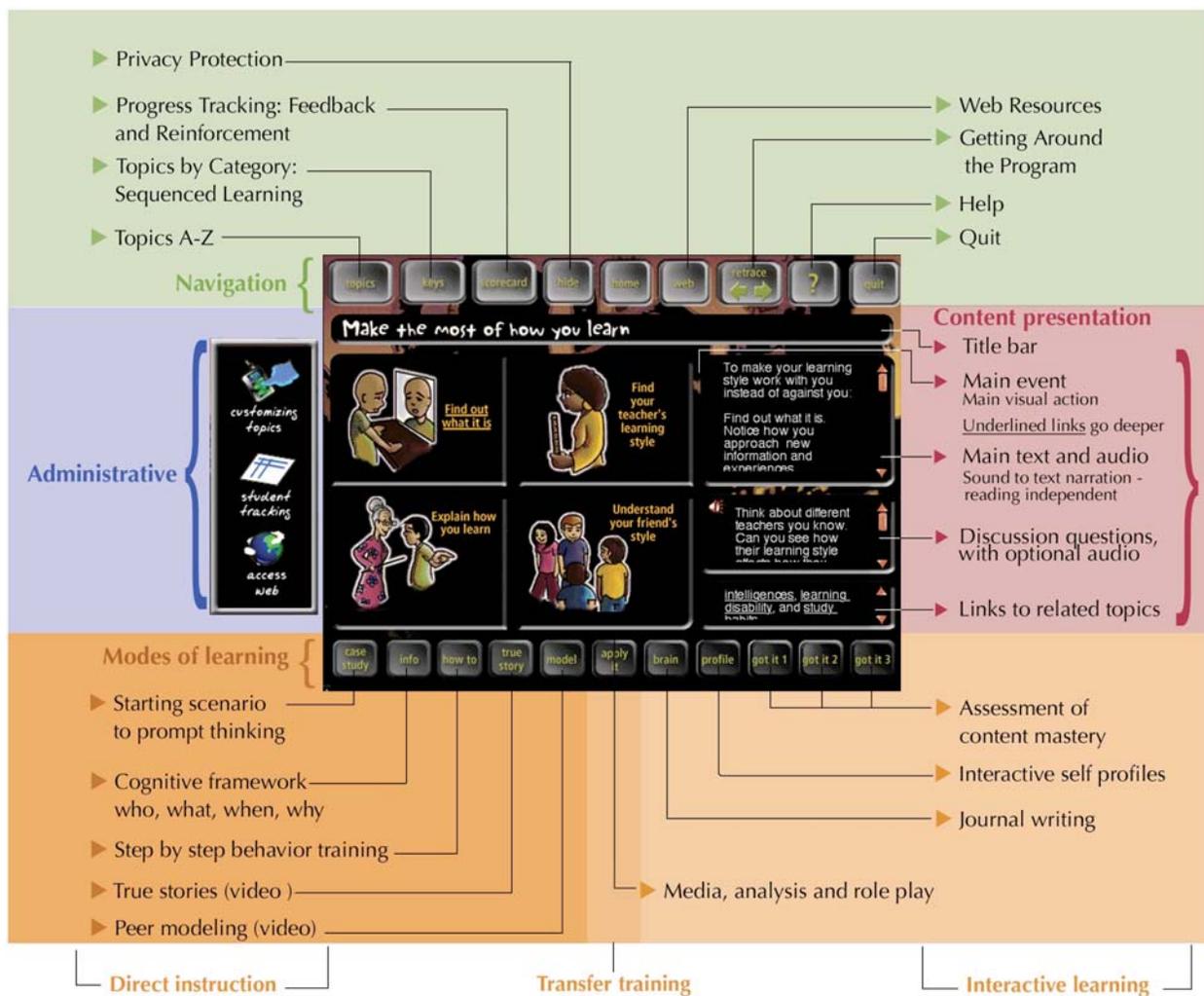


Figure 6.3

## A. Student POV Screen-by-screen walkthrough

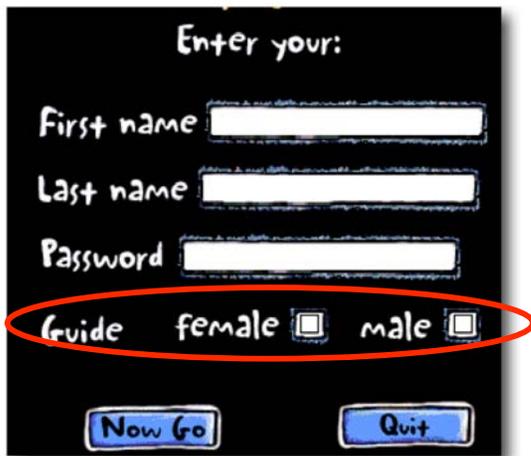


Figure 6.4: Sign in screen

### Signing in

**Choosing a password** begins the process of self regulated learning. It puts students in charge, lets them save their work, and protects confidentiality.

**Choosing the gender of a guide** determines whether the male or the female guide image and audio narration will play on the home screen and model screen, as well as the end of info and how to screens. On all other screens, gender voices and images alternate.



Figure 6.5: Ripple Effects for Teens intro animation screen

### Introductory animation

A short animation introduces the two electronic mentors and briefly describes what the program is and how to use it.



Figure 6.6: Staff and elementary electronic guides

### Guides—electronic mentors

Two guides, one male and one female, appear intermittently to help users reinforce key points. They are designed to look like adventurous peers of the learner, whether child, teen or adult, and are purposely ethnically ambiguous. They encourage identification with the material. At left are guides from the software for adults, and elementary grade students.



Figure 6.7: Sound level adjustment

## 1. Home Screen

The home screen is the jumping off point for all content. There are two modes to approach the content: an index of topics, and a table of contents.

Students can set the sound level and begin program exploration.



Figure 6.8: Topic index on cellphone

## 2. Topics: A-Z index for non-linear sequencing

The “Topics” button in the upper left corner leads users to a comprehensive, hyperlinked alphabetical index, with topics listed in ways that students, and experts separately refer to them (i.e. resilience and bouncing back). This mode supports constructivist learning, enabling users to approach the material from a concrete, personal interest, point of view and to explore via non-linear sequencing. This mode also enables facilitators to assign specific lessons to individualize and differentiate instruction.

The index is displayed in a cell phone. Users can scroll through the list, or click on the keypad to go directly to the letter a topic begins with. In the children’s version, keypad letters and topics are read aloud as users click on them.

Clicking on any topic takes users to the opening screen of that topic, a scenario-based case study. See the end of this chapter for an A to Z list of all topics.



Figure 6.9: Alpha key pad

KEYS OR TABLE OF CONTENTS



Figure 6.10: Keys/Strengths



Figure 6.11: Knowing yourself TOC

HIDE



Figure 6.12: Privacy screen

### 3. Keys: Table of contents for sequenced learning

A second way to approach the content is through categories of topics, table of contents style, via the “Keys” button. This approach enables systematic, sequenced learning.

In the student versions, the major categories are “Strengths,” “Problems,” and “Reasons.” Each category is further subdivided. Reasons, for example, are divided into “inside me” and “outside me” (internal or external risk factors). “Strengths” provides a scope and sequence for universal SEL, starting with “Knowing Who You Are,” shown at left.

See a list of available, preconfigured scopes and sequences on page 5.80.

### 4. Hide: Privacy protection

When the “Hide” button is activated, a graffiti screen covers the entire window and turns off the sound. The “Show” button then becomes active, and when it's clicked, the screen returns users to where they were in the program.



Figure 6.13: Questions button

## 5. Question: program orientation

The “? questions” button launches a 3 minute animated help movie that describes what the program is, and how to use it.



Figure 6.14: Bouncing back topic

From either the “Topics or Keys” screens, clicking on any topic takes a user to the first learning mode: a mini case study. For explanatory purposes here, the sample user is an adolescent, who clicks on the topic “bouncing back,” (also listed as “resilience”).



CASE STUDY Figure 6.15: Opening Topic Screen

### Case study: Concrete experience as starting point

This concrete, experiential starting point begins the learning process. This is the standard format for much constructivist instruction. It allows and requires learners, both young students and adults, to then add their own base of experience to understand the experience of others.

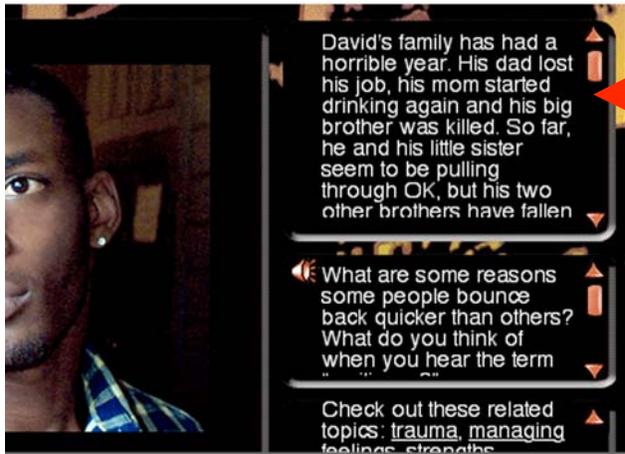


Figure 6.16: Narrative text display

### Sample text from resiliency screen

“David's family has had a horrible year. His dad lost his job, his mom started drinking again and his big brother was killed. So far, he and his little sister seem to be pulling through OK, but his two other brothers have fallen apart and are in trouble. David wonders why some people seem to be able to handle hard knocks and bounce back easier than others, and whether he will be able to make it over the long haul.”

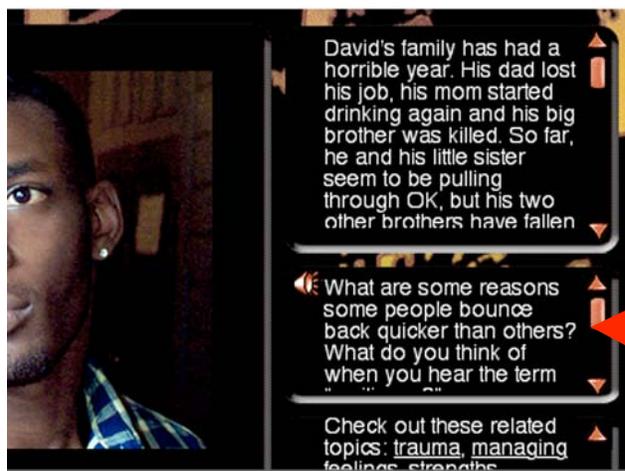


Figure 6.17: Discussion questions display

### Reflective inquiry

Open-ended discussion questions prompt reflective inquiry. From here, users can choose any other mode, in any order.

What are some reasons some people bounce back quicker than others? What do you think of when you hear the term “resiliency?”



INFO

Figure 6.18: "Info" screen with female guide

### Info: Direct instruction: cognitive framework

This screen uses an instructivist approach to transmit science-based information: Who? What? When? and theories of Why. Often this is included as "background concept" in a teacher's guide. Including it in student materials enhances learning for those students who are analytical learners, and enhances the credibility of the program for most others. Student learners report feeling respected by having it included. Screen-specific discussion questions help scaffold the learning, and support reflective inquiry.

The electronic mentor, in the gender the learner chose at sign-in, appears on screen at the end of the "Info" screen slide show, to reinforce key concepts.



Figure 6.19: "Info" screen with male guide



HOW TO

Figure 6.20: "How to" screen with male guide

**How To: Direct instruction step-by-step skill training**

Students are given multi-part instructions in slide show format, what may involve cognitive ("use an if/then sentence," "avoid weak words" like 'kind of' or 'sort of,") behavioral ("hold your head up, make brief eye contact), affective ("recognize that feelings change, like the weather"), attention ("notice the tape that is playing in your head"); and/or social skill ("ask a question that can't be answered with yes or no") strategies. All of these have been shown to be effective in addressing risk factors associated with delinquency, substance abuse and/or school failure.

The electronic mentor appears at the end of the "How To" slide show, in the gender chosen at sign in, to reinforce the main point.



Figure 6.21: Close up of "how to" screen showing links

**Embedded Links: Scaffolding and sequencing**

Embedded links from the "Info" and "How To" screens, indicated via underlined words, create linear sequences between related points. This "expert guidance" ensures that learners are led to the most relevant strategies related to the topic they are exploring. Clicking on an underlined word takes users to the "How To" screen for that topic.



Figure 6.22: Link from how to screen



Figure 6.23: Link from how to screen



Figure 6.24: True story screen

### True Story: First person videos: engagement and analysis

First person videos feature true stories of young people who have faced real problems. They provide motivation and modeling, and deepen affective involvement in the learning. Each includes a formal story arc, with setting, character, plot, resolution. Discussion questions precipitate empathic identification with protagonist and analysis of his or her character choices and consequences, using one's own experience as a point of comparison.

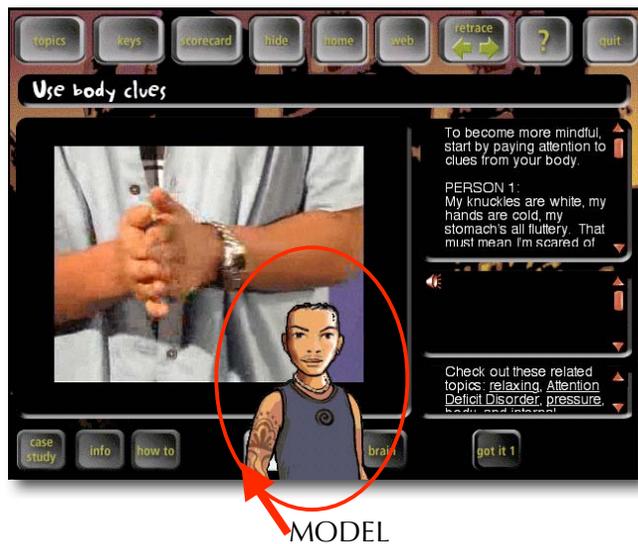


Figure 6.25: Video model screen

### Model: Peer modeling videos

Social-emotional learning theory underscores the importance of imitative behavior. Consistent with the theory of zones of proximal development, these videos feature non-actors, one developmental level above the learner, to reduce the experience gap and increase identification between models and learners. Each video focuses on a single, specific skill component.

Electronic Guides appear on the "Model" screen, in the gender chosen at log-in, to introduce the key points.



Figure 6.26: Bridge screen to transfer training

### Apply It: Transfer training

Learning is “fixed” when it is transferred. Evidence from brain science indicates that when students learn a procedure in an intensely personal situation, where many parts of the brain are involved simultaneously, they are more likely to remember it and transfer it to an academic context, than the other way around. Out-of-session activities for transfer training with family and friends, and in sports settings are included, along with media analysis and role-plays.



Figure 6.27: Friends and family transfer screen

### Apply It: 1<sup>st</sup> extension activity Friends & family

These exercises offer a way to apply each topic to the learner’s family or friends. Peers are the primary emotional focus for many adolescents. Parents have the greatest life long influence, for better or for worse. Both groups are subjects for these exercises. These exercises promote social communication aimed at shared meaning, a learning standard for language arts in most states.



Figure 6.28: Media analysis screen

### Apply It: 2nd extension activity Media analysis

These exercises prompt critical thinking, and encourage critical analysis of television programming, video games, music lyrics and other media. Students analyze how the media model glamorizes and reinforces certain social-behavior, how social conflict is a “required ingredient” in successful drama, and how dysfunctional behavior is necessary to the joke in sitcoms.



Figure 6.29: Sports transfer screen

### Apply It: 3rd extension activity Sports

These exercises apply key lessons in every tutorial to a sports setting. All learning is physically embodied at the cellular level, but for many learners, especially those who learn kinesthetically, it needs to be embodied in a more tangible way. Some students, especially boys, can more easily access “touchy-feely” material when it is in the context of sports settings.



Figure 6.30: Rehearsal assignment screen

### Apply It: 4th extension activity Skill rehearsal - Role-play

These rehearsal scripts can be used with a partner, or in front of mirror. They are intended to be practice, not performance. Rehearsal of social-emotional and language skills in real world contexts is important to creating “performance knowledge”. However, the value of public performance, as a method for building SEL skills has not been universally established.



Figure 6.31: Brain/Journal overview screen **BRAIN**

### Brain: Structured journaling

Vygotsky was among the first to identify journaling as an instructional method that facilitates the process of internalizing dialogue to shape understanding. Other researchers have demonstrated how journaling can be an independent tool for self understanding, as well as reinforce the skill of reflecting upon what is being discussed with others.

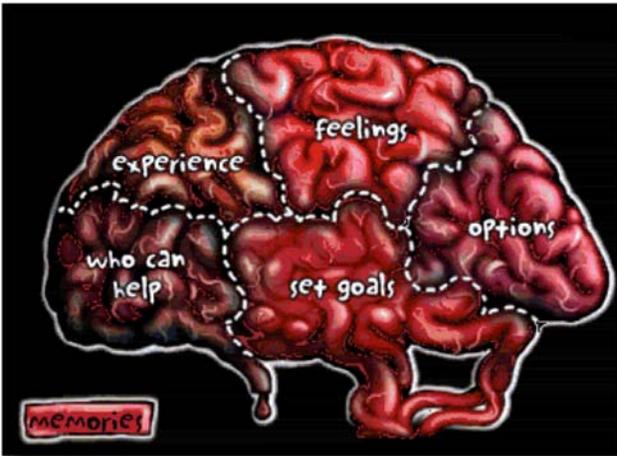


Figure 6.32: Structures a critical thinking process

The Ripple Effects interactive, journal writing exercises utilize a structured and assisted process of reflective inquiry, which has as its subject, one’s own life. In addition to drilling in the classical critical thinking process of identifying problems, clarifying options and choosing alternatives, it adds two components, which are important with social-emotional issues: identifying feelings related to each experience, and identifying who in the community a student can turn to for help solving this problem. It gives students a means to name their experience, the first step in having power over it.



Figure 6.33: Animated sequence of brain opening

Clicking on any brain section opens it, to reveal a brain/journal entry screen. An animated sequence gives users the sensation of going “inside their mind.”



Figure 6.34: Brain journal entry screen–Experience section

“**Drag and Drop**” word prompts provide a bridge to communication for ELL students and those with low language skills, helping to scaffold language development.

**Password protection and encryption** protect student privacy, an important element in promoting openness.

“**Type here**” is an **open-ended text entry box**, that provides room for more proficient communicators to express themselves in any language read by the computer.



Figure 6.35: Memories screen

## Memories Screen

The journal writing process results in a tangible product: an experience-driven, goal oriented, autobiographical set of sketches that are printable, but also password protected and encrypted to safeguard student confidentiality. Students can choose to save their memories electronically, or paste them into email.

In districts that require adult supervision of all student writing, students can be required to print their entries, but teachers cannot break into students' encrypted files without their permission.



Figure 6.36: Profile questions

### Profile: Interactive self-assessment

These self-assessments are the 180° balance to the objectivist instruction offered in the “Info” and “How To” screens. Thirty-seven different interactive profiles promote intrapersonal “intelligence,” based on greater understanding of personal strengths and weaknesses. The learning styles profile promotes meta-cognition, (understanding the working of one’s own mind). Other profiles help students identify risk and protective factors, and core social-emotional competencies such as empathy, assertiveness, problem-solving, connecting in community, and impulse control.

The profiles are not medical diagnostic tools. They are science-based, engaging exercises that can promote self-understanding, provide first-pass screening for disorders such as ADD, dyslexia, and PTSD, and provide individualized guidance based on students’ presentation of experience.



Figure 6.37: One of five possible results for “resilience” profile

After ranking six sets of four statements, learners get an immediate, customized response, including a graphic profile, and a description in text and audio, of what their answers mean for them. Results direct users to further skill training in the program, based on their responses. The “profiler” mimics proven counseling approaches, in that participant input is mirrored back to them, and framed in ways that point them towards help.

Profile results can be printed, but are not saved.



Figure 6.38: Learners click on speakers to hear audio

## Got It: Assessment of concept mastery

The “Got Its” are multiple choice tests, disguised as interactive games. There is at least one for every lesson. They are like traditional multiple choice tests in that they query for understanding of facts, thinking processes and procedures, as well as providing “word problems” through which learners must demonstrate deeper understanding. They differ from those conventional tests in that they are designed not to sort students into categories, but to bring every student to mastery. They throw out wrong answers, enabling a trial and error approach to learning. The strong kinesthetic component makes them a good tool for students who learn by doing, or who are bored by passive listening.

There are several different types of “Got It” games. All have audio narration and playful sound cues. Most also have animation components.

### A. Multiple choice “Cat & Mouse” game

Each correct answer moves the mouse closer to getting the cheese.



Figure 6.39: Cat and mouse content assessment game screen

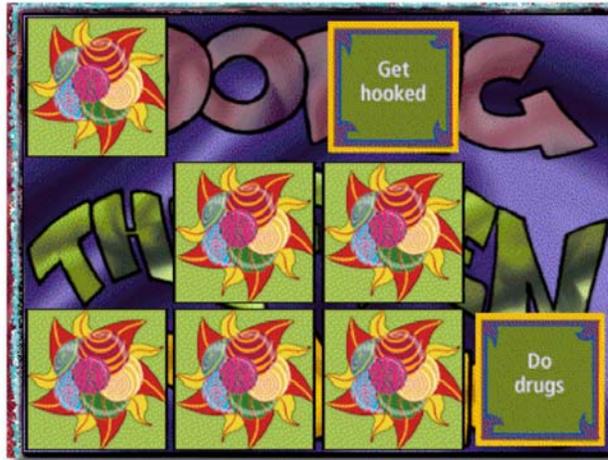


Figure 6.40: Screen for matching

**B. Multiple choice Matching game**

Learners match pairs of cards to reveal a graffiti-style mystery message related to the topic, such as “Doing the If-Then Thing”

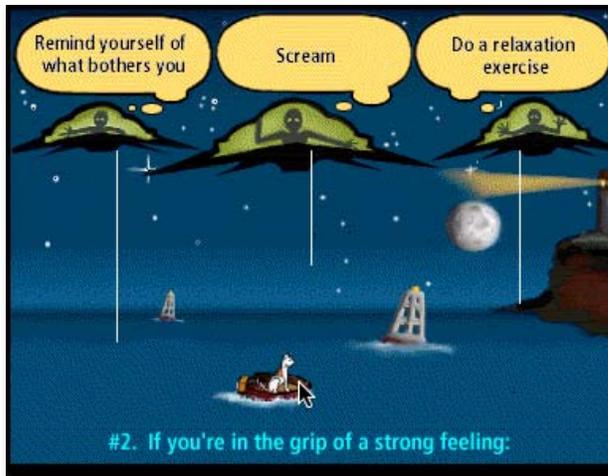


Figure 6.41: Screen for UFO game to assess content mastery

**C. Multiple choice UFO game**

Learners drag the boat under the UFO beam of the answer they think is correct.



Figure 6.42: Learner scorecard screen

**Scorecard: Reinforcement and feedback on performance**

The system tracks learner progress in completing interactive learning modes (“Brain,” “Profiles,” “Got Its”). Learners get 100 points for each. Learners can check their score to get immediate and ongoing reinforcement for behavior, a key factor in shaping, changing and maintaining behavior.

## WEB

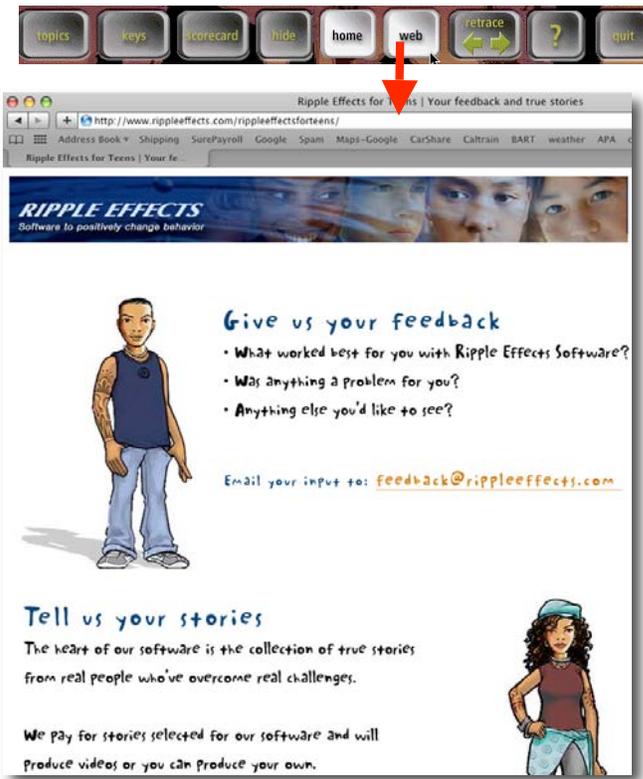


Figure 6.43: Screenshot of link to Ripple Effects website

## Web: User input feedback to developer

Clicking on the web button leads learners to the related Ripple Effects program web page, where they can provide feedback, request topics, and contribute their own true stories.

## B. Administrative tools



Figure 6.44: Administrative functions gateway screen

## Overview

Through an administrator's password, implementers can track student progress, customize content and choose to allow or disallow web access



Figure 6.45: Student progress report screen

### Data management and reporting

Implementers can click on any student name and monitor that student’s progress in completing interactive elements of assigned tutorials. Data can be exported for evaluation. This feature enables accurate measurement of dosage and implementation fidelity.



Figure 6.46: Content customization screen

### Customizing content

Implementers can block any topic they decide is either inappropriate, or outside the focus they have chosen for their setting.



## Blocking web access

Ripple Effects includes a link to the program website where learners can provide feedback and access additional resources. Some school districts do not want students to have access to the Internet except in controlled settings. A click of the mouse can activate or deactivate the web connection.

Figure 6.47: Web access control screen

## C. Safeguards for cultural competence and social equity

Cultural competence is a criterion for inclusion of every element at every level of the *Whole Spectrum Intervention System*. It is not a stand-alone component of the system; it is a standard to which all elements of the system must adhere. Some examples of how that is expressed in *Ripple Effects Whole Spectrum Intervention System* are described here.

### Module 1: Summary of staff attitudes and behavior regarding diversity

**Students:** 36 responded      Mean: 1.83 (out of 4)  
Students think teachers:



**Teachers:** 32 responded      Mean: 2.44 (out of 4)  
Teachers think other teachers:



Figure 6.48: Report screen from *Respect for Persons* survey

## Assessment of school climate

Web-based survey tools assess school climate and respect for persons to help schools identify areas where lack of cultural sensitivity, and even outright racism, may be a problem.



Figure 6.49: Sample screen from “culture” tutorial

### Professional development

The staff software provides training for teachers on managing diverse learners, including respecting ethnic, religious, class, gender and learning differences. It deconstructs race-based attitudes and expectations without blame or shame.



Figure 6.50: Some diversity related topics on cell phone

### Student tutorials on diversity

The student software provides concrete lessons for kids and teens on appreciating diversity: physical, ethnic, religious, gender, class, and sexual orientation.

Content also includes issues that may have particular relevance to specific groups and subgroups. For instance, the tutorial on English as second language (ELL) has special relevance to the immigrant community; the tutorial on “wheelchairs” is of special interest to the disabled community; the tutorials on “special education” and “dyslexia” are of special interest to students with learning challenges.

Specific lessons have been designed to address ethnic conflict and intervene with both targets and perpetrators of bias activity.

---

## Diverse multimedia content

Diverse young people appear in the software, with representation closely monitored to reflect the following targets: 50% Caucasian, 15% each Africa American, Latino and Asian, and 5% Native American children and adults, with people with visible physical limitations included in every group. Gender and ethnicity of images are balanced through the program as a whole, and across individual topics so that, for instance, if a “True Story” features a Latina, the (“Case Study scenario”) photo for that topic features a male from another ethnic group. Specific visual imagery is described, with examples, below.

---

## Photographic imagery

There are nearly 550 photographs across the two student programs, with another 140 in the staff program. Subjects are peers of the learner, photographed in real education settings. In addition to balancing the gender, ethnic, and visible disabilities, images are often chosen to counteract stereotype or expectation, and are framed close up to give a sense of intimacy and immediacy.



Figure 6.51: Disabled girl



Figure 6.52: African American boy



Figure 6.53: Asian boy and girl



Figure 6.54: Latin girl

## Videos

More than 80 true story videos present the authentic life experiences of diverse young people. Some were directed by youth, others by award-winning independent filmmakers.



Figure 6.55: True story screen



Figure 6.56: True story screen

Hundreds of peer modeling videos feature ordinary youth from diverse backgrounds, rather than professional actors.



Figure 6.57: Movie model screen



Figure 6.58: Movie model screen

## Hand-drawn illustrations

Thousands of hand-drawn illustrations featuring diverse young people, create rich, imaginative visual images to illustrate key points on the “Info” and “How To” screens.



Figure 6.59: Sample of diverse images

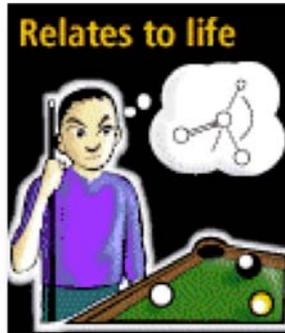


Figure 6.60: Sample of diverse images



Figure 6.61: Sample diverse illustration



Figure 6.62: Sample diverse illustration



Figure 6.63: Sample diverse illustration



Figure 6.64: Sample diverse illustration

## Activity artwork and animations

Supplemental artwork and animations used on activities have a hip-hop look and feel, and provide small rewards for completion of activities.



Figure 6.65: Help is out there (“help” tutorial screen)



Figure 6.66: Judgment call (“decision-making” tutorial screen)



Figure 6.67: Doing the if/then thing (“consequences” tutorial screen)

## II. Assessment Tools

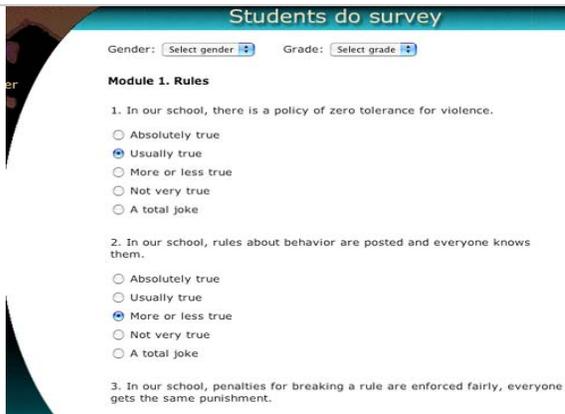


Figure 6.68: School safety survey screen

### Group-level assessment tools

Web-based, group-level, school climate profilers can quickly assess initial needs and measure group change, from student and staff perspectives.

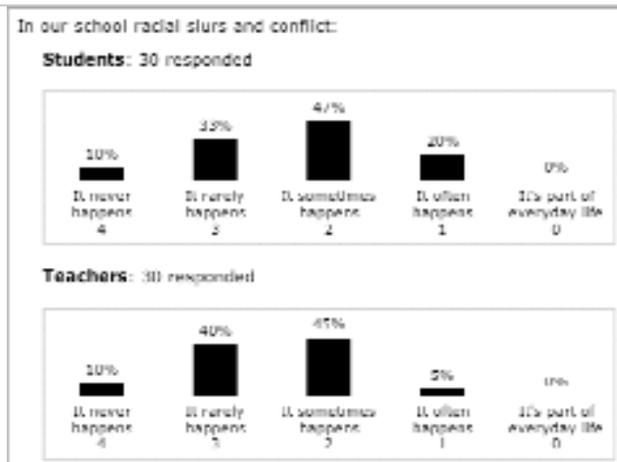


Figure 6.69: School safety survey results screen

**Instant reports** allow immediate evaluation of results at summary and individual item levels.

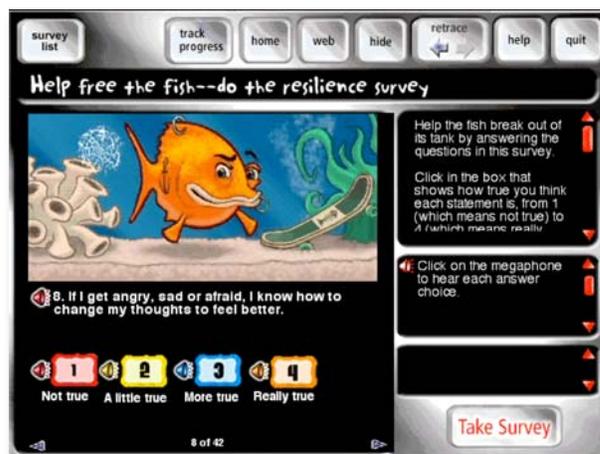


Figure 6.70: Self-report survey screen

### Individual self-report assessment tools

Validated, computerized surveys about attitudes and self-perception, enable pre- and post testing for evaluation of internal, self-reported, intervention outcomes at both individual and group levels.

## APPENDIX C

### INDEX OF TOPICS IN RIPPLE EFFECTS FOR TEENS (GRADES 6-11)

- A
- absent
  - absent minded
  - abstinence
  - abuse-boy/girlfriend
  - abuse-child
  - abuse-domestic
  - abuse-drugs
  - abuse-emotional
  - abuse-physical
  - abuse-sex offender
  - abuse-sexual
  - accepting responsibility
  - accepting yourself
  - acid
  - acne
  - acquaintance rape-victim
  - active listening
  - activism
  - addicted
  - addicted parent
  - ADHD
  - ADHD-drugs
  - adopted
  - adult who cares
  - afraid
  - agency
  - aggression
  - AIDS
  - alcohol
  - alcoholic parent
  - alcoholic-you
  - all 'dat
  - alone
  - alone at home
  - alternatives-evaluating
  - angel dust
  - anger
  - animals-hurting
  - anorexia
  - anti-depressants
  - anxiety
  - anxiety attacks
  - apologies
  - appearance
  - appreciating diversity
  - arrest
  - arson
  - artsy
  - ashamed
  - asking for help
  - asking questions
  - asking someone out
  - assault
  - assertive eyes
  - assertive message
  - assertive posture
  - assertive reasons
  - assertive voice
  - assertiveness
  - asthma
  - athletic style
  - attachment objects
  - attendance
  - attention
  - Attention Deficit Disorder
  - authority-dealing with
  - authority-defying
  - avoiding triggers
  - aware
- B
- baby-yours
  - background-community
  - background-family
  - backlash target
  - back-talk
  - bad decisions
  - bad grades
  - bad words
  - barbiturates
  - bashing gays
  - beat up-victim
  - beaten
  - beauty
  - beer
  - behavior-confronting
  - being connected
  - beliefs-standing up for
  - believing
  - belonging
  - bias
  - bias crimes-target
  - bigotry
  - binge eating
  - bi-racial
  - birth control
  - birth order
  - blabber mouth
  - blankie
  - blind
  - blinking
  - blocked
  - blow
  - blunt
  - blurting out
  - body
  - body clues
  - body image
  - body language
  - body odor
  - body weight
  - body-ashamed
  - body-posture
  - booze
  - bored
  - bouncing back
  - boundaries

boy/girlfriend	cigarettes	crazy feelings
boy/girlfriend-abuse	cigars	creativity
bra	citizenship	criticism-dealing with
bragging	clique	cruel
brainstorming	clothes-rules	crush
breaking rules	club drugs	crying
breaking up	cocaine	crystal meth
breathing deeply	codeine	cultural differences
broke	coke	curfew
broken heart	cold-hearted	cursing
broken home	college	cussing
brothers	commanding respect	cutting class
buddies	commitments	cutting yourself
bugging someone	communicating feelings	cyberspace
bulimia	communication skills	
bullied	community	
bullying	community history	D
bully-offender	community resources	date rape drug
bully-target	competition-losing	date rape-offender
bummed out	competition-winning	date rape-victim
busted	complaints-making	dating
bystander	compliments-giving	dating abuse
	compliments-receiving	deaf
C	compulsive	dealing with authority
calling something	conceited	death
calming down	condoms	decisions
cappin'	conflict-resolving	defiance
car theft	conflict-with teacher	democracy-doing
cards you're dealt	confronting behavior	dependability
care-for yourself	confronting injustice	depression
care-showing it	connecting with others	developmental delay
cause and effect	consequences-predicting	diabetes
celibacy	considerate	diet
chair	contact lenses	dieting
chalk	contraception	differences
change-normal	controlling impulses	disability-hearing
change-unplanned	control-taking	disability-learning
changing feelings	conversations	disability-mental
character	coping	disability-physical
Charlie	cops	disability-visual
cheating-in school	copying	disappointment
chew	counselors-using	discipline
child abuse	courtesy	discouraged
choices	crack	discrimination
choosing friends	cramps	discussions-having
chronic illness	crank	disputes

dispute-with teacher	drugs-painkillers	failure-wanting
disrespect	drugs-prescription	fairness
disrespected	drugs-Ritalin	faith
dissent-supporting	drugs-stimulants	falling asleep
dissin'	drunk driving (DUI)	falling down
diversity-appreciating	drunkie	families-blended
diversity-cultural	dumped	family background
diversity-disability	dying	family violence
diversity-ethnic	dyslexia	family-embarrassing
diversity-gender		fat
diversity-physical	E	fatal attraction
diversity-preferences	eating disorder	fear
diversity-religious	economics	fear of failing
divorce	ecstasy	fear of success
do not assert yourself	education-higher	feel powerless
do not connect	effort	feeling for others
do not feel for others	ELL	feeling frustrated
do not know yourself	embarrassment	feelings
do not manage feelings	emotional abuse	feelings-changing
do not persevere	emotional intelligence	feelings-communicating
do not problem-solve	emotional maturity	feelings-confusing
do not try	emotional style	feelings-depressed
domestic violence	emotions-yours	feelings-expressing
dope	empathy	feelings-handling
down	English language learner	feelings-mixed
down for someone	envy	feelings-names for
downers	errors	feelings-not
dress code	ethnic diversity	feelings-owning them
drinking	ethnic slurs	feelings-predicting
drinking too much	ethnicity	female roles
driving	evaluating alternatives	fibbing
driving drunk	excluded	fighting
dropping	exercise	fighting with parents
dropping out	exercise type	fingernails
drug dealing	exercising rights	fire
druggie	expectations	fire setting
drugs	expelled	fitness
drugs-antidepressants	experimenting	fitting in
drugs-body building	express yourself online	Five-0
drugs-date rape	expressing feelings	following instructions
drugs-depressants	expressing sympathy	fondling yourself
drugs-designer	expressing thanks	foreplay
drugs-friend using		foster home
drugs-hallucinogens	F	freezing out
drugs-inhalants	failing	French kissing
drugs-marijuana	failure	friend-drinking

friend-helping	group-discussions	hormones
friendly	groups-joining	hospitalization
friends	guilt	how it is
friends-choice of	guilt-survivor	huffing
friends-fighting	guns	humor
friends-making		hung-over
friends-none	H	hurting animals
friends-suicidal	habits-nervous	hurting yourself
friends-turning in	habits-quitting	
friends-using drugs	hallucinogens	I
frustration	hanging out	I statements
funny	happiness-practicing	ice
future not there	harassment online	ideas-finding
	harassment-perp	identifying with others
G	harassment-target	identity
gambling	hard things	ignoring
game freak	hard thing-surviving	illness
gangs	hate	image-your body
ganja	hate crime perp	immaturity
gay	hate crime-target	immigrant
gay bashing	hate online	impulsive
gender differences	hate school	incest-perp
generosity	hating yourself	incest-victim
genes	have to do it	individuality
getting even	having a mentor	in-group
getting help	having conversations	inhalants
getting support	hazing	injustice-confronting
girl/boyfriend	hearing impaired	in-school suspension
girlfriend/boyfriend-	heavy	insecure
abuse	helpers-adult	insomnia
girlie cycle	help-getting it	institutional injustice
giving	helping others	instructions-following
giving compliments	heritage	integrity
giving help	heroin	intelligences
giving up	hiding-wanting to	intercourse
glasses	hitting	internal triggers
gloves	HIV	internet safety
goals	home alone	internet-courtesy
goals-none	homeless	internet-expressing
good sport	homework	yourself
gossip	homophobia	internet-harassment
grades	honesty	internet-hate
graffiti	hood	internet-info sharing
grief	hooker	internet-meet up
group home	hooking up	internet-reading people
group skills	hopeless	

internet-sexual  
exploitation  
internet-threats  
intolerance  
introducing yourself  
introvert  
inviting someone  
irresponsible  
irritating someone

J

jacking  
jail  
jealousy  
jerking off  
job  
joining a group  
joints  
jumped  
justice  
justice-restoring  
juvey

K

karma  
keeping faith  
keeping going  
killing yourself  
kindness  
kissing  
klepto  
knives  
knocked-up  
knowing who you are

L

labeling  
lack of effort  
latchkey  
late  
laughing  
laughing gas  
learning disability  
learning style  
left out  
legal rights

lesbian  
let-down  
letting go  
liar  
liking someone  
liking yourself  
limits-setting  
lip locking  
listening to others  
loneliness  
loner  
looks  
loser  
losing  
losing someone  
love  
loyalty  
loyalty to country  
LSD  
luck  
lying

M

macking  
mad  
making apologies  
making complaints  
making decisions  
making excuses  
making friends  
making out  
making space  
making things right  
making up  
male roles  
managing change  
managing feelings  
manners  
marijuana  
Mary J  
masturbation  
MDMA  
mean  
meeting people  
menstruation  
mental disability

mental illness  
mentally retarded  
mentors  
message  
meth  
middle child  
mindfulness  
mistakes  
mixed feelings  
mixed race  
molested  
molester  
mom & dad  
money  
money-not enough  
morphine  
motivation  
motives-understanding  
moving  
muggin'  
multi-racial  
murder-threats  
muscles  
musty  
mutilation-self

N

nail biting  
name-calling  
naming problems  
narcotics  
narcs  
needs-stating  
negative criticism  
neighborhood  
neighborhood-new  
nervous  
nervous habits  
networking  
new kid  
nice  
no goals  
no to sex  
norms  
not athletic  
not creative

not good-looking	pals	possibilities
not happy	panic attacks	posture
not invited	paraphrasing	pot
not liking yourself	parent-alcoholic	poverty
not motivated	parent-embarrassed by	power
not popular	parent-fighting with	practicing happiness
not smart	parent-hits you	predicting consequences
not thin	parenting-teen	predicting feelings
not worthy	parents	preferences
numbness	parents-break up	pregnancy-avoiding
O	parent-talking to	pregnant
obesity	passed away	prejudice
observers	passions	premenstrual syndrome
obsessing	patriotism	prescription drugs
obsession-offender	paying attention	pressure
obsession-victim	PCP	pressure to succeed
OC's	peer pressure	pressure-resisting
odds-defying	people smarts	pride-national
oldest child	perfect-having to be	prison
on the rag	performance	probation
online clues	period	problem-naming
online expression	perseverance	problem-solving
online harassment	personal history	procrastination
online hate	personality	promises
online info sharing	perspective taking	props-giving
online sexual	pet dying	prostitution
exploitation	peyote	Prozac
online threats	physical abuse	PTSD
oops	physical differences	puberty
open	physical disability	punishment
open-ended questions	physical sensations	pushing
opinions	picked on	put-downs
opium	picking on people	putting off
options-coming up with	pimples	
options-evaluating	pissed off	Q
outbursts	playing with yourself	questions-asking
outside triggers	PMS	quiet
outsider	point of view	quitting
overeating	police	quitting habits
overweight	politics-being part of	quitting-school
owning up	politics-unpopular	
OxyContin	poor	R
	poor sport	race
P	popoe	race-mixed
p.o.	poppers	racial conflict
painkillers	popular	racial diversity

racial slurs	risky behavior	set you off
racism	Ritalin	setting goals
rape drug	rivalry-sibling	setting limits
rape-offender	rock	sex abuse-offender
rape-victim	roofie (rohypnal)	sex abuse-target
ratting out	room for others	sex-forced
rave drugs	rubbers	sex-forcing
reactions-stopping	rules	sexism
reading problems	rumors	sex-not doing it
reasons-giving	running away	sex-postponing
rebellion	rural	sex-refusing
receiving compliments		sex-restraint
recklessness	S	sex-safe
reflecting on	sadness	sexual diseases
performance	safer sex	sexual exploitation
refugee	sarcasm	online
refusal skills	saying no	sexual harasser
refusing sex	saying what you need	sexual orientation
rejected	scared	sexuality
relapse	school failure	sexually abused
relating	school-dropping out	sexually harassed
relationship	school-grades	shagging
relaxing	school-habits	shame
reliability	school-hate it	sharing
religion	school-kicked out	shootings
religious attack	school-skipping	shoplifting
religious diversity	school-unsafe	shoving
repeating back	second language-English	showing care
resilience	secrets	shrooms
resisting pressure	security blanket	shut up-can't
resisting stereotypes	sedatives	shyness
resolving conflict	seeing-can't	sibling rivalry
resources	self-acceptance	sick-a lot
respect online	self-aware	sideshow
respectful to authority	self-care	sisters
respect-getting it	self-centered	skinny
respect-showing	self-confidence	skipping class
responding to others	self-control	skipping school
responsibility	self-esteem	skunk
responsibility-for feelings	self-injury	sleepy
restitution	self-talk	slow
restless	self-worth	slurs
revenge	selling drugs	smack
ride or die	sensations-physical	smarts
rights-exercising	separating	smelly-you
risk and protection	Sept. 11	smirk

smoking  
 sniffing  
 snitch  
 snow  
 snuff  
 social skills  
 social values  
 social-emotional skills  
 solidarity-showing  
 solutions-evaluating  
 solutions-trying  
 solvents  
 solving problems  
 sore loser  
 sorry-you are  
 space-making  
 spacing out  
 spanking  
 speaking up  
 special ed  
 speech impediment  
 speed  
 sports & exercise type  
 sportsmanship  
 stalked  
 stalker  
 standing up for yourself  
 stank  
 staring  
 starving yourself  
 staying connected  
 STD  
 stealing  
 stepfamilies  
 stepping in their shoes  
 stereotypes  
 steroids  
 sticking to it  
 stimulants  
 stopping reactions  
 strength-inner  
 strengths  
 stress  
 study habits  
 study hall  
 stupid

stuttering  
 substance abuse  
 success-phobia  
 success-pressure  
 suicidal  
 suicidal friend  
 support-getting  
 supporting dissent  
 surviving hard times  
 survivor guilt  
 suspended  
 swearing  
 sweat  
 sympathy-expressing

T  
 tagging  
 taking care  
 taking chances  
 taking control  
 talents  
 talking  
 talking back  
 talking-in a group  
 talking-too much  
 tantrums  
 tardy  
 target  
 target-for bully  
 taste  
 teacher  
 teams  
 teams-joining  
 teasing  
 teen parent  
 television  
 telling  
 telling a secret  
 temper  
 temperament  
 temptation  
 terrorism  
 tests  
 thanking someone  
 theft  
 thoughtfulness

thoughts  
 thoughts-of suicide  
 threats- internet  
 threats-to kill  
 throwing up  
 ticked off  
 tics  
 time management  
 tobacco-chewing  
 tolerance  
 torturing animals  
 touch  
 touching yourself  
 tranquilizers  
 transitions  
 trashing things  
 trauma  
 triggers-inside  
 triggers-outside  
 truancy  
 trustworthiness  
 truthfulness  
 trying  
 trying solutions  
 trying things out  
 turf  
 turning someone in  
 TV  
 twitches

U  
 ugly  
 understanding motives  
 undressing  
 unfairness  
 unhappy  
 uniforms  
 unlucky  
 unmotivated  
 untruthful  
 unworthy  
 using counselors  
 using resources

V  
Valium  
values  
values-social  
vandalism  
Vicodin  
victim  
video games  
violence  
violence-guns  
visual impairment  
voice-using yours

yourself-standing up for  
yourself-starving  
yourself-touching

Z  
zits  
Zoloft

W  
want other people's stuff  
wanting revenge  
weaknesses  
weakness-picking on  
weapons  
weed  
weight  
weight-losing  
what you love  
wheelchair  
whippets  
whistle-blower  
why they do it  
winning  
withdrawn  
witness  
work  
working out  
worry-wart

Y  
youngest child  
your strengths  
your word-keep  
yourself-accepting  
yourself-aware of  
yourself-caring for  
yourself-cutting  
yourself-feelings toward  
yourself-killing  
yourself-knowing  
yourself-not liking

## APPENDIX D

### INDEX OF TOPICS IN RIPPLE EFFECTS FOR KIDS (GRADES 2-5)

A note about these lists: There are 140 unique lessons in the Kids version, 390 in the Teens version, and 136 in the Staff version, but in each case, many more topics appear in each index. This is because topics are listed under multiple names, to help ensure that learners will find their topic by the name they commonly use. For example, “smoking” and “cigarettes” both lead to the same lesson.

<b>A</b>	<b>C</b>	diversity-appreciating
absent	calming down	divorce
afraid	can't bounce back	don't assert yourself
alcohol	caring-show it	don't connect with others
alcoholic parent	character	don't control impulses
angry	cheating	don't feel for others
apologies	cigarettes	don't know yourself
ashamed	citizenship	don't problem-solve
asking questions	clingy	don't set goals
assertive body	communicating feelings	don't try
assertive message	complaint	drugs
assertive voice	compliments	
assertiveness	conceited	<b>E</b>
asthma	conflict	effort
attachment objects	connecting with others	embarrassed
attention problems	consequences-predict	empathy
aware of yourself	controlling impulses	envious
	conversations	exercise
<b>B</b>	courtesy	experimenting
background	crush	expressing feelings
bad grades	cultural differences	
beaten	cursing	<b>F</b>
bed wetting		failure-school
beliefs	<b>D</b>	fairness
blankie	death	family problems
blurting out	decisions	fat
body type	diabetes	feeling-for others
bouncing back	diet	feelings control you
brainstorming options	different	feelings-changing
breaking rules	disabilities	feelings-communicating
bullied	disappointed	feelings-dealing with
bully-you do it	discipline	feelings-expressing
bystander	discouraged	feelings-knowing yours
	discrimination	

feelings-mixed  
feelings-predicting  
feelings-understanding  
fighting  
forgiving  
friend problems  
friends-making  
frustrated

G  
gangs  
goals  
gossiping  
grades  
group-joining

H  
hands and feet  
hard things  
help-getting it  
help-giving it  
hitting  
honesty  
hormones

I  
ideas  
identifying with others  
ignoring  
illness  
impulse control  
instructions-following  
introducing  
inviting

J  
jealous

K  
keep trying  
knowing yourself

L  
late  
learning problems  
learning style

learning success  
left out  
letting go  
listening  
lying

M  
making a complaint  
managing feelings  
marijuana  
mistakes  
molested  
motives-understanding  
N  
name-calling  
neighborhood problems  
nervous

O  
obese  
options-brainstorming  
options-weighting them  
others

P  
parent-talking to  
parents' substance use  
peer pressure  
permission-getting  
pet dying  
physical differences  
picked on-by peers  
picked on-by teacher  
point of view  
predicting consequences  
problem-naming  
problem-solving  
puberty  
pushing and shoving

Q  
questions-asking

R  
reactions-controlling  
refusing

relaxing  
resilience  
resolving conflict  
respect  
responsibility  
Ritalin  
rules

S  
sad  
safety  
school failure  
secrets  
security blanket  
self-awareness  
self-control  
self-esteem  
self-talk  
shame  
sharing  
shy  
sick a lot  
sickness  
skipping school  
smarts  
smoking  
snatched-afraid of  
solutions-brainstorming  
solutions-testing  
standing up  
standing up-message  
standing up-voice  
standing up-your body  
stealing  
stereotypes-resisting  
strengths  
study habits  
success  
success at learning

T  
talking back  
tardy  
teacher problems  
teased  
teasing

telling  
tests  
thoughts-controlling  
threats  
tobacco  
touch  
triggers-catching  
trust  
trying

U  
understanding feelings  
unfair

W  
weed  
wetting bed

Y  
yourself-aware of  
yourself-strengths  
yourself-talking to  
yourself-understanding

## APPENDIX E

### INDEX OF TOPICS IN RIPPLE EFFECTS FOR STAFF

Ripple Effects for Staff presents 138 lessons in three areas: Strengthening your leadership, Managing diverse Learners, and Making programs work.

#### STRENGTHENING

##### YOUR LEADERSHIP

hold a vision  
transform yourself  
emotional intelligence

know who you are  
learning style-yours  
strengths  
goals  
feelings  
social background-yours  
resilience

have empathy  
take perspective  
show care

(assertiveness)  
eyes  
message  
posture  
reasons  
voice

establish authority  
set expectations  
set rules  
have consequences  
confront behavior

manage feelings  
anger  
fear  
hopelessness  
self-talk  
physical sensations

control impulses  
stop reactions  
predict consequences

make decisions  
problem solve  
name the problem  
identify options  
weigh alternatives  
test solutions

connect in community  
model social values  
honesty  
courtesy  
fairness  
respect  
humor  
kindness  
trust

get support  
involve parents  
involve students  
work with administrators

#### MANAGING DIVERSE LEARNERS

learning orientation  
cultural background  
socio-economic status

learning styles-students  
feeler-doer learners  
feeler-watcher learners  
thinker-doer learners  
thinker-watcher learners

balanced learners  
bimodal learners

intelligences  
learning-related  
challenges  
academic disorders  
attention disorders  
giftedness  
mental retardation

behavioral challenges  
attention seeking  
autism spectrum  
defiance  
disruptiveness in class  
disruptive on playground  
hyperactive  
impulsive  
oppositional disorder

#### MAKING YOUR PROGRAM WORK

prepare the way  
engage stakeholders  
parents  
students  
administrators  
get buy-in  
hold a vision  
set the climate  
provide training  
create a plan  
match to other programs  
adapt with fidelity  
use in context  
discipline

counseling  
advisory period  
academic achievement  
after school  
testing  
corrections  
infuse into curriculum  
language arts  
social studies  
health  
decide dosage  
customize scope &  
sequence  
individualize  
create IEP

implement effectively  
introduce  
use teachable moments  
orient  
lead discussion  
model  
direct rehearsal  
reinforce  
ensure compliance  
persevere  
handle disclosure

measure results  
collect data  
profiles  
content assessment  
surveys

scale and sustain  
leverage technology  
ripple effects software  
learning system  
research base  
screen layout  
privacy issues  
administrative functions  
monitoring progress  
customizing content  
using web resources  
solving tech problems

## REFERENCES

- Andersson, G., Bergström, J., Carlbring, P., & Lindefors, N. (2005). The use of the Internet in the treatment of anxiety disorders. *Current Opinion in Psychiatry, 18*, 73-77.
- Bandura, A. (2005). The primary of self-regulation in health promotion. *Applied Psychology: an International Review, 54*, 245-254.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). *Impact of a Computer-Based, Social-Emotional Intervention on Outcomes Among Latino Students When Adult Monitors of the Student Training Are Non-professionals: A Randomized Controlled Trial*. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of a Self-Regulated, Computerized, Social-Emotional Learning Intervention on Disengaged and Delinquent Students at a Continuation High School. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact Of Self-Regulated Use Of Computer-Based Social-Emotional Learning On Rural Adolescents At Risk For Alcohol Abuse. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of Social-Emotional Learning Software on Attitudes About Marijuana and Alcohol Among Urban and Rural Adolescents. San Francisco: Rockman et al.
- Beier, Sharon R. MD; Walter D. Rosenfeld, MD; Kenneth C. Spitalny, MD; Shelley M. Zansky, PhD; Alexandra N. Bontempo, MS, (2000). "The Potential Role of an Adult Mentor in Influencing High-Risk Behaviors in Adolescents," *Arch Pediatr Adolesc Med.* 2000;154:327-331
- Berg, S. , Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Berland, G.K., Elliott, M.N., Morales, L.S., Algazy, J.I., Kravitz, R.L., Broder, M.S., Kanouse, D.E., Munoz, J.A., Puyol, J., Lara, M., Watkins, K.E., Yang, H. & McGlynn, E.A. (2001) Health information on the Internet: Accessibility, quality, and readability in English and Spanish. *Journal of the American Medical Association; 285*: 2612-21.
- Bernard-Opitz, V., Sriram, N. & Nakhoda-Sapuan, S. (2001). Enhancing social problem solving in children with autism and normal children through computer-assisted instruction. *Journal of Autism and Developmental Disorders, 31*, 4, 377-384(8).
- Bosworth, K., Gustafson, D. H., & Hawkins, R. P. (BARN Research Group). (1994). The BARN system: Use and impact of adolescent health promotion via computer. *Computers in Human Behavior, 10*, 467-482.
- Brendryen, H., & Kraft, P. (2008). Happy ending: A randomized controlled trial of a digital multi-media smoking cessation intervention. *Addiction, 103*, 478-486.
- Budman, H. S., Portnoy, D., & Villapiano, J. A. (2003). How to get technological innovation used in behavioral health care: Build it and they still might not come. *Psychotherapy: Theory, Research, Practice, Training, 40*, 45-54.
- Carlbring P, Nilsson-Ihrfelt E, Waara J, et al. (2005). Treatment of panic disorder: live therapy vs. self-help via the Internet. *Behavioral Research and Therapy; 43*:1321–1333.
- CAST. 2009. Universal Design for Learning Guidelines. Retrieved March 15, 2009. <http://cast.org/publications/UDLguidelines/version1.html>
- Charlop-Christy, M.H., Danshvar, S. (2003). Using video modeling to teach perspective taking to children with autism. *Journal of Positive Behavior Interventions. 5*, 12.

- Christensen H, Griffiths KM, Jorm AF. (2004). Delivering interventions for depression by using the internet: Randomised controlled trial. *BMJ*, 328: 265.
- Clarke G, Eubanks D, Reid E, et al. (2005). Overcoming Depression on the Internet (ODIN) (2): a randomized trial of a self-help depression skills program with reminders. *Journal of Medical Internet Research*; 7:e16.
- Carroll, K. Ball, S., Martino, M. Nich, C., Babuscio, T., Nuro, K., Gordon, M., Portnoy, G., and Rounsaville. B. (2008) Computer-assisted delivery of cognitive-behavioral therapy for addiction: A randomized trial of CBT4CBT. *American Journal of Psychiatry* 165: 881-888.
- De Long-Cotty, B. (2008). Can computer-based training enhance adolescents' resilience? Results of a randomized control trial. (Unpublished manuscript expanded from poster presentation at the 2007 Annual Meeting of the Society for Prevention Research).
- Dynarski, M, Agodini, R., Heaviside, S. Novak, T., Carey, N. Campuzano, L., Means, B., Murphy, R., Penuel, W., Javitz, H., Emery, D., & Sussex, W. (2007) *Effectiveness of reading and mathematics software products: Findings from the first student cohort*. Washington, D.C.: U.S. Department of Education, Institute of Education Sciences.
- Farvolden P, Denisoff E, Selby P, et al. (2005) Usage and longitudinal effectiveness of a Web-based self-help cognitive behavioral therapy program for panic disorder. *Journal of Medical Internet Research*,; 7:e7.
- Feigenbaum, Edward, *The Age of Intelligent Machines*, Edited and co-authored by Ray Kurzweil, The MIT Press, Cambridge, MA, 1990
- Feigenbaum, Edward, "Some challenges and grand challenges for computational intelligence", *Journal of the ACM (JACM)*. Volume 50, Issue 1, January 2003.
- Feigenbaum, Edward, *Expert Systems: Principles and Practice*, Stanford University, 1992.
- Gardener, H. (2006) *Five Minds For The Future*. Boston: Harvard Business School Press.
- Gustafson, D. H, Bosworth, K., Chewning, B., & Hawkins, R. P. (1987). Computer-based health promotion: Combining technological advances with problem-solving techniques to effect successful health behavior changes. *Annual Review of Public Health*, 8, 387-415.
- Kahnemann, D., Slovic, P. & Tversky, A. (eds.) (1982): *Judgment Under Uncertainty: Heuristics and Biases*. Cambridge: Cambridge University Press.
- Karabenick, S. A., & Knapp, J. R. (1988). Effects of computer privacy on help-seeking. *Journal of Applied Social Psychology*, 18, 461-472.
- Kelley, L. & Ringstaff, C. (2002) *The learning return on our educational technology investment: A review of findings from research*. San Francisco: WestEd.
- Koffman, S., Ray, A., Albarran, N., & Vasquez, M. (2008) Impact of Computer-Based, Psycho-Social Training on Depression, Among Youth At Risk for Gang Involvement and Other Forms of Delinquency. Manuscript in review.
- Koffman, S., Ray, A., Berg, S., Covington, L., Albarran, N., Vasquez, M. (2009). Impact of comprehensive Whole Child Intervention and Prevention Program among Youths at Risk of Gang Involvement and and Other Forms of Delinquency. *Children & Schools, A Journal of the National Association of Social Workers*, vol. 31, #4, pp 239- 246.
- Kulik, J.A. (2003). *Effects of using instructional technology in elementary and secondary schools: What controlled evaluation studies say*. Arlington, VA: SRI International.
- Lenat, Douglas; Guha, R. V. *Building Large Knowledge-Based Systems*, Addison-Wesley , New York, NY, 1989.

- Marsch, L.A., Bickel, W.K., Badger, G.J. (2006). Applying computer technology to substance abuse prevention science: Results of a preliminary examination. *Journal of Child & Adolescent Substance Abuse*, 16(2): 69-94.
- McDermott, R. (1999a). Knowledge Management – Why Information Technology Inspired But Cannot Deliver Knowledge Management. *California Management Review*, 41(4), 103-117.
- McCraty, R., M. Atkinson, et al. (2006). *The coherent heart: Heart-brain interactions, psychophysiological coherence, and the emergence of system-wide order*. Boulder Creek, CA, HeartMath Research Center, Institute of HeartMath, Publication No. 06-022.
- Perry, S.M., Bass, K, Ray, A. & Berg, S. (2008) Impact of a computer-based social-emotional learning intervention on objective school outcomes among diverse adolescents: A summary analyses of six randomized controlled trials. Expanded from poster presentation at the 2007 Annual Meeting of the Society for Prevention Research.
- Perry, S.M., Bass, K, Ray, A. & Berg, S. (2008). Impact of a Computerized Social-Emotional Learning Intervention on African American and Latino Students When Implemented In Lieu Of Academic Instruction: A Randomized Controlled Trial. Manuscript in preparation.
- Perry, S.M., Bass, K, Ray, A. & Berg, S. (2008) Potential and Limitations of Ripple Effects Self-Regulated, Computerized, Social-Emotional Training to Improve Outcomes Among Students Behind Grade Level in an Unsafe and Chaotic School.
- Perry, S.M., Bass, K, Ray, A. & Berg, S. (2008) Potential and Limitations of Ripple Effects Self-Regulated, Computerized, Social-Emotional Training to Improve Outcomes Among Students Behind Grade Level in an Unsafe and Chaotic School.
- Pull, C.B. (2006). Self-help Internet interventions for mental disorders. *Current Opinion in Psychiatry*. 19, 50-53.
- Ray, A. (1999). Impact on passivity-assertiveness-aggression of short term, computer-based, skill building in assertiveness: A pilot study. San Francisco: Ripple Effects. (First presented as peer reviewed poster session at Division of Adolescent School Health Annual conference.
- Ray, A. (2008). Unexpected findings on the impact of computerized social-emotional learning: Implications for research and practice. Paper presented at the 2008 Annual Meeting of the American Educational Research Association.
- Ray, A., Berg, S. (2008). Adaptation - Fidelity with a computerized SEL training program for primary, secondary and tertiary interventions across 50 real world settings. Ripple Effects, Inc.
- Ray, A., & Berg, S. (2010). Factors in compliance rates with self-regulated use of Ripple Effects computer-based intervention for social-emotional learning. Accepted by the 2010 Annual Meeting of the American Educational Research Association (AERA).
- Ray, A., Patterson, V., & Berg, S. (2008) Impact of a district-wide individualized, computerized, positive behavioral intervention on discipline referrals, in-school suspensions and out of school suspensions. Ripple Effects. San Francisco.
- Ray, A. Patterson, V., & Berg, S. (2008) What are they looking for? Risk factors students privately address on the computer in discipline settings. Manuscript in preparation.
- Ray, A., Perry, S., Bass, K., & Berg, S. (2008) Computer-based training to promote self-efficacy: Ethnicity, urban/rural status and impacts on locus of control. Ripple Effects. San Francisco.

- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 - 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.
- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.
- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Ritterband, L. M., Cox, D. J., Gordon, T. L., Borowitz, S. M., Kovatchev, B. P., Walker, L. S., & Sutphen, J. L. (2006). Examining the added value of audio, graphics, and interactivity in an Internet intervention for pediatric encoyresis. *Children's Health Care*, 35:1, 47-59.
- Schacter, J., & Fagnano, C. (1999). Does computer technology improve student learning and achievement? How, when, and under what conditions? *Journal of Educational Computing Research*, 20, 329-343.
- Schinke, S.P., Schwinn, T.M., Ozanian, A.J. (2005). Alcohol abuse prevention among high-risk youth: computer-based intervention. *Journal of Prevention and Intervention in the Community*, 29:1-2, 117-130.
- Stern, R. & Repa, J. T. (2000). A study of the efficacy of computerized skill building for adolescents: Reducing aggression and increasing pro-social behavior. Unpublished manuscript.
- Stjernswärd, S., & Östman, M. (2006). Potential of e-health in relation to depression: Short survey of previous research. *Journal of Psychiatric and Mental Health Nursing*, 13, 698-703.
- Tantam, D. (2006). The machine as psychotherapist: impersonal communication with a machine. *Advances in Psychiatric Treatment*. 12, 416-426.
- Thomas, R. Cahill, J. (1997) Using an interactive computer game to increase skill and self-efficacy regarding safer sex negotiation: Field test results. *Health Education & Behavior*, 24, 1, 71-86.
- Turner, C.F., Ku, L., Rogers, S.M., Lindberg, L.D., Pleck, J.H., & Sonenstein, F.L. (1998). Adolescent sexual behavior, drug use, and violence: Increased reporting with computer survey technology. *Science*, 280, 867-873.
- VaderVen, (2008) . "Promoting Positive Development in Early Childhood: Building Blocks for a Successful start," from The Search Institute Series on *Developmentally Attentive Community and Society*, 10.1007/978-0-387-79922-3\_1
- Wagman. M. *Cognitive Psychology and Artificial Intelligence: Theory and Research in Cognitive Science*. Praeger 1993.
- Whalen, C., Liden, L., Ingersoll, B., Dallaire, E., and Liden, S. (2006). Positive behavioral changes associated with the use of computer-assisted instruction for young

children. *Journal of Speech and Language Pathology and Applied Behavior Analysis*, 1:1.

Weisband, S., & Kiesler, S. (1996). *Self-Disclosure on computer forms: Meta-analysis and implications*. In M.J Tauber, V. Bellotti, R. Jeffries, J.D. Mackinlay, J. Nielsen, (Eds.), *Proceedings of the ACM CHI 96 Human Factors in Computing Systems Conference*. Vancouver, Canada. p.3-10.

Ybarra, M. L., Eaton, W. W., & Bickman, L. (2005). Internet-based mental health interventions. *Mental Health Services Research*, 7:2, 75-87.

Zabinski, M.F., Celio, A.A., Wiffley, D.E., Taylor, C.B. (2003). Prevention of eating disorders and obesity via the internet. *Cognitive Behaviour Theory*. 32:3, 137-150.

Zadeh, L. A . 2002. Toward a Perception-Based Theory of Probabilistic Reasoning with Imprecise Probabilities. *Journal of Statistical Planning and Inference* 105(1):233–264.

Zadeh, L. A. 2001. A New Direction in AI—Toward a Computational Theory of Perceptions. *AI Magazine* 22(1): 73–84.

Zadeh, L. A. 1999. From Computing with Numbers to Computing with Words—From Manipulation of Measurements to Manipulation of Perceptions. *IEEE Transactions on Circuits and Systems* 45(1): 105–119.

**Chapter 7: Implementation Science**

**Moving from ivory tower efficacy to real world effectiveness**

Major implementation challenges..... 4

    Process challenges ..... 4

    Program related challenges ..... 4

    Challenges at intersection of process and program..... 4

    Technology not the whole answer..... 3

        Technology introduces new barriers to implementation..... 3

Models of Implementation..... 3

Implementation process *components*..... 4

    Source..... 4

    Destination ..... 4

    Purveyors ..... 4

    Feedback mechanisms..... 4

    Feedback loop of program evaluation and development..... 5

    Sphere of influence..... 5

    The role of leadership..... 5

Components *negatively* correlated with success..... 7

    Information dissemination alone ..... 7

    One time workshops ..... 7

Implementation process *stages* ..... 8

Ripple Effects *Whole Spectrum Model of Staged Implementation* ..... 9

    Preparing the way ..... 9

    Planning & program implementation ..... 9

    Documentation and data management..... 9

    Program evaluation – data analysis ..... 9

    Sustaining a program over time..... 10

    Ripple Effects resources to support successful implementation..... 11

    RE resources for direct implementation support..... 11

    RE resources to support evaluation..... 12

    RE resources to support sustainability..... 12

Technology based support .....	12
Non-technology based support .....	12
Implementation process <i>characteristics</i> .....	12
Program attrition - non-participation.....	13
External factors linked to attrition:.....	13
Insufficient training.....	13
Competition with academic areas .....	13
Time constraints .....	13
Lack of cultural relevance.....	13
Discipline problems .....	13
Natural – and unnatural disasters .....	13
Internal factors linked to attrition: .....	13
Frustration with inflexibility of program.....	13
Discouragement .....	13
Lack of motivation.....	13
Teacher boredom .....	13
Balance between fidelity and adaptation .....	14
Categories of lack of fidelity.....	14
Incorrect content .....	14
Incorrect instructional methods.....	14
Ad hoc adaptations.....	14
Lack of supplemental materials .....	14
Cultural incompetence .....	14
SAMHSA guidelines for balancing program fidelity and adaptation...	15
Learner behavior – the missing core process component .....	15
Summary of Ripple Effects <i>core content and process components</i> .....	18
Levels of implementation: tiered intervention.....	20
Primary – universal promotion .....	20
Secondary – targeted prevention .....	22
RTI .....	23
Tertiary – individualized, indicated positive behavioral intervention .....	24
Key characteristics of successful tertiary interventions .....	24

Juvenile justice applications.....	25
Three levels for staff as well.....	25
Intensity/dosage .....	25
Speed of implementation .....	26
Relevance.....	27
Affordability.....	27
Initial investment .....	27
Level of investment risk .....	28
Net cost after short term return on investment.....	29
Costs of sustainability .....	29
Long term return on investment.....	30
Role of program design elements in implementation success.....	30
Differentiation of learning .....	30
Data management .....	31
Learning from ineffective programs.....	31
Lightening the load .....	32
Ease of use.....	32
Avoiding boredom.....	33
“Customer is right” focus.....	34
References .....	36





## Chapter 7: Implementation Science

*Moving from ivory tower efficacy to real world effectiveness*

As researchers have attempted to transfer science to practice, the stark contrast between research-based program models and diverse, real world efforts at applying those models has become evident. Ineffective programs have been implemented well (e.g., the DARE program, Elliott, 1997; Ennett, Tobler, Ringwalt, & Flewelling, 1994). Effective programs have been implemented poorly (Fixsen & Blase, 1993; Fixsen, Blase, Timbers, & Wolf, 2001). In their meta analysis of effectiveness of delinquency prevention programs, Lipsey et al arrived at the broad conclusion that even the best programs, delivered poorly, had no more and, in some cases, fewer positive effects than theoretically weaker programs that were delivered as designed. Consistently positive outcomes are achieved only when effective programs are implemented with fidelity (Fixsen et al., 2001; Leschied & Cunningham, 2002; Washington State Institute for Public Policy, 2002). Unfortunately, this is the exception more often than the norm.

A metaanalysis of data on implementation of prevention programs in 104 school districts, indicated that only 19% of the schools were implementing research-based prevention programs with fidelity (Hallfors & Godette, 2002). Setting level variations account for some, but not all, of those differences. One meta analysis estimated that as many as 68% of all prevention programs were described too broadly to be replicated and very few included measurements of treatment fidelity”

(Domitrovich & Greenberg, 2000, p. 197).

A study of Hispanic students in eight urban schools in the Boston area, reported that the amount of the exemplary Life Skills Training program material covered by teachers ranged from 44% to 83%, with positive results found only in the high implementation group, who had mean completion rate of 78% (Botvin, 1989). In poor schools serving minority students the mean fidelity rates were even lower, 48% over all sessions (Botvin et al, 2001). One study showed that among the top ten prevention programs identified in the literature, only one was implemented by classroom teachers, and that intervention was *not scalable* because it involved extraordinary amounts of training and consultative support for teachers (Tobler, 1992).

For all these reasons, in recent years the focus of inquiry with both live instruction and technology-enabled programs has been steadily moving from finding practices that work in ideal settings, to identifying those which enable the successful transfer of proven science to real world service, with special attention to reaching those populations that have historically been left behind.

The emerging field of *Implementation Science* has developed out of the need to address the persistent gap between theory and practice in prevention science, in education and in technology adoption. Public health research, technology adoption studies, marketing research, business management research and

organizational development theory, especially theories of change that straddle the boundaries between social psychology and business management, have all contributed to this emerging field.

## **MAJOR IMPLEMENTATION CHALLENGES**

Ripple Effects was specifically founded to address implementation challenges that have hampered the transition from science to service. Some are intrinsic to the implementation process, some relate to program elements, and many relate to the intersection of those two things.

### **Process challenges**

Among the process-related challenges identified by Ripple Effects are to:

- Shorten and streamline the adoption process to realistically allow for continuing turnover in administrative staff and changes in school district level policies
- Reduce attrition by annually updating site-based plans to increase and renew implementer buy-in
- Find affordable, timely methods to collect and analyze objective data to enable program evaluation in terms of implementation process, content, and outcomes
- Embed implementation training so that implementers get what they need, when they need it, and new implementers each year can quickly become proficient
- Economically bring programs to scale
- Sustain programs when trained practitioners move on

### **Program related challenges**

Among the program related challenges, are to:

- Provide timely access to evidence-based information and practices in a context where the knowledge base is expanding rapidly and training time for individual issues is shrinking, even while overall training time is expanding
- Differentiate delivery of interventions to accommodate individual needs, address learning differences, leverage personal wisdom, reduce individual risk factors and build needed personal strengths – without losing standardization required for fidelity
- Provide content comprehensive enough to include a constantly shifting set of timely issues, while still allowing focused exploration of a targeted few issues
- Allow local communities control over sensitive social content, without losing fidelity to science
- Keep the supplemental materials from getting lost

### **Challenges at intersection of process and program**

Among the challenges at the intersection of program and process are to:

- Reduce the risk of instructor-based loss of quality and fidelity
- Reconcile the diverse and sometimes conflicting needs of learners, administrators and policy makers

- Build in cultural competence to allow site-specific constraints and opportunities, without either losing fidelity to EBP, or forfeiting cultural responsiveness
- Reduce the costs of customization
- Reduce redundancy of “silo” programs that address specific academic, behavior, and health factors that are linked to each other and to common external factors
- Keep it from being boring – to students and/or implementers

### Technology not the whole answer

As described in earlier chapters, technology can offer a partial solution to some of these challenges. Specifically, it potentially can make up for loss of supplemental materials, incorrect information, incorrect instructional methods, cultural irrelevance, lack of flexibility and, boredom related to lack of interactivity.

Ripple Effects software includes all audio-visually, plus printable “handouts,” role play instructions, interactive games assessment exercises, and electronic copies of all manuals right in the computer-based program, so these vital materials can’t get lost. Expert content is scripted into the student program and delivered with audio-visual media. This removes from facilitators the burden of needing to be content experts. By changing their role from “sage on the stage” to “guide on the side,” content purity is maintained while facilitators stay involved.

### **Technology introduces new barriers to implementation**

However, technology-based programs are not immune to

implementation failure. Many technology-based, academic programs have about the same fidelity rates as prevention programs described above. Technology brings its own impediments to the implementation process and may add as many barriers as it removes, including the critical issue of sometimes moving control further away from the actual implementers. In most cases, it must be installed by - and in some cases even approved by - technologists, who may see the richness of the program as a weakness, because of its memory requirements. Even when the technology is in place and working, and technologists are supportive rather than controlling, implementation can falter.

Various implementation failures in the early years of use of Ripple Effects student software have driven the expansion of the program to include not only technology-based learning software, but a comprehensive set of live, electronic and print resources to support successful implementation.

## MODELS OF IMPLEMENTATION

Several theoretical models for understanding and evaluating the implementation process have been put forth. Two major ones alternately describe it in terms of process *components* (nouns) (Fixen et al, 2006) and process *stages* (verbs) (Backer, 2002). Another model defines implementation in terms of process *characteristics* (adjectives). Obviously, these are not mutually exclusive terms. Taken together they provide a comprehensive description of the implementation process and the challenges inherent in it.

## IMPLEMENTATION PROCESS COMPONENTS

In their 2006 *Synthesis of Implementation Research*, Fixen et al analyze implementation in terms of basic *components* of the implementation process. They note that these elements exist in all situations and are independent of the quality of the program being implemented. Although they can be independently identified as drivers of the implementation process, they interact with each other to create a combined effect. In some cases the strength of one component may outweigh weakness in another area. These *implementation process components* are something different from core components, even process ones, of a particular *program*. Across programs, regardless of individual core components, Fixen et al look for:

### **Source**

This is a best example of implementation of an intervention. It may be sponsored by program developers.

Ripple Effects provides not just one, but a list of exemplary reference sites of effective implementation in a variety of settings.

### **Destination**

This is the place that houses, supports and funds the implementation, often a school or school district.

The intended destinations for Ripple Effects' student and staff software are schools, juvenile justice settings and community-based organizations. Within school districts the most common institutional homes are Student Services, Special Education and Professional Development departments, and

increasingly, Supplemental Education Services (SES). There is also a version available for students to use at home.

### **Purveyors**

This refers to the "feet on the ground," program implementers.

The program implementers for Ripple Effects are most often teachers who need to provide RTI for underperforming students, class advisors, Special Education teachers and coordinators, counselors, nurses, and disciplinarians, including vice-principals and in-school suspension supervisors. Teachers are encouraged to use the professional development software at home, or wherever they feel most comfortable. In SES programs in Texas, students use the program in their homes, with parents as monitors.

### **Feedback mechanisms**

These are the variety of means through which information gained by any of these three parties is shared between them.

Ripple Effects provides an embedded link to a feedback page for use by students and a separate page for feedback from clients, whether administrators, implementers or direct influencers. On the day this paragraph was written, an educator in Mississippi (unsolicited) wrote: "Hello, your software has been very helpful to me and my students. I think it's awesome. I would like to see some information on 'resentment.' Thanks." "Resentment was then added to the to-do list for topic additions for a future release.

Ripple Effects also calls clients at least twice during the year to solicit feedback and check on implementation success.

The Company participates in research projects that include collection and publication of objective implementation process data. The built-in data system allows all four parties - learners, implementers, developers and researchers - to see exactly what lessons have been covered, which students have completed core components and how various amounts of exposure under various conditions of use, correlate with specific outcomes.

### ***Feedback loop of program evaluation and development***

For the last decade, both formative and summative evaluations have been conducted on various configurations of the Ripple Effects program with various communities, in many dozens of settings. Through a feedback loop that includes both scientific and informal clients evaluations, including evaluation by student users, design has been tweaked, content revised, and hundreds of new tutorials added.

The program has morphed from a single software program for teens, to a comprehensive, integrated set of electronic training tools, print materials and supplementary implementation services for teens, younger children, and the adults who work with them.

The process of continuous feedback has informed not only development of the software, but the shape of the Company itself. It has prompted Ripple Effects to shift direction from a product-oriented, software company, to a client-centered facilitator of students' and teachers' success.

### ***Sphere of influence***

This is context writ large; the socio-economic and political factors that affect implementation outcomes. It is an extension of the context for learning addressed in Chapter 5.

Ripple Effects addresses spheres of influence through:

- A data system that allows implementers to tailor the Ripple Effect library of content to fit the social and political environment that is its context
- Direct professional development – both live and electronic on getting buy-in in the community;
- Direct skill-building for both teachers and students on how to address socio-economic issues that impact their lives; and an occasional column, “
- Timely from the Top” an occasional online column, through which Program Creator, Alice Ray, comments on the relationship of items in the news to program use and implementation.

### ***The role of leadership***

Strikingly absent from the model of “key components” of implementation (though included in Fixen’s wider notion of “context”) is what many researchers and practitioners, including the CASEL group, consider *the single most important component of successful implementation: leadership*. This includes both personal leadership of the principal or other advocate leading the effort and a shared *leadership process* that engages the whole staff and can continue when key leadership positions turn over. (Devaney, et al, 2006; Elias, & Kamarinos Galiotos, 2004; Kam, Greenberg and Walls, 2003).

Closely related to the role of leadership in general and leadership in implementation of SEL programs in particular, is *the primacy of social-emotional competencies within a leader* in predicting success in school and other organizational settings (Lambert, 2003, Patti and Tobin, 2003; Goleman, D. 1998).

Ripple Effects *Professional Development* software includes a whole unit on leadership development through

personal transformation. 53 tutorials develop the same core social-emotional competencies that are addressed in the student program, including all six identified in the CASEL model, as seen on page 5.27. Two additional units include dozens of areas of application of each of those core competencies to the processes of managing diverse learners, and successfully implementing psycho-social (SEL) interventions.

### Ripple Effects Leadership Unit

#### Paradigm based on transformation

Leadership  
Holding a vision  
Social-emotional intelligence  
**1 Know Who You Are**  
Learning style (yours)  
Strengths  
Goals  
Feelings  
Social background (yours)  
Resilience

#### 2 Be Assertive

Face  
Voice  
Message  
Body  
Establish authority  
Set expectations  
Set rules  
Have consequences  
Confront behavior

#### 3 Have Empathy

Take perspective  
Show care

#### 4 Connect in Community

Model social values

Honesty  
Courtesy  
Fairness  
Respect  
Humor  
Kindness  
Trust  
Get support  
Involve parents  
Involve students  
Work with administrators

#### 5 Manage Feelings

Anger  
Fear  
Hopelessness  
Self-talk  
Physical sensations

#### 6 Control Impulses

Stop reactions  
Predict consequences

#### 7 Make Decisions

Problem solve  
Name the problem  
Identify options  
Weigh alternatives  
Test solution

An implicit assumption in all of these approaches is that adult implementers

will always mediate, and be at the center of interventions with children. *None of the major models in operation today address the emerging role of student learners themselves as key drivers in the*

*implementation process.* Nor do they account for the role of specific program elements in the implementation process.

Ripple Effects recognizes the role of adults as major drivers of implementation success. However, the organization also recognizes self-regulated, learner behavior as a key implementation driver, directly correlated with program success (Ray & Berg, 2008). Indeed, Ripple Effects would argue that regardless of implementer adherence to program guidelines, if even a sizable minority, much less the majority of students, fail to comply with their roles as participants in the intervention, then either the program design is flawed, or its is not being implemented successfully. Ripple Effects recognizes the important role of program design and specific program content components in fostering student participation in the implementation process.

### **Components *negatively* correlated with success**

While the core components for implementation success are still being refined, early evidence has identified two key factors that are NOT associated with implementation success, yet are still widely used toward that end:

#### ***Information dissemination alone***

Despite preponderant evidence that general information distribution is more likely to overwhelm than to empower, wide scale distribution of research literature and practice guidelines, increasingly through the use of email, continues to be a major focus, not only by program developers, but by organizations that are charged with implementation success. Some school

district departments may send out a half dozen or more email briefings a day to the people charged with implementing the policies and programs they have adopted.

Ripple Effects provides substantial, supplemental print information to support the implementation process, but the primary implementation support materials are for hands-on planning of the application of Ripple Effects to particular students in particular situations. They are available in print and electronic form when and where the implements themselves decide they would be most useful.

#### ***One time workshops***

One time training sessions, no matter how well done, have not been proven effective in leading to successful implementation (Fixen et al, 2005; Duvaney et al, 2006). Nonetheless they have continued to be the training mainstay of even “model” programs throughout the United States, partly because many school districts will not adopt a program without them. A meta-analysis of research on training and coaching in the public schools by Joyce and Showers (2002) clearly showed that “training that only consisted of workshop-based theory and discussion produced a modest gain in knowledge about the topic in questions, and small increases in the ability of teachers to demonstrate the new skills in the protected training environment, but the skills did not transfer successfully to the classroom. More substantial immediate gains were made when demonstration, practice, and feedback were added to theory and discussion in training workshops, but still there was little use of the new skills in the classroom. Only

when on-the-job coaching was added were large gains seen in knowledge and actual use of the new skills in the classroom with students“ (Joyce & Showers 2002). These findings are consistent with theory and research about education in general and professional development in particular as described at greater length earlier, in Chapter 5.

Ripple Effects, directly and through a cadre of certified trainers across the country, provides a limited number of live workshops for implementers. They include some discussion, calibrated modeling, extensive practice and real time feedback. *RE Trainer Training* workshops includes presentation of the theory base, as a complement to experiential learning. However, the bulk of Ripple Effects implementer training is now embedded coaching that is delivered through the staff training software for use when and where teachers most need it.

## IMPLEMENTATION PROCESS STAGES

Another model for implementation, formally developed for SAMHSA as an outcome of the meta analysis by Thomas Backer (2002), but also cited extensively by Fixen and used by CASEL (Devaney et al, 2006) focuses on different *stages*, rather than components, of the implementation process. Backer’s model identifies the stages of:

- 1) Program adoption
- 2) Needs and strengths assessment
- 3) Program implementation
- 4) Program evaluation  
(with results fed back into the process, and modifications made to ensure . . .
- 5) Sustainability over time.

CASEL divides the SEL implementation cycle into just three stages: readiness, planning and implementation, then breaks those stages down into 10 discrete steps.

In the readiness phase, the principal commits to a school wide initiative and engages key stakeholders, including a steering committee.

In the planning phase the steering committee develops and articulates a shared vision, conducts a school wide needs and resources assessment, and creates a site-based plan based on that assessment.

In the implementation phase, trainers conduct professional development. Classroom instruction is launched in a pilot mode, then expanded school wide. Formative evaluation results in adjustments for continuous improvement (Devaney et al, 2006).

Fixen et al (2006) identify adoption as the first stage in the process, but break that stage down further, into aspects of organizational readiness, need identification and social marketing, with social marketing referring to the consumer oriented approach to change that public health has adopted from commercial business. These researchers insert the processes of installation and training as a single discrete stage in implementation, prior to actual program delivery.

With technology-based programs this order is particularly important, but the two elements of technology installation and implementer training are necessarily separate. This model also divides the program delivery phase into an “initial try,” often called a pilot, and full operation, frequently described as going to scale. They then insert a stage of innovation and adaptation prior to sustainable implementation, and list

sustainability *prior* to evaluations, whereas in Backer’s model the last two steps are reversed.

CASEL handles sustainability as a separate issue and separately identifies six sustainability factors: ongoing professional development, ongoing evaluation for continuous improvement, infrastructure development to support ongoing programming, integration of SEL programming with school wide practices, nurturing partnerships with families and communities, and communicating with the entire school community about SEL programming (Devaney et al, 2006).

In both Backer (2002) and Fixen (2006) models, there are feedback loops between stages. In both models, evaluation includes a core components analysis and an outcomes analysis. All of these models assume the initial level of intervention is a classroom group.

For all, “going to scale” means school-wide implementation, not scaling to the larger units of district, county, state or country.

None of these models addresses what has increasingly become a major factor in successful long-term implementation, data management, the ongoing documentation and analysis of both process and outcomes.

Integrating these three approaches, incorporating the special conditions and constraints that are part of technology-dependent programs, recognizing that going to scale ultimately must include at least district level coordination, and taking into account that data collection, management and evaluation, are increasingly important parts of the process that often can’t happen at all if they are not built into the beginning of this implementation process, yields this five stage model:

## ***Ripple Effects Whole Spectrum Model of Staged Implementation***

### ***Preparing the way***

- Assessing organizational readiness for (and resistance to) change at district and site levels
- Assessing strengths and needs of individuals and the organization
- Social marketing aligned with organizational and personal self-interest
- Formal program adoption

### ***Planning & program implementation***

- Technology installation
- Orientation to data system
- Site-based planning aligned with school goals
- Training of implementers
- Orientation training for individual learners
- Pretest - collection of baseline data
- Pilot program delivery, including monitoring progress
- Adjusting for improvement
- Widening and deepening to scale

### ***Documentation and data management***

- Continuous assessment
- Progress tracking
- Generating reports

### ***Program evaluation – data analysis***

- Formative – from both learner and implementer perspectives
- Process – dosage and core components analysis
- Proximal (mediating) outcomes

- Distal outcomes, based on goals

***Sustaining a program over time***

- Adaptation with fidelity
- Ensuring affordability
- Updates and renewal

Ripple Effects *Coach for Staff* software, designed for job-embedded,

continuous coaching, provides direct training to support staged implementation success.

The unit on *Making Programs Work* is comprised of 55 tutorials, divided into four stages: *Prepare the Way, Implement Effectively, Measure Results, and Scale and Sustain*, as seen in the scope and sequence below.

***Tutorials in “Making Your Program Work” Unit of RE Coach for Staff training software***

**I. Prepare The Way**

Engage stakeholders  
 Parents  
 Administrators  
 Get buy-in  
 Hold a vision  
 Set the climate  
 Create a plan  
 Match to other programs  
 Adapt with fidelity  
 Use in context  
 Discipline  
 Counseling  
 Advisory period  
 Academic achievement  
 After school  
 Testing  
 Corrections  
 Provide training  
 Infuse into curriculum  
 Language arts  
 Social studies  
 Health  
 Decide dosage  
 Customize scope & sequence  
 Individualize  
 Create IEP

**II. Implement effectively**

Introduce \*  
 Use teachable moments  
 Orient \*  
 Lead discussion \*  
 Model \*  
 Direct rehearsal  
 Reinforce \*  
 Ensure compliance \*  
 Persevere  
 Handle disclosure

**III. Measure results**

Collect data  
 Profiles  
 Content assessment  
 Surveys

**IV. Scale and sustain**

Leverage technology  
 Ripple Effects software  
 Learning system  
 Research base  
 Screen layout  
 Privacy issues  
 Administrative functions \*  
 Monitoring progress \*  
 Customizing content  
 Using Web resources  
 Solving tech problems

\* Indicates core components for Ripple Effects implementers

Every step in the implementation process is covered in both the Professional Development software and the three-day, live, trainer-training workshop. Although the organization of the *Making Programs Work* unit follows the general implementation stages described above, learners are not forced into a single sequence, and all learners do not need to complete all parts of it. Rather implementers are able to access whatever lesson they need, exactly when they need it.

As CASEL has pointed out (2006 *Implementation Guide*, p 126), although basic steps remain the same, the exact nature and sequence of these steps will differ depending on situational factors. From the Ripple Effects perspective, the exception to this rule is that implementers must complete the eight (minimum) core implementer training components (marked with asterisks after the topic) through either live or electronic training, before beginning delivery of the intervention.

In addition to the live training and the staff development software that provides a multi-part, multimedia tutorial on each of the topics listed above, Ripple Effects offers a range of print and electronic resources, as well as consumer-oriented organizational policies, to support the implementation process. They include the following:

### ***Ripple Effects resources to support successful implementation***

- RE resources for preparing the way
- Survey tools for needs assessment (*School Safety Profiler*, *Respect for Persons* on-line group Profilers)
- Four levels of streamlined planning guides in print and fillable pdf

- formats: district, school site, individual teacher, individual student
- Theory and logic model matched to existing national (and some state) standards and frameworks for academic and non-academic curricula, including SEL
- Built-in way to maintain local control over content (unacceptable content can be deleted, scope and sequences can be customized)
- Positioning as a supplement to, not substitute for, other initiatives
- Matched to funding streams and requirements (Title I, Title IV, IDEA)
- Optional, customized district level planning services
- Outcomes guarantee as part of purchase agreement

### ***RE resources for direct implementation support***

- Check list for technology installation, prior to training
- Site-based planning manuals; (customizing a scope and sequence to the site and/or individual level) is integral part of the training)
- Software-based, ongoing, embedded implementer training
- Validated, electronic tools for individual progress tracking
- Pricing incentives to go from piloting to scale
- Automated data collection
- Ongoing free, live and electronic technical support,
- An easy and economical way to scale program delivery

### ***RE resources to support evaluation***

- A structure for receiving feedback from both learners themselves and implementers
- Automatic tracking of compliance and dosage
- Valid electronic tools for measuring proximal outcomes
- Standard conventions for student interoperability formats (SIF), so that dosage data can be integrated with school district administrative data
- Referrals to reputable 3rd party organizations for statistical analysis

### ***RE resources to support sustainability***

#### *Technology based support*

- Embeds and renews professional development through anytime, anywhere software, with option for potable flash drive delivery\*
- Makes data collection easy\*
- Provides a way to use evaluative data for continual improvement\*
- Has secured university-based, graduate credit certification for completion of software course
- Incorporates content of users from the community (true stories)
- Updates software as operating systems change
- Is platform independent, can move quickly to new platforms as they arise
- Offers low cost, maintenance contracts that guarantee continued technical support for up to five years.

#### *Non-technology based support*

- Provides print and electronic copies of a comprehensive set of manuals with recommended best practices and suggested scopes and sequences

for use as primary, secondary and tertiary interventions

- Enables annual renewal of site plans as goals and constraints change
- Facilitates continual integration into existing frameworks school wide\*
- Integrates implementation with student services\*
- Seeks program placement in an institutional home that will “win” with sustained implementation\*
- Ties the intervention to traditional school outcomes\*
- Involves families and communities\*

(\* Denotes factors identified by CASEL as key to long term sustainability

### **IMPLEMENTATION PROCESS CHARACTERISTICS**

Separate from both components and stages of the implementation process are qualitative characteristics that can make the differences between long-term, organization-wide, implementation success and failure (Paulson et al, 2002). Commonly cited key characteristics include attrition, fidelity/adaptability balance, affordability, reach/scale, and speed. Some models, such as that promoted by Russell Glasgow (2002) with the acronym RE-AIM also include efficacy and “maintenance.” Ripple Effects subscribes to the notion that proven efficacy is an important measure of implementation success, and addresses efficacy issues in a separate set of monographs.



See *Evidence of Effectiveness, Volumes I, II, III, IV, V, VI*. It addresses maintenance as part of the sustaining stage of implementation addressed above.

Ripple Effects identifies four additional characteristics as important factors in long term implementation success: personalization/ learning differentiation, ease of use, and avoiding the boredom factor.

### **Program attrition - non-participation.**

The biggest single reason that evidence-based prevention programs fail to deliver promised results is that they are simply not used. Deliverers drop out due to both internal and external factors.

#### ***External factors linked to attrition:***

##### *Insufficient training*

Insufficient training results in unfamiliarity with the program due to teacher turnover, or lack of initial training.

##### *Competition with academic areas*

There is growing pressure on teachers to deliver higher student scores on standardized tests in academic areas. "Social issue" and/or health training is often seen as time taken away from real studies.

##### *Time constraints*

Insufficient prep time; class periods being unexpectedly cut short and sick days for teachers and students, all cut into available instruction time.

##### *Lack of cultural relevance*

This ranges from lack of diversity in program images and examples, to insensitive language, stereotyping, and failure to include the real life settings of many students' lives.

#### *Discipline problems*

Discipline problems interrupt delivery, reduce available instructional time, in some settings by as much as 80%!

#### *Natural – and unnatural disasters*

From snow storms, to pandemic health threats, to hurricanes, to school shootings, to forest fires, to the terrorist attacks of 9/11, unplanned crises preempt planned routines and interfere with program delivery.

#### ***Internal factors linked to attrition:***

##### *Frustration with inflexibility of program*

Instructors have 45 minute periods, and the lesson is designed to last 50, or they have been allotted 20 open class periods, and the curriculum requires 35.

##### *Discouragement*

There is not enough ongoing support or help in solving problems as they arise.

##### *Lack of motivation*

There is no tangible payoff for effort.

##### *Teacher boredom*

Even committed teachers get bored with presenting the same rigid program year after year. As one teacher said, "After five years, I just couldn't hold up those same pictures, and ask the same questions again" (Private conversations, A. Ray, 1998).

None of these problems individually are insurmountable, but in combination they are formidable. Unless there is a multi-pronged approach to addressing them, it's virtually assured that delivery of prevention programs as designed, will continue to be the exception not the rule.

## Balance between fidelity and adaptation

Both fidelity and adaptation have been consistently identified as key factors in implementation success. By definition there is a tension between the need to ensure the purity of a scientifically derived method, and the need to enable local adaptation that is consonant with diverse community and cultural values and changing organizational priorities. The current assumption that some adaptation is needed for implementation success is in stark contrast to that of just two decades ago, when implementation fidelity meant complete standardization to criteria that were most often established in controlled settings that could rarely be duplicated in real world practice. On the other hand, the recognition that free-wheeling adaptation can sink even the best-designed program has never been higher.

### Categories of lack of fidelity

Lack of fidelity is not a homogenous problem. Teachers “dirty the design” intentionally and unintentionally.

Based on directly providing training to more than 2000 teachers and community activists, and overseeing project personnel who have provided training to more than 3000 participants in 200 school and community-based organizations across the country, as well as drawing on information gained from a customer base that includes implementers and administrators from more than 500 school districts, Ripple Effects has identified these five major categories of lack of fidelity to program: incorrect content, incorrect instructional methods, ad hoc adaptations, lack of

supplemental materials and cultural incompetence.

#### *Incorrect content*

Messages are not science-based; incorrect information is imparted; proven effective strategies for skill training are not used. This may be due shortcomings in the curriculum itself, or to loss of fidelity when teachers interpret and misrepresent of content.

#### *Incorrect instructional methods*

Rehearsal, interaction, inclusive participation, reinforcement of key concepts and/ or transfer training do not happen, or are being used ineffectively.

#### *Ad hoc adaptations*

Many practitioners do what they sense will get a response from their population, even when it threatens the integrity of the program. They believe adaptation is necessary to reach diverse populations, in diverse settings. They believe the problem is in the rigidity of a particular design, not in their customized implementation of it.

#### *Lack of supplemental materials*

Videos, teachers guides, posters, markers are frequently lost. Teacher guides are separated from the products they accompany, often by the second year. Although this may not seem serious, teachers cite it as a major source of their frustration in program delivery. These materials are often supplemental to the Teacher’s guide, but essential to a successful class.

#### *Cultural incompetence*

Even when materials are culturally sensitive and inclusive, teacher

expectations and behavior may not be, thus undercutting core messages.

To help resolve the continuing conundrum of how to resolve the need to preserve program integrity, while still allowing implementation flexibility, SAMHSA has identified a set of practical guidelines for “Balancing Program Fidelity and Adaptation” (Backer, 2002). Ripple Effects can be measured against these guidelines.

### ***SAMHSA Guidelines for Balancing Program Fidelity and Adaptation***

*1 – Identify and understand **the theory base** behind the program. Published literature on the program should provide a description of its theoretical underpinnings. The theory and logic model are not in themselves core components of a program, but they can help identify what the core components are, and how to measure them. This step also identifies core values or assumptions about the program that can be used to help persuade community stakeholders of the program’s fit and importance for their environment.*

This monograph (*From Multidisciplinary Theory to Multimedia SEL Interventions: The Conceptual Underpinnings of Ripple Effects Whole Spectrum Intervention System*) directly responds to this requirement. It includes verbal and visual descriptions of the logic model (page 11-12), as well as an extensive, documented description of the theory base from the separate perspectives of prevention science, education and technology. It is available from Ripple Effects in print and electronic forms.

Use of the search engine on Ripple Effects web site will lead to documentation of much of the research

base of the program. In addition, the staff development software includes in every tutorial the names of thought leaders for major concepts covered in that tutorial. The content located through the “Info” and “How to” buttons mirrors that traditionally located in the preface to a lesson plan, under a heading like “Background Concepts.”

Typically this background is available in materials for instructors but not for students. Ripple Effects makes these background concepts available to even the youngest learners through the “Info” button, one of 13 options available for every lesson. However, in the rest of the software, the broad and wide theory base is mostly implicit, rather than explicit. This is in response to RE market research that indicates users are often distracted, intimidated, or put off by having to wade through theory before they can access resources for their practical needs.

*2 – Locate or conduct a **core components** analysis of the program. This will provide implementers with a roster of the main “program ingredients,” and at least some sense of which components are essential to likely success and which are more amenable to modification, given local conditions. In essence, core components analysis represents a bridge between developer and implementer, and between fidelity and adaptation.*

### ***Learner behavior – The missing core process component***

Efforts to identify core “implementation drivers” have almost exclusively focused on adult-oriented process components. Fixen et al identify *staff selection, pre-service and in-service training, ongoing consultation and coaching, staff and program evaluation, facilitative administrative support, and*

*systems interventions as all important (2005)*. This overlooks the obvious fact that learners themselves are the most important drivers of much implementation success. Their behavior is included in Ripple Effects core components analysis.

Ripple Effects core content and process components differ by level of intervention. Both adult facilitators and student learners have clearly identified responsibilities. Ripple Effects is designed for tiered implementation to address primary, secondary and tertiary prevention needs. Recommended core components are based on the intended level and setting of use. Specific Core process and content components to reach targeted goals, with individuals and or groups in a variety of settings are described at length in the series of implementation manuals listed on page 7.18.

In general, for universal promotion group interaction is more important; for indicated interventions, student privacy is more important. The relative importance of student privacy over adult modeling did not become clear until implementers had used the program in a different settings with a number of different populations.

 In response to a combination of outcome and market research, core process components for student learners have been narrowed down from those originally proposed by Ripple Effects (which included all 13 learning activities for every lesson). Outcome research indicated that group level role plays were not adding value, so they were shifted from “required” to optional activities. In addition, there was no evidence that requiring all students to expose themselves to every available learning

modes was any more effective than requiring them to complete just the interactive exercises. Thus only the three interactive exercises (“got it”, journal and profile) and the opening case study, were identified as core process components, all other learning activities are now optional.

This is consistent with research on the emerging role of implementers in defining core components (Arthur & Blitz, 2000; Gallagher, 2001; Harachi, et al 1999; Winter & Szulanski, 2001; Wolf, et al, 1995).

 Dosage data from Ripple Effects evaluation studies has revealed that what students explored had less impact on outcomes than that they used the software. Students who completed the “wrong” topics had similar outcomes to students who focused on assigned work. In addition, almost all students who had minimal exposure to the program explored additional topics of personal concern, if they could do so privately (Ray, Berg & Patterson, 2008).

Being able to choose among the buttons, not being regimented into left to right sequence of learning activities, is a core *process* component. Self-chosen *content* also is linked to implementation success for both students and teachers. On the other hand, if students are left completely free to discover the program or not, many opt out. So *requiring*, rather than inviting, students to have the minimum exposure to the software, has become a core process component, as has providing private time for students to explore self-selected topics. To ensure that students get that minimum exposure, implementer monitoring of the student score card is essential and thus a core process component for implementers. In

terms of implementer success, completion of eight key exercises, whether through live training or software-based training, has been identified as an important factor in implementer success, so those lessons are identified as core process components as seen on p 7.10.

Beyond these process factors, implementers have asked RE to specify core *content* components by tutorial name, in terms aligned with frameworks for various drug and alcohol prevention curricula, for character education programs, and for specific use in discipline settings.

See Ripple Effects recommendations – and rationales - for core content components for 6 universal, positive youth development curricula, 12 targeted intervention programs and 18 individual treatment plans are included in a set of three implementation manuals, which are also available electronically.

Core components of subject matter (assigned lessons) vary by use. Because this is a self-directed intervention, students play a key role in delivery of core components. The table below outlines core content, learning process, and data management components for both students and adult implementers.

## Summary of Ripple Effects Core Content and Process Components

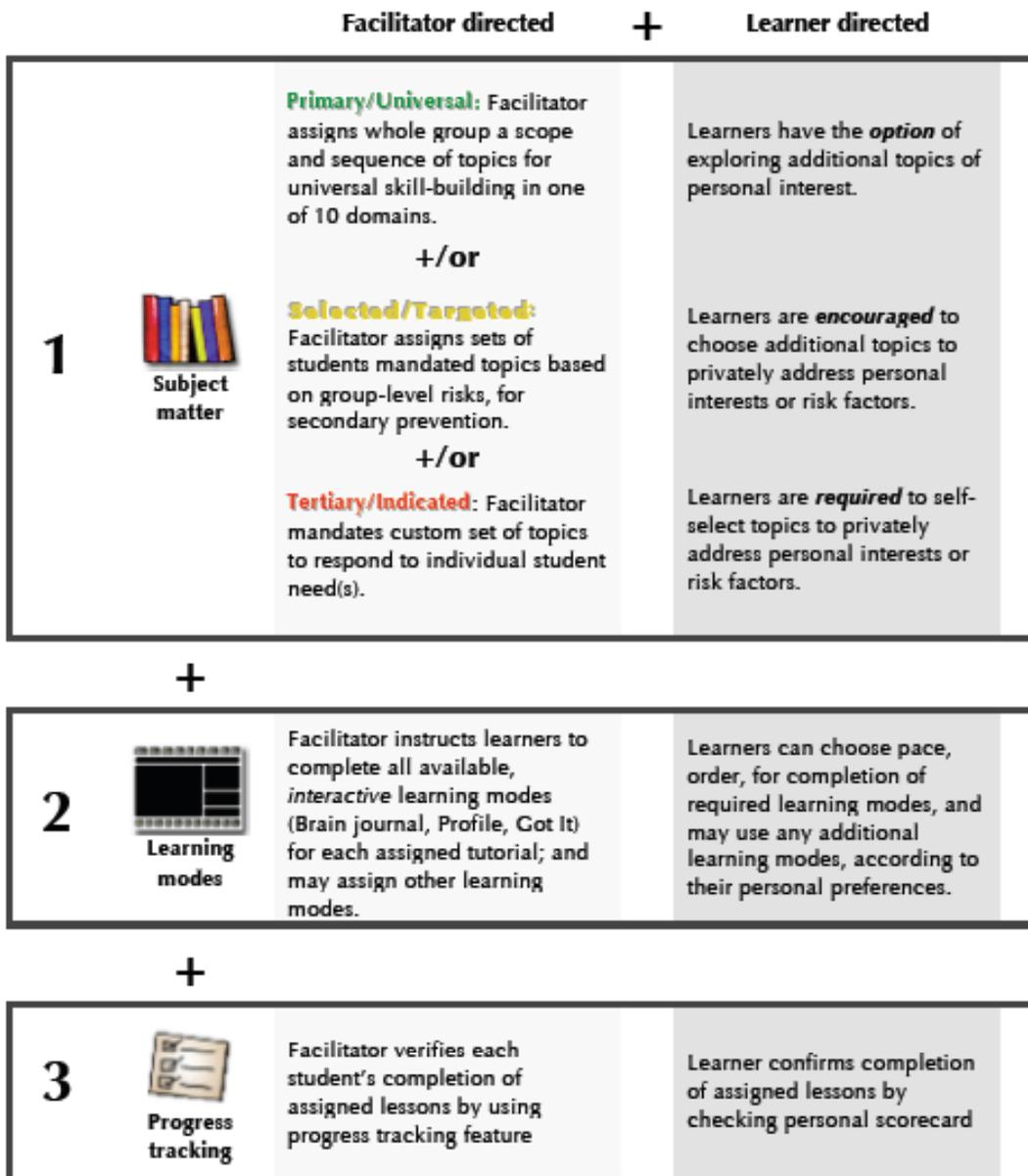


Figure 11

3 – Assess fidelity/adaptation concerns for the particular implementation site. . . determining what adaptations may be necessary, given the target population, community environment, political and funding circumstances, etc.

The design of Ripple Effects assumes that every implementation plan will be adapted to site-specific constraints, opportunities and circumstance. *The Site-Planning Guide* explicitly identifies strengths and barriers to success of implementers (as well as students,) as well as site-based goals, policies, and technology/funding constraints that the implementation must be aligned with. Political circumstances may require deleting certain topics, especially regarding sexuality, that evidence would otherwise support including, and adapting the duration and frequency of lesson sessions to fit into existing schedules.

4 – *Consult as needed with the program developer to review the above steps and how they have shaped a plan for implementing the program in a particular setting. This may also include actual technical assistance from the developer or referral to peers who have implemented the program in somewhat similar settings.*

Ripple Effects calls every client at least once a year to check on implementation progress. Clients can choose to file their site-based implementation plans with Ripple Effects to facilitate easier monitoring. In addition, the company provides free online and phone implementation support, including technology support. It also provides fee-based comprehensive planning and evaluation services. A cadre of regionally based, certified

trainers are available and recommended for on-the-ground consultation and embedded coaching about implementation issues. Dozens of reference sites have agreed to be contacted by peers who are beginning or struggling with implementation. Sharepoint templates for district level user groups promote sharing among implementers across sites. Ripple Effects User groups Recognizing that many implementation issues do not arise until well after a training workshop has been completed, RE staff training software is designed to provide ongoing, embedded coaching about what people want, when they want it. The staff training software includes true stories of other implementers' challenges, success and mistakes.

5 – *Consult with the organization and/or community in which the implementation will take place.*

A live, user-centered phone consultation is part of the software purchase process for every client. As both a philosophical position and a business practice, Ripple Effects puts the client – not theory, practice, or product – at the center of every implementation planning process. Familiarity with the demographics, policies, goals and key players in the organization is a prerequisite to making a recommendation for how, when and where to stage implementation of Ripple Effects.

Rural, urban and suburban communities, and schools within those communities with diverse populations, socio-economic environments, local policy mandates, funding capacities and styles of leadership form thousands of ecological contexts for the effective use of Ripple Effects. Ripple Effects' goal is to find ways to support, rather than

undermine, what may be fragile ecological balance in each situation. Upon request, Ripple Effects can provide a written proposal specifically matched to district wide goals, policies and resources.

*6 – Develop an overall implementation plan based on these inputs. By addressing all of the complex stages of implementation, such a plan can increase the opportunities for making choices that shape a program, while maintaining good fidelity*

Ripple Effects offers templates for three levels of implementation plans: District, or large organization level, site or school level, and individual (both student and teacher) level. The district level, EXCEL-based planning template sets up a time line and work plan for large scale implementation addressing each of the stages described above. The site based plan focuses on assessing staff, student and organizational strengths and barriers, and developing a customized scope and sequence to address site-based goals. The RTI planning guide takes that same strengths and constraints-based planning focus down to the level of individual students. A parallel guide provides for site and individual specific continuous development for teachers.

*7- Include a strategy for achieving and measuring fidelity/adaptation balance for the program to be implemented, both at the initial implementation and over time.*

Ripple Effects overall strategy for achieving fidelity/adaptation balance is to create a very strong, insulated container (the training software) within which pieces can be mixed or matched strategically toward meeting particular individual, group and organizational goals. The strategy for measuring both is collection of two kinds of formative data:

dosage data as described above, and client interviews.

## **LEVELS OF IMPLEMENTATION: TIERED INTERVENTION**

Both logic and sheer economics argue for variegated levels of services, based on student/teacher need and resource constraints. Effective preventive SEL interventions borrow from public health the triage model of service delivery; that is, a three tiered system of different levels of service, based on need. “Primary” refers to universal strategies aimed at promoting public safety, health, and school success, population-wide. “Secondary” refers to risk reduction strategies, aimed at subgroups sharing certain risks. “Tertiary” refers to indicated, intensive interventions to limit or reduce harm.

The specific adaptation of this model to address problematic behavior in schools is sometimes referred to as the “Oregon Model”, reflecting the affiliation of a prominent set of researchers who have articulated its relevance for dealing with behavior problems in schools, (Walker, Horner, Sugai, Bullis, Sprague, Bricker, and Kaufman, 1996).

### **Primary – Universal Promotion**

Primary SEL prevention focuses on universally building core social-emotional abilities, including attentional capacities, as well as pro-social values that are positively correlated with safe and supportive school environments, and that lead to school and life success. Also called "asset building," "universal promotion," "positive youth development," and "character education," this approach is designed to reach every

student/parent/teacher in a developmentally appropriate way. Universal SEL interventions usually take the form of well-enforced school discipline codes, as well as character education, social skill training and positive youth development programs for students. For teachers, increasingly it takes the form of addressing social-emotional and cultural learning in Teacher's Colleges and Induction Programs.

These programs are the SEL equivalent of a healthy diet or exercise regime. They have value for everyone, may keep students who are on the margins of risk from falling to a higher risk category (the way a healthy diet is protective to a young man with a family history of diabetes) and can reinforce and normalize lessons learned in intensive intervention. Sugai et al. estimate that 80 to 90 percent of all students will respond successfully to a well-implemented universal intervention (2002). This may be a "best case" analysis that assumes low levels of personal risk factors, across the board cultural relevance, and aligned school policies, factors that do not generally mark urban middle schools and high schools. Even when these added complexities reduce the number of students who respond successfully to universal interventions, research has repeatedly shown that they can reduce aggression and improve academic performance among students who are responsive, at high enough levels to significantly impact the group mean in a positive direction (Gottfredson, 2002).

Ripple Effects' universal promotion program promotes seven core personal characteristics: self-understanding, assertiveness, empathy, management of emotions, problem solving, impulse control, and connect to community. The

community connection module is comprised of personal communication and group participation skills. As well as training in the value needed for a diverse and democratic society to flourish: honesty, fairness, responsibility, respect, etc.

These abilities are protective for all students. In fact, they are protective for all people of all ages. Though culturally mediated, they are important across cultures. They can often preempt and protect against negative behavior before it arises. They enable a resilient response when unexpected trauma occurs. They are also positively correlated with success in the classroom – for teachers as well as students.

Use of Ripple Effects as a primary prevention program promotes pro-social values, strengths-based resilience, positive social relations, academic achievement, civic participation, health and wellness. This is the first step in preventing anti-social behavior and negative health and school outcomes.

Ripple Effects has designed the Whole Spectrum Intervention System to be easily configured for use in a variety of universal promotion programs. They include:

*Character education*, with scope and sequence matched to Character Education Partnership principles.

*Asset building*, with scope and sequence matched to the Search Institute's internal assets list.

*Social emotional competence*, with scope and sequence matched to the Collaborative for Academic, Social, and Emotional Learning (CASEL)'s model for competency and Ripple Effects model of "Seven Keys" (core abilities).

*Academic achievement*, with scope and sequence designed to address non-academic, school-related factors, like

attitudes (including attitudes toward efforts and success), efficiencies (like learning style, attention problems, learning disorders, study habits and connectedness (including resolving peer and teacher conflict).

*Civic engagement*, with scope and sequence matched to national frameworks for social studies, and focused on building youth activists who know, appreciate, exercise and protect their rights.

*Diversity appreciation*, with scope and sequence developed in collaboration with the Leadership Conference on Civil Rights Education Fund and Partners Against Hate, to prepare students for the accelerated inter-group contact that will be a hallmark of the 21st century.

*Health, safety and wellness*, with scope and sequences matched to National Health Education Framework. That framework identifies 19 subjects for a comprehensive health course; all are included.



For a full description of the background and suggested scope and sequence for each of these primary prevention uses, see the manual: *Positive Youth Development: Sample Scope and Sequences for Universal Promotion*.

## Secondary – Targeted Prevention

Secondary prevention is comprised of targeted efforts to ward off anti-social behavior, illness, injury, or school failure. It is aimed at people who have group level factors that put them at risk for behavioral and academic failure. Those risks may be internal psychological factors, or may come from exposure to environmental factors in multiple domains, as documented in Chapters 2 and 3.

Sugai et al (2002) hold that, if the general norm for behavior is positive and pro-social, then students who need more targeted interventions will become more visible, self-selecting for the level of secondary intervention. The goal with these students is to decrease the frequency or intensity of problem behaviors, instill appropriate behaviors, and help them to be more responsive to universal interventions. This is the group of students for whom the term “Response to Intervention” (RTI) was coined.

To continue the physical analogy, these are the high blood sugar, pre-diabetic kids, who can benefit from a structured regime of training in good eating habits and exercise. Many students (and teachers!) who have exhibited behavior problems start behaving better after being involved in universal and selected interventions; but only if those interventions are implemented with fidelity.

Substance abuse prevention programs may target all children who share a developmental point that makes them vulnerable to peer pressure and/or the temptation to experiment with alcohol or drugs, and/or those who live in neighborhoods where drugs or weapons are easily available, and/or those who share a history of parental addiction or alcoholism. Bully prevention programs may target special education students who have higher risks of being bullied than other students. Both violence and PTSD prevention programs may especially target youth who live in neighborhoods with high levels of domestic or gang violence.

This level of prevention focuses on developing specific attitudes and skills that have been shown to reduce the risk of becoming either perpetrator or victim of specific unsafe, unhealthy or unlawful

behavior. For example, perspective taking is a specific ability linked to appreciating diversity, a prerequisite to preventing hate crimes. Identifying with others is the basis for moving bystanders' to a position of solidarity with the victim in bullying situations. Assertiveness is what enables them to act on those feelings. It is also the key factor in effective resistance skills. The ability to put together an "if/then" sentence is essential to predicting consequences, which in turn is needed as part of a behavior management program for students who tend toward impulsivity.

Targeted prevention programs also provide the capacity to address specific attitudes and behavior that disproportionately affect social and culture groups who share risk factors. For instance, ambivalence about academic success is more often an issue for African American, urban boys than Asian American, suburban girls. So the "success-phobia" tutorial might be in order for the first group and the "pressure to succeed" lesson more appropriate for the second group. "Discrimination" is more likely to be a real world experience for children of color, than for Anglo children. Thus, that tutorial, with practical strategies for dealing with discrimination, will have more relevance to the former group.

Ripple Effects has developed background information and scopes and sequences for use of the program in the following areas of secondary prevention: Injury prevention: "Child abuse," "Bias offenses," "Bullying," "Sexual harassment," "Youth violence," "Dating abuse," "Online exploitation," "Illness prevention," "Tobacco prevention," "Drug abuse prevention," "Eating disorders and obesity", "Depression & suicide", "Post traumatic stress,"

"STDs/Pregnancy," "HIV& AIDS," "Academic failure," "Testing," "Truancy."



For a full description of the background and suggested scope and sequence for each of these uses for secondary intervention, see the guide, *Ripple Effects Targeted Prevention: Risk Reduction*.

There is no single factor that is as predictive of impact on academic achievement and/or social behavior and/or mental health as poverty. Title I funding is specifically designed to mitigate the impact poverty has on children's life trajectory, yet few prevention programs directly target experience, feelings and reactions directly related to economic status.

Ripple Effects includes a tutorial that addresses poverty directly ("poor" in student version, "class" in staff version, and one that focuses on the often taboo topic of "money"), as well as related tutorials to address internal reactions to poverty ("shame," "disappointment," "hopelessness"), interpersonal challenges (embarrassed about family," "envy," temptations toward "stealing") and societal aspects of economic inequality ("social justice").

## RTI

Response to Intervention (RTI) is an approach that provides differentiated, preventive interventions for students whose life circumstance and/or behavior indicate that they are at elevated risk of being assigned to disciplinary action/and or being designated as needing remedial Special Education. It is the bridge

between secondary and tertiary interventions.

Ripple Effects has developed planning guides that enable implementers to quickly personalize a preventive intervention for each of these students



See (*Planning for RTI*) available to clients as fillable PDF files, from which information can be exported to a data base.

### **Tertiary – Individualized, Indicated/ Positive Behavioral Intervention**

Tertiary, intensive intervention is indicated for individuals who have already been involved in anti-social behavior, or health-related, reckless behavior, or have experienced school failure. It is most often in the form of an individualized intervention. It may also be called PBIS (Positive Behavioral Interventions and Supports) and EIS (Early Intervening Services). This differentiated intervention is designed for students whose behavior has brought them into discipline settings or required their labeling as having "special needs." It comes into play after something has brought that student to the attention of authorities: failing grades, truancy, an act of defiance, a racially-charged taunt, bullying a weaker classmate, or being chronically bullied. This training is also an efficient way to get quality training, aligned with an Individual Education Plan (IEP) to students with special needs.

Sugai and Walker point out that students who need indicated intervention are often the most troubled children from the most chaotic homes. These students require extremely intensive, individualized, interventions, often involving segregated special placement, including some alternative school

settings. However, civil rights legislation requires students who have behavioral disorders, like students with other disabilities, to be placed in the least restrictive environment possible, usually their own classrooms.

Some researchers who have intensively studied teacher practices, believe that extremely disruptive behavior can have roots in teacher practices (Kounin, 2003) and cultural insensitivity (Cross et al, 1989). Not all student misbehavior requires intensive intervention with students. In some case, targeted intervention with their teachers can be effective.

Ripple Effects provides a turn key solution to skill-based tertiary interventions for both students and the adults who work with them.

### ***Key characteristics of successful tertiary interventions***

For a tertiary intervention to be successful, it needs to be personalized. It needs to be matched to the learning needs of each student, address the underlying reason behind the unsafe or disrespectful behavior, and teach (including model) effective, positive alternatives that can also meet underlying needs.

Ripple Effects integrates all these elements. The most common first use of Ripple Effects in a school setting is as a positive, therapeutic, tertiary intervention for behavior problems, regardless of their origin. Ripple Effects provides a suggested protocol and individual treatment plans for a wide range of behavior-related challenges, including: "Predatory behavior," "Angry acting out," "Attention seeking/needy," "Communicative disorders," "Cultural alienation," "Defiant," "Disrespectful,"

“Disruptive,” “Hyperactive,” “Impulsive,” “Isolated/loners,” “Poor judgment,” “Rejected by peers,” “Spaced out/inattentive,” “Traumatized, Truant.”

Parallel lessons for teachers to explore their role in this behavior are found in the *Coach for Staff* training software.

 For a full description of the background and suggested scope and sequence for each of these treatment plans, see *Ripple Effects’ Individual Treatment Intervention Guide*, and the *Managing Diverse Learners* unit of the staff training software.

### ***Juvenile Justice applications***

Ripple Effects WSIS includes a separate manual with intervention plans for therapeutic sanctions for illegal behavior that has caused adolescents (and in a small percentage of cases, younger children) to become involved with the juvenile justice system. Ripple Effects offers therapeutic treatment plans for 14 criminal offenses, in the categories of Crimes against persons, Property offenses, Drug-related offenses and Status offenses. The list of offenses covered is described in Chapter 2. Each of these plans also includes lessons on building skills, strengthening pro-social norms, and understanding and exercising legal rights.

### ***Three levels for staff as well***

In addition to direct services to students, Ripple Effects system offers three levels of computer-based professional development for staff, designed to build their capacity to facilitate, reinforce, sustain and expand student learning.

 For a full description of this training, see the *Ripple Effects Coach for Implementer User Guide*.

### **Intensity/Dosage**

Another defining characteristic of many intervention programs is the intensity of service provided. Interventions can range from a single school assembly to years of systematic, sustained programming

Because the Ripple Effects system is used to address a wide range of goals, in a wide range of settings, dosage requirements also vary widely. Each lesson takes roughly 15-20 minutes. Depending on context and goals, users have seen results with dosage levels that range from a single 15 minute session to 12 contact hours over as many weeks. In general, dosage levels should be matched to the scope of the goal for the intervention, and individual student risk and protective factors, and should always include time for individual learners to privately explore topics of their choice.



As a tertiary intervention to address specific behavior problems in discipline and guidance settings, graduated dosage levels from 15 minutes (roughly one tutorial), to several hours are common. One study of 3,685 students found that repeat referrals to ISS dropped by 28% after an average of two contact hours with the software.



For targeted secondary prevention, four studies showed improved GPA with an average of 10 contact hours, or roughly 34 mandated tutorials, supplemented with one or more self-selected tutorials.



For universal promotion of resiliency assets, one study demonstrated that dosage of 12 hours resulted in significant increases in scores for empathy and problem-solving.

### Speed of implementation

Speed of implementation matters, because the real lives of real students are at stake. Every year that psycho-social interventions are not implemented widely and effectively, more students are injured, injure others, drop out of school, fail to thrive. If social-emotional readiness to learn and to interact constructively with others is recognized as essential to school and life success, then it is hard to make the case that access to social-emotional competency is anything less than a civil right. Thus the speed at which effective psycho-social interventions can be and are implemented, is not only a key quality marker, it is a matter of justice.

Regardless of the fiercely urgent need for wide scale implementation of evidence-based, SEL programs, substantial research shows that quick adoption and implementation simply doesn't work. CASEL maintains that effective program adoption takes at least 3-5 years (Greenberg et al, 2001). This has historically been true for top down programs. It cannot be disconnected from the reality that urban administrators stay in place an average of just two and a half years. As much as fifty percent of the teaching staff in these areas turns over each year. Thus the dynamics of district administration, at least in urban areas where they are most needed, mitigates against slowly staged implementation. Model program after model program is retired to the shelf before it ever gets strong enough to thrive.

Part of the problem is that “quick” adoption has often meant “dirty” as well. That is, it has been insensitive to the dynamics of personal and organizational change and/or without a means to ensure quality at scale. However, strong research also supports the assertion that rapid organizational change can be positive, and in many cases, less traumatic, and provoke less resistance than change that is dragged out. Some of the most successful superintendents of large districts are masters of accelerated change. Partly this is because it is difficult for stakeholders who are transients themselves, to see program benefits that are diluted over a lengthy period.

Some SEL experts insist that the kind of inner transformation that SEL programs target, is a long term process that cannot be expected to produce short term results (Devaney et al, 2006). On the other hand, Arthur & Blitz (2000) contend “the speed and effectiveness of implementation may depend upon knowing exactly what has to be in place to achieve the desired results for consumers and stakeholders: no more, and no less.”

Ripple Effects position is that adoption can happen much more quickly than many academicians believe if three things are present:

1. A method to scale implementer training to a “critical mass” within 18 months
2. Clear evidence of success *about something that matters to the implementers* and their bosses, within six months, preferably less
3. As positions change, a fast, inexpensive way to bring new implementers on line

Ripple Effects accepts the premise that any program that is dependent on high quality, live implementer coaching

and instruction simply can't be scaled in a compressed time period, without loss of quality. Thus the primary means of initial instruction and ongoing coaching for Implementers in the Ripple Effects program is software-based training (RE *Coach for Staff*). Ripple Effects does not accept as indisputable the belief that inner transformation is intrinsically a long, slow process. Many insight traditions across world religions, point to the possibility of "abrupt awakening" that can be transformative.



Ripple Effects outcome data from 11 studies, involving almost five thousand students, provides strong support for the fact that change can happen quickly (Bass et al, 2008; Ray, 1999. Ray et al 2008). Myriad client case studies support this same conclusion. An important key seems to be identifying the discrete goal that has meaning for administrators, and implementers and students, and targeting these goals through adaptations of the program that make the most site specific sense.

## Relevance

Realistically, for intervention programs to find a permanent place in already overcrowded school schedules, they need to be tied explicitly to schools' primary mission of promoting academic excellence, and creating a safe, supportive environment for all students as noted in chapter 5. CASEL has provided effective leadership in analyzing impact of SEL interventions on academic and other school outcomes and promoting SEL training as a means toward academic achievement for all, not a substitute for it.

From the very first year, Ripple Effects has evaluated its interventions for impact on academic factors. In almost every

case, positive effects have been demonstrated. To help clients ensure they get the academic outcomes they are seeking, Ripple Effects has developed a scope and sequence for academic achievement, which includes such topics as "study habits" and "taking tests," as well as "learning style", "teacher conflict," "effort," "goals," and "successphobia."

## Affordability

In all but the most affluent schools, need constantly outpaces resources. Every decision to allocate resources impacts all other options. Thus the cost of interventions needs to be evaluated not only in terms of absolute level of initial investment, but also comparatively, in terms of investment risk, net cost after short term return on investment, cost of sustaining, and long term return on investment

## Initial investment

The most comprehensive SEL programs, - those that address individual, family, community and structural factors concurrently - are considered by many experts to be the most effective, although Lispey and Hawkins (2007), found such wide spectrum programs to be less effective than more targeted approaches. (In any case, truly comprehensive programs are often prohibitively expensive for almost all school budgets. For instance, the exemplary FAST program costs about \$1 million per site. On the other hand, exemplary prevention programs that focus on skill building with individual students can often be purchased for one to ten percent of that cost. These less expensive programs *can* be successful, but only if delivered as

designed. (Lipsey, 1992, Botvin et al, 1990, 2000). Training teachers and providing on-going implementation support is most often the key to ensuring that programs will be delivered as designed in those settings.

Ripple Effects costs \$10K for the largest, unlimited site license for the student program, with an average life of 4 years for the software, a prorated cost of \$2500 per year. Approximately twice that initial investment is required to purchase individual copies of the professional development software for all staff in a medium sized school, delivered on a portable flash drive. An initial investment of \$30,000 per school for software and \$5,000 for training, including travel expenses, is the *most* any school would pay for Ripple Effects. That is just three and half percent of the cost of several programs that have been federally funded for piloting or dissemination. Schools who start with just one computer as a pilot (not recommended, but allowed) pay only \$549 to get the program started. Because the program has been proven effective, even when implemented by non-professionals with less than three hours training, there is also a considerable cost advantage over live instruction programs that require more intensive up-front training.

### ***Level of investment risk***

Educational systems are large bureaucracies. Almost by definition they are risk averse. One big hedge against risk is limiting investment to programs listed on “model programs” lists. Evaluation research for these programs has been vetted by research scientists, so they cannot be said to be risky ventures. The downside of this approach is that some of these lists are decades old.

Restricting options to whatever is on the list necessarily means failing to take advantage of new research and innovative methods as they arise. As a practical matter, it also most often means investing only in programs that come out of university settings, which is where the level of research needed to prove effectiveness is most often funded. Unfortunately these university-based, fully funded programs can be insulated from the real world economic, physical and policy constraints that many public schools face.

Well-designed innovative programs have the potential to dramatically change student lives, increase their chances of life long professional success, reduce their chances of becoming dependent on welfare, or involved in family violence, delinquency, or other crime. With so many students failing, dropping out, and filling the “school to prison pipeline” failing to explore innovative options that might reverse these trends also presents (what should be) an unacceptable level of risk for school districts. The question is how to hedge the risk on innovative programs, without ruling them out altogether.

Ripple Effects reduces the level of investment risk for clients in two ways. First, as an innovative program, it offers *an unconditional money back guarantee of measurable, positive outcomes*, when used as directed with a site-based plan.

Secondly, Ripple Effects is listed as a Model Program by the National Drop Out Prevention Center, having received the highest rating (strong evidence of effectiveness) for all three levels of implementation. It meets guidelines for inclusion on several lists that have been closed, and is currently under review by several others.

## Net cost after short term return on investment

Ripple Effects software has an average life of four years. That means the licensing cost described above, can be divided by four, to get a per/year cost that can range from \$150 per year for a single computer license for a small purchase, to less than \$2 per student, per year, when prorated over five years, for a district-wide license. Because many students can each get individualized intervention, all at the same time and/or when each needs it, it represents a realistic way to triage counseling services and stretch scarce resources further.

Consistent evidence of reduced truancy and lower summer school referrals among students who used Ripple Effects, relative to control or comparison groups, also has a potentially important short term economic impact on schools. Schools receive revenue based on average daily attendance figures. In some urban areas, for large high schools the program could pay for itself in the first year, simply by reducing the truancy rate by 10% (less than the average reduction seen in evaluation data so far).

### **Costs of Sustainability**

Sustainability is both a characteristic and the last stage of the implementation process. To sustain a program over time, there needs to be affordable ways to maintain training levels as staff turns over, and ways for implementers to “reinvent” programs to secure buy-in each year, without heavy investment of time and money. Teacher and community-based organization staff turnover is so high that within two years a majority of teachers, even in a school that has sponsored training, may again be

unfamiliar with the program (National Education Association Communications Fact Sheet 2002).

As described earlier in this chapter (page 7.12) Ripple Effects has a number of organizational policies and supplemental resources to increase the sustainability of its programs. Here, the focus is on the *economics* of sustainability.

Although some costs of sustaining a program are connected with the need to continually replace lost or broken materials, specifically supplemental materials, the largest cost of sustaining programs is mostly located with the continual need for training new teachers each year, and providing booster sessions for already trained teachers. There are three parts to this cost: the program developers’ fee to provide the live training, the salary costs incurred by teachers who are at the training, and payment for their substitutes if training is conducted during a regular school day. The cost of the latter is often prohibitive. Even all of this investment does not address the fact that the preponderance of evidence points to the fact that ongoing, embedded, personalized coaching is the best way to get sustained implementation of a program.

Four things make it possible to sustain Ripple Effects intervention at lower costs than other programs:

- A software license through which lost software can be replaced
- Annual maintenance/update costs of only 15% per year
- Site-based plans that are easily renewable each year
- Continuously available embedded implementer coaching (software based)

## Long term return on investment

There are two important metrics for measuring Ripple Effects' long-term return on investment. The first is how much Ripple Effects can add to the return on prior investments in other intervention programs that are not yet delivering the results that had been envisioned.

Ripple Effects *Whole Spectrum Intervention System* is not intended to replace existing, evidence-based programs, which represent many millions of dollars in already incurred financial and human resource investments. Rather it is designed to increase the return on earlier investments by providing capacity to supplement, strengthen, scale and sustain what is already in place. Ripple Effects can be a lesson-to-lesson supplement for the following programs already in large numbers of schools: *Social Decision Making/Social Problem Solving* (Research Press), *Second Step* (Committee for Children), *Positive Action* (Positive Action), *Botvin LifeSkills Training* (National Health Promotion Associates), *PATHS* (Channing Bede), *Overcoming Obstacles* (Overcoming Obstacles), *Why Try* (Why Try), *Olweus Bully Prevention* (Hazelden). It can and does increase the return on those prior investments, through reducing the need for expensive remedial programs to reach students who need more intensive support than is offered in the group level interventions using these curricula.

The second set of metrics has to do with the long term, economic costs of underemployment, poor health outcomes, welfare payments, and involvement in the criminal justice system, too often eventually including incarceration. Scientists at the American Institutes of Research (AIR) and others have extensively documented that every

dollar spent on preventive interventions can result in savings of many multiples over the life of each student who is supported toward success instead of failure. A large Pennsylvania study showed an average return on preventive interventions of \$1 – \$25 per dollar invested, but noted that not all popular interventions are cost-effective, citing a negative cost-effectiveness value of Scared Straight (Aos et al., 2004; Greenwood, 2005) created mostly by reverse effects of increased involvement of juveniles with the justice system, following exposure to the program (Jones et al, 2008).

## ROLE OF PROGRAM DESIGN ELEMENTS IN IMPLEMENTATION SUCCESS

The conceptual distinction between program content and implementation process elements has been an important one in moving the field of implementation science forward. Nonetheless, this model fails to take into account the role of program design in implementation success or failure. Two key program elements that are emerging as important factors in both the adoption and implementation processes are differentiation of learning and data management.

### Differentiation of learning

The significance to implementation science of the mounting evidence of the positive effect of personalized, differentiated learning cannot be overstated. Compelling brain imaging research as well as a growing body of outcome data described in Chapter 5 point to the fact that this is a key factor in initial and continuing engagement with

all kinds of learning for both adults and students. Yet most preventive interventions, including model programs, still do not treat differentiation of learning as an important metric of either program design or the implementation process. As overall educational reform begins to penetrate the prevention programs, differentiation (versus standardization) of learning will become increasingly important to consider, document and measure as a factor in implementation success.

As noted in the previous chapter, all Ripple Effects software is designed around the concept of universal design for learning. A strong case can be made for the fact that relatively low, group level effect sizes for “successful” live interventions is linked to the fact that some students elect not to participate in, or receive little or no benefit from the standardized, group level instructional methods that are the norm. There is an urgent need for well-designed research to measure the impact of this variable on implementation success.

## Data management

Data driven decision-making has become a mantra for education in general, and for preventive interventions in particular. It is the place where education becomes more science than art. Ongoing data management is increasingly a requirement of federal entitlement programs, including IDEA and Title 1, as well as foundation funders. These are often the funding source for secondary and tertiary intervention programs.

While requirements for collecting, analyzing and reporting data have grown, capacity has not grown proportionately, even with the addition of new resources.

Many teacher, administrators and program implementers find it almost impossible to meet the necessary requirements, much less to actually use implementation process data in real time to make program adjustments that can increase program effectiveness. Even when they are capable of collecting the requested data, many teachers consider it a betrayal of their commitment to teaching, to use scarce preparation and instructional time to fulfill paperwork requirements.

Ripple Effects data management system is well described in the previous chapter. The usefulness of this system in terms of implementation success is fourfold:

- It enables program officers to tie group and individual needs assessment to program adaptation.
- It enables implementers to track student progress against assigned goals.
- It allows researchers to conduct dosage-correlated evaluations
- It enables administrators to meet high standards of accountability.

## LEARNING FROM INEFFECTIVE PROGRAMS

*“It is commonly recognized that ineffective programs can and have been implemented fully and well, and that effective programs have been implemented ineffectively, or not at. It has been clearly established that setting level differences, account for some of that discrepancy. However, little attention has been given to identifying what are the strengths of those “ineffective” programs that make them more likely to be widely and sustainably implemented, than more theoretically rounded programs. Nor has*

*there been careful study of why some programs are implemented well and others poorly among the same staff, in the same settings” (Fixen, 2005).*

A look at a range of programs that have been implemented persistently and extensively, despite research that shows they don’t work, as well as recognition that even the most effective programs, even when implemented with full fidelity, fail to change outcomes for a substantial minority of students, leads to the conclusion that some elements of program content or design must matter in the implementation process.

Ripple Effects’ program designer (Alice Ray) has been studying this issue for more than 30 years. Without having the benefit of formal metaanalyses, which still remain to be done, drawing instead on extensive field experience with several preventive interventions, she has identified four program design characteristics as being key to successful implementation of *ineffective* programs. Those programs are characterized by one or more of the following: They

- Lighten implementer’s load
- Are easy to use
- Avoid the boredom factor
- Have a “customer is right” focus

### **Lightening the load**

All teachers have too little time for extensive preparation in order to deliver even one lesson outside of their area of domain expertise, much less two dozen or more such lessons in an area they may never have been formally trained in. Thus it is not surprising that program interventions are more successful when they lighten a teacher’s burden, rather than make it heavier.

Programs that provide outside presenters to deliver an intervention in a regular class period, have higher implementation rates than those that require classroom teachers to deliver the intervention. DARE is a perfect example of a program that is much more widely implemented than effectiveness research suggests it should be. From an implementation perspective it is a great program. It lightens a teacher’s load, and serves the secondary goal of developing positive relationships with the police force, by bringing police into the classroom to deliver information and skill training (including training in skills they may not have mastered themselves). By comparison, Botvin’s well-researched, model, substance abuse *Social Skill* training program requires teachers to take on additional responsibilities to prepare, adapt and present the material.

Ripple Effects lightens teacher’s load by removing the burden of becoming SEL domain experts from their shoulders and providing them with an instantly available support for dealing with behavior problem that interrupt the flow of instruction.

### **Ease of use**

Programs that have easy to use teaching prompts, such as large illustrations or photos with teacher scripts on back, among which *Second Step* was one of the first, while not as easily embraced as DARE’s turnkey approach, are implemented at higher rates, and with greater fidelity, than those that provide teachers with a well referenced instructional “cookbooks” and expect teachers to then cook up a class – or dozens of them.

Ripple Effects makes things easy for teachers. It brings outside experts into

the classroom to deliver evidence based practices. Those experts' presentations are made using peer voices of the learners, whether those learners are children, adolescents, or adults.

Although teachers have the option of planning and preparing each lesson, they can also just give a student a starting point and trust the expert system to guide them through a useful sequence.

### Avoiding Boredom

A common characteristic of the most popular, ineffective programs, whether school assemblies, puppet shows, cop presentations, or computer games is that they are not boring. "Scared Straight" which brings delinquent youth into jails and prisons to talk with inmates may be ineffective from a research perspective, but it is popular because it is exciting and creates a short-term emotional reaction. A too frequent assumption among many program developers, researchers (and implementers as well), is that they often must choose between programs that work, but are boring, or programs that don't work, but are engaging. This is not an unreasonable belief.

Of necessity, print and video programs on sensitive topics often must be reduced to a "boiled potatoes" approach. They are scientifically "nutritious" (evidence-based), but in order to be acceptable to every community, from Biloxi to San Francisco, they must often be reduced to a lowest common denominator. The result is often bland, if not downright boring. There needs to be a way to avoid being boring, without being offensive and without requiring extraordinary effort from already overburdened teachers.

One major way to reduce the boredom factor is to increase the level of

physical engagement with the program available to each student. Physical interactivity with a computer program is one well documented way of doing that.

Another way to reduce the boredom effect is to increase the emotional engagement available to each student, by widening the content and "spicing it up."

Separate from content is the issue of boring – and bored – teachers. In film, it's axiomatic that a bad actor can ruin the best script, but even the best acting cannot rescue a bad script. There is a parallel phenomenon among teachers, including presenters of SEL programs. The appeal of inherently interesting topics can be completely lost if it is presented in a boring, didactic way.

Ripple Effects provides both physical and emotional engagement to keep students and teachers from becoming bored. In terms of emotional engagement, with 390 tutorials in the teen software alone, Ripple Effects offers a range of content that is both wider and more emotionally compelling than any other SEL intervention. Most of the topics beyond the standard, skill building tutorials to address bullying, violence, tobacco, drugs and alcohol were recommended for inclusion by learners themselves. Many of these tutorials start with the word not: "not included," "not athletic", "not good looking" etc. Experts may recommend strengths-based training, but students – like most humans – are more concerned with first dealing with their place of personal pain. Ripple Effects tutorials for some fairly common traumatic experiences, such as "pet dying" (obvious after the fact, but not generally part of SEL curricula) fit in this group. Less common, and even more traumatic experiences, such as being the victim of sexual abuse or the target of a hate crime, are also included. In every

case, the local administrator can delete what they don't want.

### **“Customer is right” focus**

Wide scale commitment to implementation of SEL intervention has been hampered by a mismatch between practitioner experience and research findings. The institutional bias at every level of government is in favor of the researcher, at the expense of practitioners. And there is virtually no recognition at any level, that the student-learner's direct experience has validity equal to, and perhaps greater than, any other evaluator.

A large body of marketing research points to the fact that a “customer is right” focus pays off in increased customer commitment. Nordstrom's was the first national retailer to make this a differentiating source of competitive strength. Their huge success has led to policy changes in almost every major retail chain in the country, especially regarding returns and refunds,

There has not been a corresponding change in understanding of the role of customer focus in best practices for implementing SEL programs. Unfortunately in terms of implementation science, when outcomes don't match predictions, the customer is usually considered “wrong.” He or she or they didn't do what they were told, didn't learn the right information, didn't follow the right order, etc, etc, etc.

It is Ripple Effects' position that this bias against the consumer, often expressed in vastly discounting “anecdotal” evidence that doesn't agree with outcomes in controlled settings, is a major factor in implementation failure. The issue goes beyond finding a balance between fidelity and adaptation. It goes

to a fundamental issue of respect or disrespect for clients' everyday experience.

Ripple Effects believes the customer *is* always right. The challenge is simply to find *how* they are right, and then use that new knowledge to strengthen the program. When implementers tell us they need manuals with individual treatment plans, even though thousands of such plans are already built into the expert system, we create and distribute those plans, because if clients think they need them, then they do, whether or not a technical case can be made for the other side. When students tell us that their major concerns are not drug or alcohol use, or even violence, and certainly not empathy, but appearance issues and peer relations, we listen and find ways to leverage those interests to build the key skills that research shows they also need. When a customer tell us they have tried the program and it doesn't produce positive outcomes (something that has happened only once in a dozen years) we refund their money. If a training has fallen short of agreed upon standards, we repeat it without charge.

This is about more than placating people who pay for a program. It is about recognizing, respecting and leveraging the whole body of earned wisdom that is offered to us, regardless of where it comes from. It is about refusing to accept that implementation, or any other part of intervention success, is an either/or proposition: either stages or components; either practitioner oriented, or theory based; either implementer focused, or learner centered.

What makes Ripple Effects truly a *Whole Spectrum Implementation System* is the same thing that defines other parts of the *Whole Spectrum Intervention System*: it refuses to arbitrarily pick and

choose where parts of the truth deserve to be recognized and where the source of that truth may lie.

## REFERENCES

- Aarons, G. A. (2004). Mental Health Provider Attitudes Toward Adoption of Evidence-Based Practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research, 6*(2), 61-74.
- Adelman, H. S., & Taylor, L. (2003). On sustainability of project innovations as systemic change. *Journal of Educational and Psychological Consultation, 14*(1), 1-25.
- Alavi, M., & Joachimsthaler, E. A. (1992). Revisiting DSS Implementation Research: A Meta-Analysis of the Literature and Suggestions for Researchers. *MIS Quarterly, 16*(1), 95-116.
- Anderson, J., & Narasimhan, R. (1979). Assessing Project Implementation Risk: A Methodological Approach. *Management Science, 25*(6), 512-521.
- Aos, S., R. Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth (Document No. 04-07-3901). Olympia: Washington State Institute for Public Policy.
- Arthur, M. W., & Blitz, C. (2000). Bridging the gap between science and practice in drug abuse prevention through needs assessment and strategic community planning. *Journal of Community Psychology, 28*(3), 241-255.
- Backer, T.E. (2002) *Finding the Balance: Program Fidelity and Adaptation in Substance Abuse Prevention. A state of the Art Review*. DHHS/SAMHSA/CSAP 2002 Conference Edition. Downloaded from [www.nrepp.samhsa.gov/pdfs/FindingBalance1.pdf](http://www.nrepp.samhsa.gov/pdfs/FindingBalance1.pdf) March 15, 2009.
- Backer, T. E., Liberman, R. P., & Kuehnel, T. G. (1986). Dissemination and adoption of innovative psychosocial interventions. *Journal of Consulting and Clinical Psychology, 54*, 111-118.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of a Computer-Based, Social-Emotional Intervention on Outcomes Among Latino Students When Adult Monitors of the Student Training Are Non-professionals: A Randomized Controlled Trial. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of a Self-Regulated, Computerized, Social-Emotional Learning Intervention on Disengaged and Delinquent Students at a Continuation High School. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact Of Self-Regulated Use Of Computer-Based Social-Emotional Learning On Rural Adolescents At Risk For Alcohol Abuse. San Francisco: Rockman et al.
- Bass, K, Perry, S.M., Ray, A. & Berg, S. (2008). Impact of Social-Emotional Learning Software on Attitudes About Marijuana and Alcohol Among Urban and Rural Adolescents. San Francisco: Rockman et al.
- Bauman, L. J., Stein, R.E. K., & Ireys, H. T. (1991). Reinventing fidelity: The transfer of social technology among settings. *American Journal of Community Psychology, 19*, 619-639.
- Berg, S. , Cluver, S., Brentano, L. and Ray, A. *Ripple Effects Technology Guide*. Ripple Effects, Inc., San Francisco, CA. 2006.
- Bero, L., Grilli, R., Grimshaw, J., Harvey, E., Oxman, A., & Thomson, M.A. (1998). Closing The Gap Between Research and Practice – An Overview of Systematic Reviews of Interventions to Promote Implementation of Research Findings by Health Professionals. In A. Haines & A. Donald (Eds.), *Getting Research Findings into Practice*. (pp. 27-35). London: British Medical Journal Books.

- Bierman, K. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., et al. (2002). The implementation of the Fast Track Program: An example of a large-scale prevention science efficacy trial. *Journal of Abnormal Child Psychology*, 30(1), 1-17.
- Blase, K. A., & Fixsen, D. L. (2003). *Evidence-Based Programs and Cultural Competence*. Tampa, FL: National Implementation Research Network, Louis de la Parte Florida Mental Health Institute, University of South Florida.
- Botvin, G., Baker, E., Dusenbury, L., Tortu, S., & Botvin, E. (1990). Preventing adolescent drug abuse through a multimodal cognitive-behavioral approach: Results of a 3-year study. *Journal of Consulting and Clinical Psychology*, 58(4), 437-446.
- Botvin, G. J. (2000). Preventing drug abuse in schools: Social and competence enhancement approaches targeting individual-level etiological factors. *Addictive Behaviors*, 25, 887-897.
- Botvin, G. J., Griffin, K. W., Diaz, T., & Ifill-Williams, M. (2001a). Drug abuse prevention among minority adolescents: One-year follow-up of a school-based preventive intervention. *Prevention Science*, 2, 1-13.
- Botvin, G. & Griffin, K.,(2005). Prevention science, drug abuse prevention, and Life Skills Training: Comments on the state of the science. *Journal of Experimental Criminology* (2005) 1: 63-78
- Buston, K., Wight, D., Hart, G., & Scott, S. (2002). Implementation of a teacher-delivered sex education programme: obstacles and facilitating factors. *Health Education Research*, 17(1), 59-72.
- Chen, H. T., & Rossi, P. H. (1983). Evaluating with sense the theory driven approach. *Evaluation Review*, 7(3), 283-302.
- Chilvers, R. (2002). Evidence into practice – Application of psychological models of change in evidence-based implementation. *British Journal of Psychiatry*, 181, 99-101.
- Crosby, B. L. (1991). Stakeholder Analysis: A Vital Tool for Strategic Managers. *Implementing Policy Change: Technical Notes*(2), 1-6.
- Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review*, 18(1), 23-45.
- Dansereau, D. F., & Dees, S. M. (2002). Mapping training: The transfer of a cognitive technology for improving counseling. *Journal of Substance Abuse Treatment*, 22, 219-230.
- Devaney, E., O'Brien, M. U., Resnik, H., Keister, S., & Weissberg, R. P. (2006). *Sustainable schoolwide social and emotional learning (SEL): Implementation guide and toolkit*. Chicago, IL: CASEL.n
- Durlak, J. A., & Weissberg, R. P. (2005, August). *A major meta-analysis of positive youth development programs*. Invited presentation at the Annual Meeting of the American Psychological Association. Washington, DC.
- Domitrovich, C. E., & Greenberg, M. T. (2000). The study of implementation: Current findings from effective programs that prevent mental disorders in school-aged children. *Journal of Educational and Psychological Consultation*, 11(2), 193-221.
- Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. *Health Education Research*, 18(2), 237-256.
- Elias, M. J., & Kamarinos Galiotos, P. (2004). Sustaining social-emotional learning programs: A study of the developmental

- course of model/flagship SEL sites.  
Unpublished manuscript, Rutgers  
University, Piscataway, NJ
- Elliott, D. S. (1997). Implementing and  
evaluating crime prevention and control  
programs and policies. *Crime Law and  
Social Change*, 28(3-4), 287-310.
- Elliott, D. S., & Mihalic, S. (2004). Issues in  
Disseminating and Replicating Effective  
Prevention Programs. *Prevention Science*,  
5(1), 47-52.
- Ennett, S. T., Tobler, N. S., Ringwalt, C. L., &  
Flewelling, R. L. (1994). How effective is  
drug abuse resistance education? A meta-  
analysis of Project D.A.R.E. outcome  
evaluations. *American Journal of Public  
Health*, 84, 1394-1401.
- Fagan, A. A., & Mihalic, S. (2003). Strategies  
for Enhancing the Adoption of School-  
Based Prevention Programs: Lessons  
learned from the Blueprints for Violence  
Prevention Replications of the Life Skills  
Training Program. *Journal of Community  
Psychology*, 31(3), 235-253.
- Fairweather, G.W., Sanders, D. H. &  
Tornatzky, L. G. (1974). The essential  
conditions for activating adoption. In  
*Creating change in mental health  
organizations* (pp. 137-161). Elmsford,  
NY: Pergamon Press.
- Fixsen, D. L., & Blase, K. A. (1993). Creating  
new realities: Program development and  
dissemination. *Journal of Applied  
Behavior Analysis*, 26, 597-615.
- Fixsen, D. L., Naoom, S. F., Blase, K. A.,  
Friedman, R. M. & Wallace, F. (2005).  
Implementation Research: A Synthesis of  
the Literature. Tampa, FL: University of  
South Florida, Louis de la Parte Florida  
Mental Health Institute, The National  
Implementation Research Network (FMHI  
Publication #231).
- Fixsen, D. L., Blase, K. A., Timbers, G. D.,  
and Wolf, M. M. (2001). In Search of  
Program Implementation: 792
- Replications of the Teaching- Family  
Model. In G. A. Bernfeld, D. P.  
Farrington, & A. W. Leschied Eds.),  
*Offender rehabilitation in practice:  
Implementing and evaluating effective  
programs*, 149-166. London: Wiley.
- Forgatch, M. S., Patterson, G. R., &  
DeGarmo, D. S. (in press). Evaluating  
Fidelity: Predictive Validity for a Measure  
of Competent Adherence to the Oregon  
Model of Parent Management Training.  
*Behavior Therapy*.
- Gallagher, K. (2001). *Bringing Research to  
Scale: The Nurse-Family Partnership  
Program*. Denver, CO: The  
ColoradoTrust.
- Gingiss, P. L. (1992). Enhancing program  
implementation and maintenance  
through a multiphase approach to peer-  
based staff development. *Journal of  
School Health*, 62(5), 161-166.
- Glasgow, R.E., Lichtenstein, E., Marcus, A.  
(2002) Why don't we see more  
translation of health promotion research  
to practice? Rethinking the efficacy to  
effectiveness transition. *American Journal  
of Public Health*, 93(8):1261-1267.
- Goleman, D. (1998, Nov.-Dec.). What makes  
a leader? *Harvard Business Review*, 93-  
102.
- Goodman, R. M. (2000) Bridging the gap in  
effective program implementation: From  
concept to application. *Journal of  
Community Psychology*, 28(3), 309-321.
- Gottfredson, D. C., & Gottfredson, G. D.  
(2002). Quality of school-based  
prevention programs: Results from a  
national survey. *Journal of Research in  
Crime and Delinquency*, 39(1), 3-35.
- Greenberg, M.T., Domitrovich, C.E.,  
Graczyk, P., & Zins, J. (January 2001 ). A  
Conceptual Model of Implementation for  
School-Based Preventive Interventions:  
Implications for Research, Practice, and  
Policy. Report to the Center for Mental  
Health Services, Substance Abuse and

- Mental Health Services Administration,  
US Department of Health and Human  
Services.
- Greenwood, P. (2005). *Changing lives: Delinquency prevention as crime control policy*. Chicago, IL: University of Chicago Press.
- Hahn, E. J., Noland, M. P., Rayens, M. K., & Christie, D. M. (2002). Efficacy of training and fidelity of implementation of the Life Skills Training Program. *Journal of School Health, 72*(7), 282-287.
- Hallfors, D., & Godette, D. (2002). Will the 'Principles of Effectiveness' improve prevention practice? Early findings from a diffusion study. *Health Education Research, 17*, 461-470.
- Harachi, T. W., Abbott, R. D., Catalano, R. F., Haggerty, K. P., & Fleming, C. (1999). Opening the black box: Using process evaluation measures to assess implementation and theory building. *American Journal of Community Psychology, 27*(5), 715-735.
- Henggeler, S. W., Melton, G. B., Brondino, M. J., Scherer, D. G., & Hanley, J. H. (1997). Multisystemic therapy with violent and chronic juvenile offenders and their families: The role of treatment fidelity in successful dissemination. *Journal of Consulting and Clinical Psychology, 65*(5), 821-833.
- Jones, D., Bumarger, B., Greenberg, M., Greenwood, P., Kyler, S. *The economic Return on PCCD's Investment in Research-based Programs: A Cost-Benefit Assessment of Delinquency Prevention in Pennsylvania*. Prevention Research Center. Pennsylvania State University, 2008.
- Joyce, B., & Showers, B. (2002). *Student Achievement Through Staff Development (3<sup>rd</sup> ed.)*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence based practice: a conceptual framework. *Quality in Health Care, 7*(3), 149-158.
- Klem, A. M. (2000). You Can Get There From Here: Using a Theory of Change Approach to Plan Urban Education Reform. *Journal of Educational and Psychological Consultation, 11*(1), 93-120.
- Korunka, C., Weiss, A., & Karetta, B. (1993). Effects of New Technologies with Special Regard for the Implementation Process per se. *Journal of Organizational Behavior, 14*(4), 331-348.
- Kounin, Jacob S. , (2003). The Kounin Model. Approaches to Discipline, <http://www.solwebs.net/sgfl/teaching/discplan/koun1.htm>.
- Lambert, E. (2003). The impact of organizational justice on correctional staff. *Journal of Criminal Justice, 32*, 155-168.
- Leschied & Cunningham, (2002.) *Seeking Effective Interventions for Serious Young Offenders Interim Results of a Four-Year Randomized Study of Multisystemic Therapy in Ontario, Canada*. Center for Children and Families in the Justice System. Ontario, Canada
- Linehan, M. (1991). *Cognitive-Behavioral Treatment of Borderline Personality Disorder*. New York: Guilford Press.
- Lipsey, M. W. (1992b). The effect of treatment of juvenile delinquents: Results from meta-analysis. In F. Losel, D. Bender, & T. Bliesener (Eds.), *Psychology and law: International perspectives* (pp. 131-143). New York: Walter de Gruyter.
- Lipsey, M.W., Hawkins, D. (2007, May) *Prevention Of Antisocial Behavior: The Most Effective Interventions For Changing The Most Predictive Risk Factors*. Organized Paper Symposium, Society for

- Prevention Research Annual Meeting, Washington, D.C.
- McCormick, L. K., Steckler, A. B., & McLeroy, K. R. (1995). Diffusion of innovations in schools: A study of adoption and implementation of school-based tobacco prevention curricula. *American Journal of Health Promotion, 9*(3), 210-219.
- McDermott, R. (1999a). Knowledge Management – Why Information Technology Inspired But Cannot Deliver Knowledge Management. *California Management Review, 41*(4), 103-117.
- Mihalic, S., Fagan, A., Irwin, K., Ballard, D., & Elliott, D. (2004). *Blueprints for Violence Prevention*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Mihalic, S., & Irwin, K. (2003). Blueprints for Violence Prevention: From Research to Real-World Settings-Factors Influencing the Successful Replication of Model Programs. *Youth Violence and Juvenile Justice, 1*(4), 307-329.
- Milojicic, D. S., Douglass, F., Paindaveine, Y., Wheeler, R., & Zhou, S. N. (2000). Process migration. *Acm Computing Surveys, 32*(3), 241-299.
- Mittman, B. S., Tonesk, X., & Jacobson, P. D. (1992). Implementing Clinical Practice Guidelines: Social Influence Strategies and Practitioner Behavior Change. *Quality Research Bulletin, 413-421*.
- Moll, L. C. (1990). *Introduction to Vygotsky and Education: Instructional implications of sociohistorical psychology*. Cambridge: Cambridge University Press.
- Morgan, M. J. (1992). Systems Implementation Strategy: Behavioural and Organizational Aspects. *Industrial Management and Data Systems, 92*(8), 88-98.
- National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention Development and Deployment. (2001). *Blueprint for change: Research on child and adolescent mental health*. Washington, DC: National Institute of Mental Health.
- Niazi, M., Wilson, D., & Zowghi, D. (2005). A maturity model for the implementation of software process improvement: An empirical study. *Journal of Systems and Software, 74*(2), 155-172.
- Nutt, P. C. (1986). Tactics of Implementation. *Academy of Management Journal, 29*(2), 230-261.
- Olds, D. L., Hill, P. L., O'Brien, R., Racine, D., & Moritz, P. (2003). Taking preventive intervention to scale: The nurse-family partnership. *Cognitive and Behavioral Practice, 10*, 278-290.
- Patti and Tobin (2003). *Smart School Leaders: Leading with Emotional Intelligence*. Dubuque: Kendall Hunt Publishing Co.
- Paulson, R. I., Post, R. L., Herinckx, H. A., & Risser, P. (2002). Beyond components: Using fidelity scales to measure and assure choice in program implementation and quality assurance. *Community Mental Health Journal, 38*(2), 119-128.
- Pentz, M. A., Trebow, E. A., Hansen, W. B., & MacKinnon, D. P. (1990) Effects of program implementation on adolescent drug use behavior: The Midwestern Prevention Project (MPP). *Evaluation Review, 14*(3), 264-289.
- Racine, D. P. (1998). *Replicating Programs in Social Markets*. Philadelphia, PA: Public/Private Ventures.
- Racine, D. P. (2000). *Investing in What Works*. Philadelphia, PA: Public/Private Ventures.
- Ray, A. (2008). Unexpected findings on the impact of computerized social-emotional learning: Implications for research and practice. Paper presented at the 2008 Annual Meeting of the American Educational Research Association.
- Ray, A., Perry, S., Bass, K., & Berg, S. (2008) Computer-based training to promote self-

- efficacy: Ethnicity, urban/rural status and impacts on locus of control. *Ripple Effects*. San Francisco.
- Ray, A. *Creating a Plan for RTI and EIS: Individualized Behavior Interventions*. Ripple Effects, Inc., San Francisco, CA. 2009
- Ray, A. *Relate for Kids*, training software, Version 1.0, 1.1. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Relate for Teens*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 1999 – 2004.
- Ray, A. *Respect for Persons Profiler*. Ripple Effects, Inc., San Francisco, CA. 2005 - 2009.
- Ray, A. *Ripple Effects Bring It On*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2004.
- Ray, A. *Ripple Effects Coach for Staff (Implementers)*. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects for Kids*, training software, Version 2.0, 3.0, 3.1. Ripple Effects, Inc., San Francisco, CA. 2005 – 2009.
- Ray, A. *Ripple Effects Positive Behavioral Intervention guide: Sample Individual Treatment Plans*. Ripple Effects, Inc., San Francisco, CA. 2006
- Ray, A. *Ripple Effects Respect for Persons*, training software, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2000 – 2009.
- Ray, A. *Ripple Effects School Safety Profiler*. Ripple Effects, Inc., San Francisco, CA. 1999 – 2009.
- Ray, A. *Ripple Effects for Staff*, training software, Version 1.1, 2.0. Ripple Effects, Inc., San Francisco, CA. 2006 – 2009.
- Ray, A. *Ripple Effects Survey Engine*, Version 1.0, 2.0. Ripple Effects, Inc., San Francisco, CA. 2003 – 2009.
- Ray, A. *Ripple Effects for Targeted Prevention: Risk Reduction*. Ripple Effects, Inc., San Francisco, CA. 2007
- Ray, A. *Ripple Effects Teaching Coach*, training software, Version 1.0. Ripple Effects, Inc., San Francisco, CA. 2004 - 2006.
- Ray, A. *Ripple Effects for Teens*, training software, Version 2.1, 3.0, 3.1, 3.2. Ripple Effects, Inc., San Francisco, CA. 2004 – 2009.
- Ray, A. *Ripple Effects Universal Promotion: Sample Scope and Sequences*. Ripple Effects, Inc. San Francisco, CA. 2006
- Salanova, M., Cifre, E., & Martin, P. (2004). Information technology implementation styles and their relation with workers' subjective well-being. *International Journal of Operations & Production Management*, 24(1-2), 42-54.
- Schoenwald, S. K., & Hoagwood, K. (2001). Effectiveness, transportability, and dissemination of interventions: What matters when? *Psychiatric Services*, 52, 1190-1197.
- Schofield, J. (2004). A Model of Learned Implementation. *Public Administration*, 82(2), 283-308.
- Schorr, L. B. (1993). *Effective strategies for increasing social program replication/adaptation*. Seminar On Effective Strategies For Increasing Social Program Replication/Adaptation. Washington, DC: National Association of Social Workers.
- Simpson, D. D. (2002). A conceptual framework for transferring research to practice. *Journal of Substance Abuse Treatment*, 22(4), 171-182.
- Startup, M., & Shapiro, D. A. (1993). Therapist treatment fidelity in prescriptive vs. exploratory psychotherapy. *British Journal of Clinical Psychology*, 32, 443-456.
- Stolz, S. B. (1981). Adoption of innovations from applied behavioral research: "Does anybody care?" *Journal of Applied Behavioral Analysis*, 14, 491-505.

- Sugai, G., Horner, R.H., Dunlap, G., Hieneman, M., Lewis, T.J., Nelson, C.M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A.P., Turnbull, H.R., III, Wickham, D., Reuf, M., & Wilcox, B. (2000). Applying positive behavioral support and functional behavioral assessment in schools. *Journal of Positive Behavioral Interventions, 2*, 131-143.
- Sugai, G., & Lewis, T. (2002). Social skills instruction in the classroom. In E.J. Kame'enui & C. Darch (Eds.), *Instructional classroom management*. (2nd ed.). White Plains, NY: Longman.
- Substance Abuse and Mental Health Services Administration. (n.d.). *Connecting science to service: SAMHSA model programs*. Washington, DC: U.S. Department of Health and Human Services (<http://modelprograms.samhsa.gov>).
- Taylor, L., Nelson, P., & Adelman, H. (1999). Scaling-up Reforms across a School District. *Reading and Writing Quarterly, 15*(4), 303-325.
- Tobler, N. (1992) "Drug Prevention Programs Can Work: Research Findings." *Journal of Addictive Diseases 11*(3) 1992: 1-28.
- Walker, Horner, Sugai, Bullis, Sprague, Bricker, and Kaufman, 1996
- Walker, H.M., & Shinn, M.R. (2002). Structuring school-based interventions to achieve integrated primary, secondary, and tertiary prevention goals for safe and effective schools. In M.R. Shinn, G. Stoner, & H.M. Walker (Eds.), *Interventions for academic and behavior problems: Preventive and remedial approaches*. National Association of School Psychologists. Silver Spring, MD.
- Washington State Institute for Public Policy, (2002). Washington State's Implementation of Aggression Replacement Training for Juvenile Offenders: Preliminary Findings 2002 June. Robert Barnoski. #02-06-1201.
- Webster-Stratton, C. (1996). Early intervention with videotape modeling. Programs for families of children with oppositional defiant disorder or conduct disorder. In E. D. Hibbs & P. S. Jensen (Eds.), *Psychosocial treatments for child and adolescent disorders: Empirically based strategies for clinical practice* (pp. 435-474). Washington DC: American Psychological Association.
- Winter, S. G., & Szulanski, G. (2001) Replication as Strategy. *Organization Science, 12*(6), 730-743.
- Wolf, M. M., Kirigin, K. A., Fixsen, D. L., Blase, K. A., & Braukmann, C. J. (1995). The Teaching-Family Model: A case study in data-based program development and refinement (and dragon wrestling). *Journal of Organizational Behavior Management, 15*, 11-68.
- Wolf, M. M., Kirigin, K. A., Fixsen, D. L., Blase, K. A., & Braukmann, C. J. (1995). The Teaching-Family Model: A case study in data-based program development and refinement (and dragon wrestling). *Journal of Organizational Behavior Management, 15*, 11-68.
- Zins, J. E., & Illback, R. J. (1995). Consulting to facilitate planned organizational change in schools. *Journal of Educational and Psychological Consultation, 6*(3), 237-245.

## *Afterward: Who's behind it?*

The theory and evidence for any intervention has to stand on its own feet. Nonetheless, anyone who considers investing in a prevention program might well ask: Where does it come from? Who is behind it and what motivated them?

### **ORIGINAL QUESTION FOR ALICE RAY**

#### **How to create a heart of justice?**

The genesis of Ripple Effects was a series of studies I conducted in the early 1980s. I was the first Executive Director of what became a leading child abuse prevention organization, Committee for Children. In collaboration with other professionals and leading community-based organizations across the country, we had accomplished the goal of getting research-based, abuse prevention materials in more than 25% of the country's school districts – something to be proud of. But it left prevention efforts resting heavily on the shoulders of young victims and potential victims. Was this really the best we could do? I asked: ***“What would it take for the next generation of young people not to become perpetrators of violence? How could we create in young people a heart of justice?”***

#### **What is under personal control?**

I knew that ethnicity, socio-economic status, family dynamics, and media influence all were factors in risk for victimization - from both directions - but those things are not under personal control. I was looking for characteristics that could be under personal control and

might become pivot points for change. After reviewing published studies (long before they were available on the web) and interviewing practitioners at prevention and treatment clinics across the country, I began to see a pattern. Both quantitative and qualitative evidence pointed in the same direction.

After stripping off factors not under personal control, people who hurt others – and those who were their victims – were often missing one or more core personal characteristics that could broadly be grouped into abilities that underpin a strong, efficacious sense of self, those that strengthen awareness of and connection to others, and those that enable resolution of the conflict when the interests of self and others inevitably collide.

#### **Meta-analyses confirmed risks**

Over the next two decades, powerful new computer programs enabled completion of much larger, more systematic and rigorous meta-analyses of risk and protective factors for anti-social behavior. Those statistical analyses of thousands of studies confirmed – and further honed – many of my original insights. Injurious behavior to both self and others is indeed correlated with certain personal characteristics (as well as with external factors). These characteristics can be defined as individual risk factors. As importantly, systematic research was also demonstrating that the flip side of these characteristics did more than protect against anti-social or injurious behavior,

they predicted and enhanced school and life success.

### **Assets linked to life success**

If so much injury was connected to the lack of specific abilities, much suffering could be prevented through ensuring that each person possessed them. If school and life success was linked to their presence, developing these assets should be a collective priority. But could they be taught? Many people believed they were innate.

### **Could they be taught?**

**Yes, but . . .**

Important work emerging from universities and treatment centers in the late 1970's and early 1980's, and continuing through today, has shown that these abilities could be learned. Different strategies have been developed in different academic and treatment settings, and shown to be effective for different abilities: cognitive-behavioral strategies from Harvard and Penn State, affective research from Yale, decision-making models from the University of Illinois and Rutgers.

But too often treatment was coming into play after the injury had occurred. Why wait until so much pain and suffering had been caused to begin to teach the skills that could prevent it?

### ***Second Step* an effort to teach them**

In 1985, I initiated development of a curriculum to begin teaching these abilities in childhood, before the cycle of pain and punishment began. Under my direction, Kathy Beland expertly authored

the print-based, violence prevention curriculum called *Second Step*, now used in tens of thousands of schools. The name was based on Mahatma Gandhi's belief that the first step of non-violence is to refuse to be a victim (the goal of abuse prevention programs). The "second step" is to prevent others from becoming victimizers. Today, that program is among the most widely used, clinically-validated programs available. There are now a whole group of effective models developed along similar lines.

### **Effective... but not universally**

Some of these prevention programs, including *Second Step*, have been proven effective and are partly credited with the overall downward trend of youth violence. Yet they are far from fulfilling their potential to prevent suffering. What works in the lab, doesn't always work in the field. None is effective in every setting, nor with every child. And many fall quickly out of use, often ending up on the shelf within three years. Through a combination of personal interviews and surveys conducted by Mothers against Violence in America (MAVIA) as early as 1990, we realized that the "churn" of prevention programs approached that of magazine subscriptions, with as many as 70% of subscribers falling away within two to three years.

## **SECOND QUESTION**

### **How to keep good programs off the shelf?**

Seeing the gap between theoretical best practice and real world results led me to a second question. "What would need to be true to prevent programs that

have been shown to work in the lab, from failing in practice, or ending up on the shelf?" Again, I looked both to published research and to direct conversations with practitioners from around the country for answers. There was not a simple answer. Several major themes emerged. To be successful in the real world, programs would need the capacity to:

- *Preserve fidelity* to evidence-based knowledge and practice, even as that scientific base was constantly expanding
- Allow *local communities control* over sensitive social content, without losing fidelity to science
- *Enable adaptation* to site-specific, and student specific circumstance, without compromising that fidelity
- Offer an *affordable method for scaling* without losing quality control
- *Ensure sustainability* in contexts with frequent staff turnover
- Build-in *cultural competence* at every level
- Allow *learning mode personalization* to better accommodate diverse learning styles, needs, abilities and disabilities
- *Enable individualized guidance*, to address personal risk factors, as well as their underlying causes.
- Be directly *tied to school*\_(or other sponsoring organizations) *outcomes*
- Find a way to *not be boring!*

### **THIRD STEP: NEXT-GENERATION PREVENTION**

#### **Ripple Effects founded**

Beginning in the late 1980's, I began to explore a *third step*: the use of emerging technologies to address some

of these challenges. I sought foundation funding to develop a next generation prototype, but the timing was premature.

It was with this background and in this context that in 1993 I met technology innovator, Sarah Berg. Sarah hired me as a consultant on a complex project that Microsoft co-founder Paul Allen had funded: producing a traveling multimedia exhibit to tour with the Lollapalooza concert festival (a group of alternative bands targeting teenagers). Following that, Sarah initiated the idea of forming a company that would use emerging technologies to realize the vision that I had begun to articulate. At the end of 1996, we co-founded Ripple Effects, where I would author and design and Sarah would produce a new skill-training software application for youth, designed to change behavior, solve problems, and promote social-emotional abilities.

#### **Accomplished professionals team up with at-risk youth**

We contracted with a few of the most highly accomplished technologists in the country to provide the technical skills that we needed. We hired a cadre of youth from opportunity programs to help build the software and give it the look and feel of the adolescents who would be using it. Over the next ten years, various versions of the software would go on to win 30 major national and international awards, from the education, health, software and communications industries.

#### **Evaluations enable feedback loop**

Starting in 1998, both formative and summative evaluations were conducted on various configurations of the program with various communities, in various settings. The results of those studies

became the basis for program changes, which then were the subject of further study. Through this feedback loop that included both scientific and informal client evaluations (including evaluation by student users), we made hundred of refinements to content and we learned two very important lessons:

- If it was used, the training software worked; in many cases positive results were quick and dramatic, BUT
- Sometimes it wasn't used.

We had solved some critical implementation fidelity problems, but not all of them. In fact, some of the features we had designed in to make implementation easier or more effective, actually worked against us:

- The program was so comprehensive, it could seem overwhelming. Users wanted more guidance in the form of scope and sequences for primary, secondary and tertiary prevention, with the rationale for each clearly spelled out.
- Providing children skill training was only addressing half of the equation. Teachers said *they* had never learned much of what we were teaching students. These implementers were in needs of training and coaching on an ongoing basis, both in how to use the program and in how to develop their own social-emotional capacities and technical skills.
- Even when program sponsors were absolutely convinced of the program's value, because it had never been done before, they had a hard time explaining it to others. They wanted videos and other tools to make their job easier.

- Administrators were charged with evaluating the evidence-base of the program, but because the theory was implicit, rather than explicit, it was hard to do. They wanted a clear summary of the evidence of effectiveness and a readable summary of the theory behind its use

## BACK TO THE DRAWING BOARD

It was back to the drawing board. To increase the chance of successful implementation:

- We expanded the program from a single software application for teens, to software-based training that included younger students and comprehensive professional development as well.
- We created a comprehensive set of supplemental print and web-based materials, including the set of 13 manuals listed on page 1.13.
- We expanded research efforts, summarized findings and made results available to decision-makers.
- We developed a three-minute overview video about *the Whole Spectrum Intervention System* and make it available on the web, along with videos of client's experiences, to make presenting the program easier for sponsors and advocates,
- Finally, we took on the task of making explicit, the broad and deep theory base that is hidden beneath and underpins the program. It is that effort which has filled these pages.

Alice Ray

***RIPPLE EFFECTS***  
Software to *positively* change behavior

33 New Montgomery St., Suite 290, San Francisco, CA 94105  
Phone: 415-227-1669 Fax: 415-227-4998  
info@rippleeffects.com www.rippleeffects.com