

Talking Toxic Stress and Resilience in Colorado

A FrameWorks Research Brief

Sponsored by the Early Childhood Colorado Partnership Shared Messaging Project

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Introduction

This ResearchBrief reviews and synthesizes over 12 years of research conducted by the FrameWorks Institute in order to offer a communications strategy and set of specific framing recommendations for the Early Childhood Colorado Partnership (ECCP) Shared Messaging Steering Committee. To develop these recommendations, FrameWorks researchers reviewed the Institute's portfolio of research and reframing strategies across a range of issues — including early childhood development, children's mental health and early education.¹ In this ResearchBrief, we summarize core scientific principles that reflect current expert thinking about early brain development, toxic stress and resilience; identify dominant patterns of thinking that may impede public understanding of these principles and public support for relevant policies; and suggest empirically-based framing strategies for inclusion in campaign materials.

The typical story that advocates tell about early development and adversity focuses on evoking sympathy for “vulnerable children.” The empirically-tested communications strategy presented in this ResearchBrief takes a different approach. Rather than relying solely on appeals to emotion, they employ a science-based story about early brain development that is designed to build public support for policies that ameliorate the impacts of toxic stress, and support children's resilience. In the past three decades, scientists have learned a great deal about the human brain — how it is built over time, what factors support its healthy growth, and how it affects our health, abilities and outcomes. FrameWorks' prior communications research in the U.S. and internationally suggests that sharing some of this scientific knowledge, particularly as it relates to early childhood development, can help the public engage more deeply with the policy, programmatic and systems-level change that advocates know is necessary to improve outcomes for children, families and communities.

This ResearchBrief presents the Strategic Frame Analysis[®] that the FrameWorks Institute conducted on early childhood development, early adversity and resilience. To support communication and education efforts, the FrameWorks Institute conducted a series of studies designed to yield a practical, actionable communications strategy for building public understanding of early childhood development, early adversity and resilience. All in all, more than 80,000 Americans were queried as part of this research. Listed below are selected studies, but you can find FrameWorks' full body of research on early childhood at frameworksinstitute.org.

Refining the Core Story of Early Childhood Development: The Effects of Science and Health Frames (2009). This report summarizes results from the latest iteration of FrameWorks' experimental research focused on extending existing communications strategies on the science of early childhood development, and the efficacy of adding health as a dimension of those communications.

Telling the Science Story: An Exploration of Frame Effects on Public Understanding and Support for Early Childhood Development (2008). This experimental study examines the impact of five key features of the Core Story of Early Brain Development on public attitudes and policy preferences.

Plasticity's Promise: Moving the Public Beyond the Container and Other Problematic Models (2013). The public brings a rich and complex set of cultural models to thinking about how people change. While some of these understandings are consonant with the science of developmental plasticity, others are distinctly at odds with scientific understandings of change. This report maps the gaps between how Americans *think* and experts *talk* about concepts of change over the life course, and brain change more specifically. These gaps represent specific challenges in communicating about developmental plasticity.

Key Scientific Principles Related to Toxic Stress and Resilience

The following are key scientific principles related to early brain development, stress and resilience. These principles were derived from FrameWorks' interviews with scientists affiliated with the Center on the Developing Child at Harvard University, participation in meetings with developmental scientists convened by the Center, and reviews of relevant scientific literature.² These principles constitute what FrameWorks calls “the untranslated expert story,” or the core content that scientists wish to communicate to non-expert members of the public. This content is “untranslated” in the sense that it is presented without the benefit of specific communications tools or strategies designed to make it more accessible to non-expert audiences.

- Brain development begins before birth and extends into young adulthood. There are two especially important periods of brain development: the early years — particularly the first three years of life — and adolescence.
- Neurological development is driven by early experiences, through interaction with adults and with the environment.
- Toxic stress — or the chronic activation of the body's stress response system in the absence of adult support — damages the developing brain and leads to problems in learning and behavior, and increased susceptibility to physical and mental illness.
- Resilience is a process of positive biological, psychological and physiological adaptation when there is exposure to adversity. It is generally conceptualized as reduced vulnerability to environmental risk experiences, the overcoming of stress or adversity, or a relatively good outcome despite risk experiences. While early research focused on naturally occurring resilience in humans, scientists are increasingly interested in how resilience can be *promoted*.
- The brain and other biological systems have the capacity to change over the life course — a phenomenon known as developmental plasticity. Different biological systems remain plastic (or changeable) to different degrees, and there are significant periods of plasticity after early childhood. It's easier and more cost-effective to provide the foundation for health development early, but it is still possible to improve outcomes later on.
- The science of early brain development has important policy implications. Because the brain changes in response to environments and experiences, improving those contexts can impact developmental outcomes.

The Resilience Scale: Using Metaphor to Communicate a Developmental Perspective on Resilience (2012). This report presents “The Resilience Scale” as an explanatory metaphor that helps people reason about the concept of resilience: why some children end up OK in the face of negative experiences and environments early on in life. Helping the public to understand the processes of resilience is a key part of telling the Core Story of Early Brain Development. The report details the results of an iterative methodology undertaken to design and test this explanatory metaphor.

“Anyone Can Do It ... Wake up, Rise up and Get Some Gumption”: Mapping the Gaps Between Expert and Public Understandings of Resilience and Developmental Outcomes (2011). This report summarizes the findings of a multi-year study that sought to translate the science of early childhood development, and to examine the ways that both experts and members of the general public talk and think about the issue of resilience, as well as more general concepts related to developmental outcomes and child well-being.

Frames to Avoid: Default public understandings that “eat” the message

The public brings a rich and complex set of cultural models — or deeply held cognitive shortcuts used to make sense of new information³ — to understanding early childhood development and early adversity. In many cases, these models run directly counter to the communications goals of early childhood scientists, experts and advocates. Put another way: These perceptions have the potential to limit public support for policies designed to prevent and ameliorate the impacts of toxic stress and promote resilience.

FrameWorks refers to this set of default assumptions as the “swamp” of cultural models. Just as a swamp contains many different types of creatures — some threatening, and some not — the public has many different ways of understanding an issue. Some of these ways of understanding are productive, in that they can help facilitate the messages that experts want to convey, but others can act as pernicious “gators” waiting to gobble up the intended meaning of advocates’ communications.

Recognizing these default cultural models, and understanding how they shape thinking about early development and adversity, is a critical step in crafting effective communications about this issue. The following swamp of dominant cultural models must be understood, avoided and counteracted in order for the public to deeply engage with the messages of ECCP’s work.

WHAT’S IN THE SWAMP OF EARLY CHILDHOOD DEVELOPMENT AND EARLY ADVERSITY?

Children are solely responsible for their negative outcomes. The public generally attributes substantial authority and responsibility to each individual child for the course of his or her development. This *Self-Made Child* model closely aligns with a broader, and foundational, American cultural emphasis on independence and self-reliance — or *Self-Makingness* — and is applied with increasing strength to children as they age.⁴ This perspective obscures the role of environments, relationships and external supports in children’s development, and the damaging impact stressful environments can have on child outcomes.

Childhood development is a black box. Across a wide body of research ranging from criminal justice to education to early childhood,⁵ FrameWorks has consistently found that, when faced with explaining how development works, members of the public typically fall back on the understanding that children develop “automatically,” following “natural” trajectories of physical growth and maturation. The process and mechanisms by which development happens remain largely “black-boxed” and poorly articulated.⁶ When this model is in play, people are less likely to consider the contingent nature of development, and the critical importance of positive environments and experiences and stable, supportive and responsive relationships. Instead, the assumption is that much of what constitutes “normal” and “good” development happens of its own accord.⁷ When people are using this model, programs designed to *intervene* to promote

healthy development are hard to understand and difficult to support. After all, why intervene in something that happens on its own?

It's all about the parents. The *Family Bubble* model refers to the idea that child development and children's outcomes depend, above all else, on parents. Early development happens in the home, under the purview of the parents, and is beyond the influence of outside contextual and environmental factors. The danger of cuing this model is that, once people focus on parenting practices, all of the other institutions and factors that shape early childhood development disappear from view. The strength of this model mutes attention to the importance of environmental conditions, supports and relationships outside the family that affect children and families, and undermines support for the role of other factors that promote healthy childhood development.

What doesn't kill you makes you stronger. Americans rely on an implicit understanding that stress toughens children for the trials and tribulations of life. According to this way of thinking, adversity results in a *reverse response* — propelling self-determining children into better arenas of life and improving outcomes.

Damage done is damage done. Even as they assume that healthy development occurs with relative automaticity and requires little in the way of external inputs, members of the public also share a dominant assumption that, once development is derailed, it cannot be put back on track — “damage done is damage done.”⁸ This model leads people to reason that intervention is futile, especially in cases where a child has already experienced adversity, and obscures expert understandings about how appropriately timed and targeted interventions can shift negative trajectories and improve outcomes.⁹

Frames to Advance: Redirections to safely navigate through the swamp of cultural models

FrameWorks' research suggests that the ECCP should take every opportunity to *explain* the process of early brain development, and how that process can be derailed through excessive activation of the stress response system. In the section below, we specify a set of recommendations that can help communicators navigate through the swamp of cultural models that surrounds public thinking about children's development and early adversity. These recommendations aim to avoid cuing unproductive cultural models and, instead, help communicators foreground and reinforce more productive ways of thinking about children and their development.

If advocates are to engage the public as allies in a movement for reform, they must advance a reframed narrative that is sufficiently coherent and persuasive to dislodge folk wisdom and reshape dominant understandings. Strategic Frame Analysis[®] shows that this can be accomplished by explaining both early childhood development and early adversity in more accessible, more compelling terms. To invite the public into the growing conversation about the biological impacts of early adversity, it is important to adopt a Core Story Approach, anticipating and answering the questions that attend to every social issue.

Why does this issue matter to us all? What are the mechanisms at play here — and what’s going wrong? What should we do to move forward? The Core Story recommended in this Positioning Platform begins by activating core *values* that establish why addressing issues related to early childhood development is so important to our society, moves on to establish core concepts with *Explanatory Metaphors*, and concludes by highlighting *Solutions* frames that specify the kinds of interventions and policies that contribute to prevention and rehabilitation.

1. Orient audiences with the value of *Prosperity* to establish the *collective* (rather than individual) stakes of the problem.

Values, or broad ideals about what’s desirable and good, act as a powerful directive, guiding attitudes, reasoning and decisions that follow. Opening communications with a value can subtly but effectively orient people’s thinking on the topic, making it more likely that they will engage productively in the interaction that follows. The value of *Prosperity* shifts public thinking away from problematic individualist models and towards an understanding of collective responsibility for social concerns. This value addresses the public’s problematic tendency to assign responsibility for children’s outcomes to parents, the child or nature, and reminds people that effective interventions are both possible and desirable.¹⁰ Below is an example of this value.

Positive childhood development is a foundation for community development and economic development, as capable children become the foundation of a prosperous and sustainable society.

2. Use *Brain Architecture* and *Serve And Return* to fill-in the public’s “black-boxed” understanding of development.

Metaphors are familiar to us all as *poetic* devices, but FrameWorks’ research shows that they can also be uniquely powerful *explanatory* devices that allow for deeper and more nuanced kinds of thinking and understanding. An Explanatory Metaphor is a simple, concrete and memorable comparison — between something that the audience understands and something that they struggle to understand — that quickly and effectively explains the abstract or complex topic. These metaphors empower people to think through an issue and address it more productively.

Ensuring that the public understands how an issue works is a cornerstone of effective communication about social issues. This requires a clear explanation of the causes of a problem, including the mechanism by which the problem is created. By filling in the gaps between expert and public thinking, explanation invites the public into a richer and deeper understanding of an issue, thus empowering people to more productively consider ideas for how to most effectively address these issues. It is critical that these explanations connect the *causes* and *outcomes* of development to the communities and contexts in which this process takes place — that is, communicators must help people see clearly *how* social conditions affect family functioning, and *how* family-based interventions improve outcomes and accrue broader social

benefits. To do this, communicators should embed family- and home-based programs in the communities, neighborhoods and broader social environments that affect and are affected by child and family outcomes. By explaining the processes of early brain development and resilience, the following metaphors are essential features of an explanatory strategy that connects early childhood development, environments of experiences and poverty.

Brain Architecture. FrameWorks developed the *Brain Architecture* Explanatory Metaphor to communicate the idea that brains are built over time, and that there are critical periods of intense construction activity, particularly in the early years.¹¹ The power of construction metaphors is that they can at once communicate *process* (brains are built) and *agency or efficacy* (building is an active and ongoing process, and there is always room for change and improvement).

The metaphor of *Brain Architecture* helps people understand that early experiences affect the brain, and establish either a sturdy or a fragile foundation for subsequent health, learning, growth and behavior. An example of this metaphor is below.

The basic architecture of a human brain is constructed through a process that begins before birth, and continues into adulthood. Like the construction of a home, the building process begins with laying the foundation, framing the rooms and wiring the electrical system, and these processes have to happen in the right order. Early experiences literally shape how the brain gets built. A strong foundation in the very early years increases the probability of positive health and learning outcomes later on, while a weak foundation increases the odds of later difficulties. Just as with a house, you can remodel when you need more functionality, but it's more costly than getting it right the first time.

Concepts and Ideas Included in the Metaphor:

- The metaphor explains how neurological development follows predictable stages, including rapid synapse formation at some periods, pruning of neural connections at others, and development of specific neural circuits at specific stages.
- The metaphor can be used to help people understand that the construction project starts early during the first three years, including infancy, which is an especially intense period of neurological development.
- The metaphor focuses attention on the strength or fragility of the foundation, which shapes all subsequent development, learning and behavioral outcomes.
- Using the idea of construction, the metaphor communicates that development is an ongoing process that begins before birth and continues into adulthood.

Recommendations:

- *Draw on the language of construction to describe development as an active process.* This will help dislodge passive models of development that are dominant among the American public.

- *Stress the importance of laying a strong foundation.* This aspect of the metaphor trains people’s attention on the critical 0-3 period.

Serve And Return. The *Brain Architecture* Explanatory Metaphor establishes that brains are built over time. The metaphor of *Serve And Return* helps people understand that relationships with supportive caregivers are a critical part of the brain-building process. By describing how reciprocal interactions are the “active ingredients” that build the brain circuitry on which future learning and development are based, the metaphor helps to inoculate against default assumptions that children’s development “simply happens.”¹² An example of this metaphor is below.

Scientists now know that the interactive influences of genes and experience shape the developing brain. The active ingredient is the “serve and return” relationships with their parents and other caregivers in their family or community. Like the process of serve-and-return in games such as tennis and volleyball, young children naturally reach out for interaction through babbling and facial expressions.

Concepts and Ideas Included in the Metaphor:

- The metaphor communicates the basic process of how neural connections are made through mutually contingent reciprocal interactions, which involves adults getting in sync with young children, not merely children copying adults.
- The metaphor establishes that interaction comes in many forms, including, but not limited to, language.
- By focusing on the serve-and-return that happens between any two partners who are familiar to one another, but not limited to parents, the metaphor opens space for extra-family relationships and highlights that consistent, long-term, supportive relationships between adults and young children are essential to healthy development.
- The metaphor helps people to think about how the interactions that occur, or don’t occur, in the very early years have a significant and lasting effect on all the development and learning that follows.

Recommendations:

- *Use the language of caregiver or adult.* Communicators should be sure to not limit the adult “player” in the metaphor to parents, in order to avoid activating the *Family Bubble*.
- *Connect the dots to point to policy-level conditions that help or hinder serve-and-return.* These can include issues such as child-caregiver ratios, age-appropriate curriculum, parental leave policies, and access to appropriate mental health supports, for example.

3. Toxic Stress can counter the idea that what doesn't kill you makes you stronger.

The Explanatory Metaphor *Toxic Stress* explains how chronic exposure to early adverse experiences negatively impacts early brain development. The metaphor of *Toxic Stress* distinguishes between stress responses that are time-limited and buffered by the presence of a supportive adult, and stress responses that are severe, chronic and occur in the absence of adult support. The metaphor helps to explain why interventions designed to ameliorate exposure to severe adversity are critical to future health and development.¹³ An example of this metaphor is below.

While there are many different kinds of stress, some stress is so severe and frequent that it becomes toxic, especially when children doesn't have supports around them to buffer against those experiences. Toxic stress in early childhood can result from extreme poverty, frequent neglect, abuse, or severe maternal depression, all of which can disrupt the developing brain. In this way, toxic stress can lead to lifelong problems in learning, behavior, and both physical and mental health. Being surrounded by environments and communities that have supports and resources is necessary to protect children against these toxic stressors, and promote their health and well-being.

Concepts and Ideas Included in the Metaphor:

- The metaphor establishes stress as a factor in child development, and makes a clear distinction between normal, everyday stresses, and serious adversity that can cause disruptions in brain and biological development.
- The metaphor focuses on how responsive caregiving moderates stress responses, thereby building public understanding of environmental influence.
- The idea of “toxic” helps to communicate the seriousness of adverse experiences, and the brain-based explanation that can dislodge such notions as “stress is just emotions.”
- The metaphor communicates that early adversity can lead to lifelong difficulties in learning, memory and self-regulation.

Recommendations:

- Use the metaphor to connect social conditions and disparities to health and behavioral outcomes.
- Elevate the public's sense of the gravity and urgency of adverse community conditions such as poverty and violence.

4. *Resilience Scale* inoculates against “damage done is damage done” patterns of thinking.

The metaphor of the *Resilience Scale* was created to translate the emerging science of brain plasticity and resilience. It channels thinking towards the multiple factors that influence development. In so doing, this Explanatory Metaphor addresses some of the most critical gaps in public understanding of resilience.¹⁴ The metaphor encourages the public to focus less on willpower, and moves people away from the idea that “What doesn’t kill you makes you stronger.” Furthermore, because scales are dynamic, the public can see a place for intervention and influence. An example of the metaphor is below.

Child development is like a scale that has two sides. One side gets stacked with negative things, like stress, violence and poverty, while the other side gets loaded with positive things, like supportive relationships, skill-building opportunities and challenges, good jobs, access to quality health care, and others. We want children to turn out well so that they can build and strengthen their communities, and we want the scale to be tipped toward the positive. Resilience is when a child’s outcomes are tipped toward the positive, even when there are negative things loaded on the scale. Our goal is always to address the negative weight on the scale and add additional factors to the positive side by making sure all families and communities are supported.

Concepts and Ideas Included in the Metaphor:

- The metaphor successfully diminishes talk of the *Family Bubble*, and refocuses people on environmental influences, both positive and negative, and their dynamic impact on outcomes.
- The metaphor inoculates against the individualized view of resilience as a trait.
- The metaphor promotes discussions of community-level factors that determine positive and negative outcomes for children.

Recommendations:

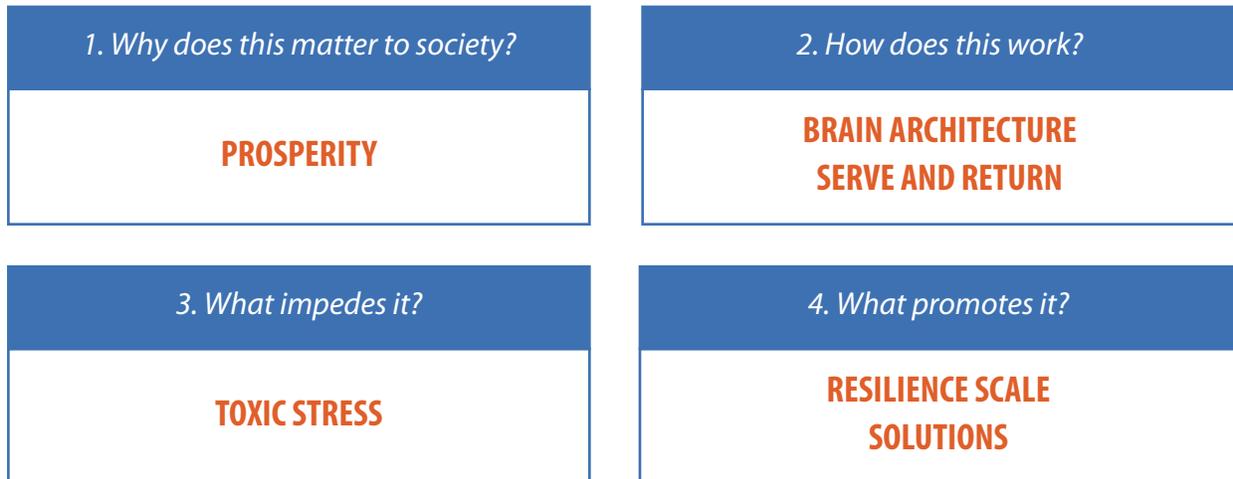
- *Populate the iteration with Colorado-specific resources.* This will help people envision in concrete terms how to load the positive side of the scale and Colorado-specific dangers to load the negative side.

5. Provide actionable steps people can take to prevent toxic stress and promote resilience.

The framing recommendations outlined above are designed to prime a conversation about *solutions*. The story is incomplete without the final solutions chapter: a discussion of specific actions that should be taken to prevent and ameliorate the impacts of toxic stress and promote resilience. However, this prospective solution needs to fit into the appropriate position in the communications narrative. That is, before this solution is introduced, people must be primed with values and metaphors.

In sum, the narrative structure associated with the conceptualization of social problems can be filled in using FrameWorks’ reframing devices in the following way:

Basic Narrative Template for an Explanatory Campaign



For an example of how other organizations have used a Core Story approach to early childhood development and early adversity, see Alberta Family Wellness Initiative’s *How Brains are Built: The Core Story of Brain Development* animated video: <http://www.albertafamilywellness.org/resources/video/how-brains-are-built-core-story-brain-development>

Frames to Avoid: Potential Communications Traps

In the following section, we list aspects of thinking about early childhood development that trigger models that may be “easy to think,” but trap public thinking in unproductive evaluations and judgments. Traps are communications habits of a field and, as such, can be difficult to notice and hard to avoid. Traps are plausible ways of framing an issue that, upon investigation, fail to achieve the desired effect on people’s understanding of, and support for, an issue, or even turn out to do more harm than good. We focus here specifically on traps that are common in science and advocacy communications, as these tend to represent unexamined hypotheses about effective communications.

- Avoid discussions that invoke models of childhood development that imply absorption or imitation. Communicators should avoid language that represents development as a passive process, and instead use metaphors like *Brain Architecture* and *Resilience Scale* to describe the dynamic processes by which development happens.
- Avoid using stories about individual children or families as illustrations of the need for intervention. Individual stories reinforce notions of individual responsibility, willpower and family autonomy,

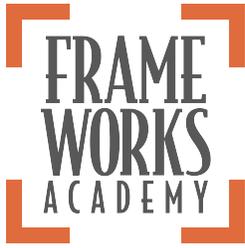
thereby dampening people's understanding of the collective nature of these issues and their support for public policies and programs. Instead, communicators should tell systems-level stories — stories that position systems and social structures as the protagonists and antagonists — rather than episodic stories that use isolated examples of the trials and tribulations of individual children and families.¹⁵ FrameWorks' module *Wide Angle Lens* provides more detailed analysis about why vivid case studies can work to undermine policy-level stories: <http://www.frameworksinstitute.org/workshops/wideanglelens/children/>

- Avoid phrases like “vulnerable families” or “at-risk children.” These terms cue the idea that each family and each child is responsible for exercising the self-discipline and hard work necessary to pull themselves into more advantageous circumstances. Instead, talk about children and families who live in communities that lack resources.
- Avoid phrases like “resilient children,” or phrases that suggest resilience as an inherent personality trait. Instead, talk about resilience as a quality that can be promoted with quality programs and strong social supports.

Conclusion

The recommended narrative that we describe has been tested to determine its ability to advance this wide array of reform measures. Thus, it can be shared by many groups advocating for related, but distinct, policy changes. Rather than trying to capture the public's attention with dozens of different stories, this narrative puts forward a story structure that can “lift all boats,” and map on to multiple policy solutions. It charts a course through the dominant patterns of reasoning employed by the public, identifies the major challenges for communicators, and recommends how communications may be redirected to improve public understanding.

In 2014, state legislatures in Wisconsin and California passed resolutions to more actively consider the impact of early childhood adversity on the long-term health outcomes of citizens.¹⁶ The American Academy of Pediatricians produced a major position paper recognizing the effects of *Toxic Stress* on early childhood, and began planning a comprehensive public health strategy to address this issue.¹⁷ In order to sustain and expand the current momentum to other states, advocates need to use new framing strategies that overcome Americans' “black-box” understandings of early childhood development. FrameWorks' research strongly suggests that a new narrative that deepens appreciation and understanding of the foundations for healthy childhood development, and of the failings of the current policy environment to provide those foundations, is within our reach. We urge communicators to expand their explanatory messaging so that ordinary people are able to understand the systemic analysis that experts take for granted. By making use of the reframes and metaphors described in this memo, they can help the public to recognize how the current system fails our young people, and how systemic and policy reforms can offer a path to a more hopeful future.



About the Institute

The FrameWorks Institute is a national nonprofit think-tank devoted to framing public issues to bridge the divide between public and expert understandings. Its work is based on Strategic Frame Analysis®, a multi-method, multi-disciplinary approach to empirical research. FrameWorks designs, commissions, publishes, explains and applies communications research to prepare nonprofit organizations to expand their constituency base, to build public will, and to further public understanding of specific social issues — the environment, government, race, children’s issues and health care, among others. Its work is unique in its breadth — from qualitative, quantitative and experimental research to applied communications toolkits, eWorkshops, advertising campaigns, FrameChecks™ and Framing Study Circles. See www.frameworksinstitute.org

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Endnotes

- ¹ All research reports are available on the FrameWorks Institute website: <http://www.frameworksinstitute.org>
- ² To access full research reports, see <http://www.frameworksinstitute.org/early-childhood-development.html>
- ³ Quinn, N., & Holland, D. (1987). Culture and cognition. In D. Holland & N. Quinn, (Eds.), *Cultural models in language and thought* (pp. 3-40). New York, NY: Cambridge University Press.
- ⁴ FrameWorks Institute. (2009). *Framing early child development message brief*. Washington, DC: Author.
- ⁵ See: <http://www.frameworksinstitute.org/public-safetycriminal-justice.html>
- ⁶ See Aubrun, A., & Grady, J. (2003). *Simplifying early childhood development: Findings from cognitive analysis and phone interviews*. Washington, DC: FrameWorks Institute.
- ⁷ Lindland, E., Kendall-Taylor, N., Baran, M., O'Neil, M., & Simon, A. (2012). *Mapping the gaps on skills and learning: A core story of education report*. Washington, DC: FrameWorks Institute.
- ⁸ Kendall-Taylor, N., & McCollum, C. (2009). *Determinism leavened by will power: The challenge of closing the gaps between the public and expert explanations of gene-environment interaction*. Washington, DC: FrameWorks Institute. See also: Kendall-Taylor, N. (2011). "Anyone can do it ... Wake up, rise up and get some gumption": *Mapping the gaps between expert and public understandings of resilience and developmental outcomes*. Washington, DC: FrameWorks Institute.
- ⁹ See, for example: Kendall-Taylor, N., & Bales, S. (2009). *Like Mars to Venus: The separate and sketchy worlds of budgets and taxes*. Washington, DC: FrameWorks Institute; FrameWorks Institute. (2009). *Enough blame to go around: Understanding the public discourse on education reform. A FrameWorks research report*. Washington, DC: Author; Bunten, A., Kendall-Taylor, N., & Lindland, E. (2011). *Caning, context and class: Mapping the gaps between expert and public understandings of public safety*. Washington, DC: FrameWorks Institute.
- ¹⁰ Manuel, T. (2009). *Refining the core story of early childhood development: The effects of science and health frames*. Washington, DC: FrameWorks Institute.
- ¹¹ FrameWorks Institute. (2009). *Framing early child development message brief*. Washington, DC: Author.
- ¹² Brown, A., Aubrun, A., & Grady, J. (2006). *A new understanding of interaction findings from interviews and talkback testing*. Washington, DC: FrameWorks Institute.
- ¹³ Manuel, T. (2009). *Refining the core story of early childhood development: The effects of science and health frames*. Washington, DC: FrameWorks Institute.
- ¹⁴ Kendall-Taylor, N. (2012). *The resilience scale: Using metaphors to communicate a developmental perspective on resilience*. Washington, DC: FrameWorks Institute.
- ¹⁵ FrameWorks Institute: *Wide Angle Lens*. Washington, DC: Author.
- ¹⁶ California Legislative Assembly. (2014). Resolution 155. Regular Session 2013-2014; Washington Senate. (2014). Resolution 59. Regular Session 2013-2014.
- ¹⁷ The complete position paper can be accessed here: <http://pediatrics.aappublications.org/content/129/1/e224.full.pdf>