

Running head: GROWTH MINDSET AS A FRAMEWORK FOR DYSLEXIA INTERVENTION

Retraining the Brain With New Strategies and Pathways:
Analysis of Growth Mindset as a Framework for Dyslexia Intervention

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Abstract

In working with students with dyslexia as a literacy interventionist, this researcher observed students in intervention when faced with challenges doubting their abilities and their self-worth. This tracks with the decades of research by Carol Dweck on mindset. Dweck's research does not connect mindset with dyslexia. However, this researcher believes students with dyslexia could benefit greatly from growth mindset thinking since it exposes the neuroscience of the brain's malleability and provides a framework for students to see challenges and failures as opportunities. This research narrative explores the benefits of growth mindset, self-efficacy, resilience, and navigational capital for students, parents, and educators.

Retraining the Brain With New Strategies and Pathways: Analysis of Growth Mindset as a
Framework For Dyslexia Intervention

Waiting for my turn. Can I anticipate when I will be called on? They are all such good readers. Can I read ahead enough in my head to be prepared to read out loud? The last time I was called on I completely failed. All the kids made fun of me. I'm never letting that happen again. I'm going to just avoid eye contact and look really busy with taking notes. Maybe I could go to the bathroom again before she calls on me, and I'll miss it altogether.

Dyslexia is a specific learning disability that is neurobiological in origin. To receive a diagnosis of dyslexia requires a lengthy and committed process. Information must be gathered concerning the child's development, medical history, and home life. Questionnaires from family members and teachers regarding the child's behavioral patterns must be reviewed. A battery of vision, hearing, neurological, and psychological tests are also required to rule out other possible issues that could be impairing the child's ability to read and spell well.

This diagnosis is hard-fought and for many people can be a double-edged sword. On one hand the diagnosis offers a person with dyslexia a sense of peace around the "why". Why they struggle with reading and spelling. Why their peers are effortlessly surpassing their abilities in reading. Why their sibling or siblings might not have struggled at all, but one of their parents "had the same issues in school too". Their diagnosis can offer direction and guidance into an effective intervention.

On the other hand this diagnosis can be devastating. With no cure for dyslexia many children and families worry students with dyslexia will not succeed in school. Students fear they will not pass a spelling test or successfully read out loud in class like children without dyslexia.

Even with effective intervention some students wonder why they still make mistakes, why they cannot get it right the first time, and why it is so easy for other kids.

As a literacy interventionist I work in my private practice primarily with children with dyslexia. In our sessions I hear about and observe students working incredibly hard to develop reading and spelling abilities. I see them make amazing strides through their challenges. I also see many of them falter with these struggles and avoid them consistently. Through these observations I began to wonder what is happening for the students I work with. One day they are exuding confidence during their intervention time and at school, and the next day they are distraught, hard on themselves, angry, frustrated, and sometimes even in tears. The students believe challenges in reading, spelling, and even the intervention processes are too big to overcome. They are focused on getting this “right”. Some doubt if they have the ability to learn new skills and overcome challenges in the process. They lose faith in the process. What if all of the students believed their abilities could grow and change? That they could work through a challenge, gain understanding from the process, and learn more from mistakes than from getting it right every time? What if the students could grow even with the constructive criticism? Build resilience and strength within themselves regardless of their diagnosis and struggles? What if they had a new mindset?

Mindset is a framework from which we see and experience our world. Carol Dweck is the leading researcher behind the theory of mindset. Dweck (2006, 2016) identifies two mindsets people hold: entity (fixed) and incremental (growth) mindset. For those with a fixed mindset, attributes like physical abilities, musical talents, even intelligence are concrete or fixed traits.

Those with a growth mindset believe these same abilities, talents, and traits are malleable and can change or grow through effort, strategies, and support from others (Dweck, 2006, 2016).

The purpose of this research narrative is to explore the idea that with a growth mindset, the struggles with dyslexia will have a reduced negative impact on a person's self worth. My hope is for parents, practitioners, and students to understand that mindset affects our perspective and is a framework through which we see and experiences life. I am proposing that a fixed mindset has the potential to cause harm to one's perceived self-worth, especially for a person with dyslexia. This fixed mindset can damage the way one perceives his/her world in a global fashion, but growth mindset has the potential to build self-efficacy, resilience, and perseverance in the face of challenges.

Background

Before examining mindset, it is important to look deeper into dyslexia and understand how the theories of self-efficacy, resilience, and navigational capital — key components of mindsets — might interact with dyslexia.

Dyslexia

The International Dyslexia Association's Board of Directors has adopted the following definition for dyslexia:

Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary

consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (IDA Board of Directors, Nov. 12, 2002)

Dyslexia is the most common specific learning disability and causes reading and spelling difficulties in approximately 5 to 17 percent of the population in the United States (Shaywitz, 1998 as cited in Shaywitz, 2011). The impact of dyslexia on an individual varies due to severity of their disability, an individual's strengths and weaknesses, and if they have received effective intervention or remediation. Appropriate evidence-based intervention should contain phonological awareness, sound-symbol association, syllabication, orthography, morphology, syntax, reading comprehension, and reading fluency (The Dyslexia Handbook, 2014; Shaywitz, 2011). For the greatest impact on children these components must be taught in an effective instructional format. Instruction should be delivered in a multisensory fashion.

Multisensory instruction includes a systematic, cumulative, and direct approach, while remaining individualized based on continual assessment, with the ability for students to synthesize and analyze parts of language (Shaywitz, 2011). Shaywitz (2003) recommends that for an intervention to be the most successful it should begin at an early age, be intensive, high-quality, and for a sufficient duration. This intervention blueprint has been shown to have the greatest impact on students' academic careers (Thorpe & Borden, 1985; Campbell, Helf & Cooke, 2008).

Individuals with dyslexia may also experience difficulty with spoken language. Even with strong positive language models in their lives, they may find it hard to express themselves in a clear concise manner or fully comprehend what others are trying to convey to them. These

communication issues can add additional difficulty to relating with others in academic and social environments (International Dyslexia Association, “Frequently Asked Questions”). Children identified as having dyslexia who received intervention after third grade have increased difficulty in remediation. Once a child falls behind in their reading and establishes a pattern of failure, they may experience a sense of inadequacy, unworthiness, and lower competency, as well as a heightened level of anxiety and self-doubt (Riddick et al. 1999; Riddick, 1996). Over time these issues can evolve “into a lifelong loss of their own sense of self-worth” (Shaywitz, 2003, p.31).

Self-efficacy

Psychologist Albert Bandura defined perceived self-efficacy as the "belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p.2). When students have a low perceived self-efficacy they doubt their abilities, question their capabilities, and give up quickly in the face of difficulties. Bandura suggests 4 main ways to impact perceived self-efficacy: mastery experiences, social models, social persuasion, and states of physiology (Bandura, 1994).

Researchers have explored the connection between dyslexia and self-worth; however researchers have not yet looked at the connection between dyslexia and self-efficacy. Shaywitz (2003) states that self worth “is the area of greatest vulnerability in children with dyslexia” (p. 31). Based on my observations as a literacy interventionist, I believe countless students with dyslexia experience failures in their educational process, and incur a diminished self-efficacy. Experiencing successes in reading and spelling intervention is vital in rebuilding their self-efficacy. However when facing the inevitable struggles or setbacks in intervention, students also get opportunities for growth in many areas and for building competence. These struggles and

successes build their mastery experience and what they achieve goes far beyond the time I get to spend with them. As a literacy interventionist with dyslexia I have the rare opportunity to model literacy achievement with my students. I get to also mentor my students in many ways. In the intervention process they receive structured situations where they can be successful with the pressure to perform removed. We get the opportunity to evaluate success by self-improvement instead of success over others. In a safe environment I also get the opportunity to observe and influence the physiological affect of stress. By observing and remaining aware of the students' physical responses (e.g facial expression changes, becoming uncharacteristically quiet, hitting their forehead with palm of their hand, avoiding eye contact) during our intervention, I offer them the ability to verbally and non-verbally share if they understand the material. This in turn gives the students a better sense of control over their learning, a characteristic of growth mindset.

Resilience

The process for building resilience is crucial to a student's ability to persevere when faced with challenges or setbacks. Resilience is defined as "the capacity to recover quickly from difficulties; toughness", or "The ability of a substance or object to spring back into shape; elasticity" (English Oxford Living Dictionaries). Students' implicit theories affect their resiliency. Students need a mindset that views a challenge as something that can be overcome through effort, new strategies, support, and time (Yeager & Dweck, 2012).

Students with dyslexia are constantly confronted with reading and spelling obstacles that can feel degrading, but I hypothesize that strengthening levels of resilience through a growth mindset can build resilience when facing these challenges.

Navigational Capital

Navigational capital is part of a six-part Cultural Wealth Model proposed by Yosso (2005). This model provides a strengths based framework from which educational leaders can view their interactions with students (Yosso, 2005). The six forms of cultural capital are: aspirational, linguistic, familial, social, navigational, and resistance capital. These six parts acknowledge the cultural capital that can be used to empower a person. Navigational capital refers to a student's ability to navigate social institutions like schools. This is another characteristic of a person with a growth mindset. These institutions can be unsupportive or hostile for students, and yet they must learn how to maneuver through their day.

Students with dyslexia can be greatly impacted when they believe they are lacking the skills or abilities to navigate social situations in their academic environment. Many children with dyslexia struggle with recalling accurate words for what they are describing or sharing. Because of this mistaken word recall, many feel intimidated or embarrassed when trying to communicate with teachers, para-educators, or peers when they are struggling. I propose that without navigational capital they are missing a crucial component to connect, communicate, or access the support they need to succeed.

Mindset

Dweck's research on mindset focuses on why some children exhibit resilience in the face of a challenge and others do not. Dweck (2000) proposes the idea that mindset is a perception or theory that we hold about ourselves. At the heart of these self-perceptions are implicit theories. Implicit theories are defined as, "core assumptions about the malleability of personal qualities" (Yeager & Dweck, 2012; Dweck et al., 1995; Dweck & Leggett, 1988; Molden & Dweck, 2006). Implicit because the theories are implied but rarely developed in a clear manner. These self-

theories create a framework for how we perceive and make assumptions about our world, our abilities, and even our intelligence.

Dweck et al. (1995) identified two implicit theories entitled entity and incremental. Through Dweck's decades of research and publications, these two theories are now better known as fixed and growth mindset. Fixed mindset theory asserts that intelligence is relatively unchangeable, while growth mindset theory asserts intellectual abilities can grow and develop overtime through effort, new strategies, and support (Yeager & Dweck, 2012).

Students with a fixed mindset believe their intelligence is set or fixed. Students believe they are "smart" or "dumb" and this level of intelligence is unchangeable. When fixed mindset students face an inevitable academic struggle they tend to believe that they will not be able to complete the work or understand the material. When a perceived failure occurs, students tend to rationalize or make excuses for the outcome (Dweck, 2006).

In contrast, students with a growth mindset believe their abilities can be developed through effort, new strategies, and support. Students with a growth mindset believe their level of intelligence and talents are just a starting point, not the finish line (Dweck, 2006).

All people are a mix of these two mindsets to some degree, but for some individuals they are more one than the other (Dweck, 2006). Being aware of mindset in an academic setting can be advantageous to the learner. Whether as a student or a teacher, a fixed mindset can create unnecessary limitations and restrictions. Viewing every assignment against a measureable outcome (e.g., grade or student's abilities) can have negative affects for the fixed mindset student. These measures result in an assault on a person's self-esteem and self-worth. However being able to see these same assessment tools through a growth mindset students are actually

informed, uplifted, and shown the areas with potential for great growth and development. In growth mindset a person's self-worth is not on the line. Rather assessments are viewed as guidance for seeking out new strategies, increased levels of effort, or more support (Dweck, 2006).

For students with dyslexia, the feeling of being assessed and compared is a daily issue. I hypothesize that when a student with dyslexia has a fixed mindset and is faced with challenges, they will likely be left doubting their ability to improve. Dyslexic students with a growth mindset will likely struggle just as much with reading and spelling as those with a fixed mindset, but they will engage in the struggle in a more positive manner and will not give up when challenged.

Discussion

I was very excited to introduce the concept of mindset to my students, but during the introduction I realized I had presented mindset in a problematic way. This is a narrative of that journey including the initial failure and reintroduction.

I began with observations to see if I could establish commonalities with my students. Would there be any? Did they react to the same stressors? What did they believe about themselves when they reacted? For about three weeks I observed and asked questions of the students and their parents. Some students, when faced with a challenge or setback, did not give up. They kept trying and asking questions. One student needed a little break and then could emotionally and mentally return. Still others had visible reactions of anger, frustration, or withdrawal. What was causing these varying reactions with the students in identical lesson formats? All students had the same teacher, environment, curriculum, and format, even the same lesson. Yet some students were reacting with frustration, withdrawal, and self-doubt.

After these initial observations I divided the students into two categories. Category 1 was comprised of those that have little to no negative reactions. Category 2 was comprised of those that had a significant visible negative reaction. Then I began asking students in both groups questions while they were in situations of challenge about how they were feeling. After watching her 2014 Ted talk, I realized that Dweck had asked some of the same questions I had posed over her decades of research. I was on the right track. She was now dedicated to researching and discovering the solution.

I began to read Dweck's (2016) book, and it opened my eyes to mindset and how it affects every part of our lives. Dweck discusses how mindset creates a theoretical framework for learning processes, whether that is based on learning goals or performance goals (Dweck & Leggett, 1988). People view intelligence as either malleable or set, growth or fixed mindset. Dweck was able to describe these two mindsets in a clear concise way with examples of how they play out in every day situations. This seemed revolutionary and fairly easy to implement with my students right away. I started with being even more intentional with my feedback and praise in a growth-mindset manner. When I noticed a student facing a difficult challenge, I would investigate what they were struggling with the most. I then added in some growth mindset based encouragement like, "That feeling like your brain hurts...it's your brain getting stronger!" And, "I can see all the time and effort you put into your homework is really paying off."

This strategy did not work as well as I had hoped. The younger students seemed confused and unconvinced with my feedback and the older students were reacting with increased irritation and aggravation. This is not what they wanted to hear. I went back to Dweck's book (2016) then reviewed more of her research, current articles, other case studies from leading research, and a

few more books. I realized what I was saying was appropriate, but they needed more depth than I was presenting. I realized I was missing pieces in the growth mindset equation for my students. My push to move them towards a growth mindset without providing a solid foundation around how the brain works, for myself or for my students, created a space of confusion. I knew if there was to be a change for my students it would need to begin with me.

First I wanted to understand my own mindset. I started this journey with a simple online survey (*Mindset Works Inc., "Mindset Assessment," 2015*) courtesy of mindsetworks.com, a website and organization cofounded by Dweck. This test confirmed what I believed about my mindset but also surprised me too. I believe in growth mindset, I practice a growth mindset, and I have growing to do. I am still a mix of mindsets like almost everyone, and I still carry some of the baggage I picked up along the way of my academic journey. This journey created in me a persevering, dedicated, learner with dyslexia. The journey also left some scars. Some hurts and beliefs still impact the way I perceive learning, especially for a person with dyslexia. I know people with dyslexia have to work harder than most people every day. I know people with dyslexia have to really want to learn to be able to learn. I know people with dyslexia process in a different part of our brain. I know the intensive intervention I do with students really works. But in my effort to spare my students some heartache, I was not giving them enough substance and evidence about their brains and mindset and robbing them of part of their journey of discovery. It seemed to me that that most important part of growth mindset for a person with dyslexia is not only increasing the amount of effort, incorporating new strategies, receiving honest feedback, praise, and support, but also the journey.

It was clear I needed to start with an understanding of the brain and give depth to my introduction of mindset. As I said before, I read Dweck's book (2016), but then I added several articles and commentaries by Dweck, watched several videos regarding introducing mindset with students, and referred to a very informative book on mindset in the classroom titled "Mindset In The Classroom; Building a Culture of Success and Student Achievement in Schools " by Ricci (2013). Through these resources I recognized the importance of discussing the actual make-up of the brain, how neuropathways work and change, and how this practically affects us all. I could see the importance of this knowledge, especially for my students to talk about, because people with dyslexia literally process in a different way, and it would be important for my students to understand how they process versus someone without dyslexia.

To introduce these topics in a non-threatening way I found a lesson plan created by Kahn Academy in collaboration with PERTS regarding mindset (*Kahn Academy, "Growth Mindset Lesson Plan," n.d.*). The lesson plan covered information concerning the brain and the importance of challenging work in building strong neuropathways. I felt this lesson would be especially helpful, because it addressed what I saw in my first introduction of mindset, that just encouraging a growth mindset would result in resistance by students. Instead a scientific and practical explanation had been found to be more effective. The lesson plan consisted of a two-minute kid friendly video about the neuroplasticity of the brain, then a personal discussion time, and finally creating a letter to a future student about the process of overcoming one of their challenges. These letters are intended to hand back to the student that created it in a time of doubt or challenge. I decided to add a piece to this lesson plan specific to my students. I chose two books to share with the students: *Your Fantastic Elastic Brain: Stretch It, Shape It* by JoAnn

Deak Ph.D.(2010), and *What Do You Do With a Problem?* by Kobi Yamada.(2016) *Your Fantastic Elastic Brain* addresses the brain in a colorful and easy to understand story format and *What Do You Do With a Problem* walks the reader through the journey of embracing the fear of a problem and finding empowerment in the process of working through it.

I introduced mindset with the chosen lesson plan and the books I selected, during my 15 minutes of comprehension each session. These weeks were the last two weeks before summer break. I met with my students in individual sessions two to three times a week. I informed the parents I would be discussing mindset and gave them a short description of what I would be covering and the reason for learning growth mindset. During these two weeks I made notes on how my students reacted to the information as well as parent observations.

On the first day of introduction I administered a mindset pre-assessment (Mindset Works Inc., “Mindset Assessment,” 2015) for each of the students. This was the same online questionnaire I had taken, but I took the time to ensure students understood every question. With the pre-assessment I wanted to understand and establish a mindset baseline for each of the students. Over the course of the next two weeks I shared the neuroplasticity video from Kahn Academy’s lesson plan, which highlighted the brain and how a person can grow through learning, creating and strengthening new neuropathways. Then came the discussion. Beginning with my own story, I led a time of sharing with each student about a time we had to work hard to get better at something and then I related it back to the video. Next I read through the two chosen books: *Your Fantastic Elastic Brain* and *What Do You Do With a Problem?* Finally I walked each student through verbally composing a letter to a future student about challenges they have faced, how they felt during those challenges, how they overcame the challenge, and what they

learned from their experience. As they shared their stories I asked questions and wrote their responses.

From the pre-assessments given to each of the four students in the study, two students held a more fixed mindset and two held a more growth mindset. This matched what I had observed initially in the students before I began the introduction of mindset.

The neuroplasticity video was well received by all but one student. The majority of the students found the video to be engaging. The video also created curiosity, and they wanted to know more. I also observed that for the remaining student the video seemed to be a bit too fast paced based on the student's facial expressions during the video.

All students connected well during the discussion and sharing time and were very willing to share their stories of struggle and working through it. Two students (one with a more fixed mindset, one with a more growth mindset) made important connections with their stories and the video regarding their thoughts or behaviors (Appendix 1-4).

The two books I chose were also well received by all of the students. With the book discussing the elasticity of the brain, the students were very curious about the details of the brain and how each part helped them in their daily lives. Most of the students were quite thoughtful during the problem solving book and were really pleased with how the book addresses solving difficulties.

Finally, half of the students were able to create a letter to a future student that is struggling with a challenge in their lives. Two students were unable to create the letter due to sickness and the end of the school year. For the remaining students, I verbally walked each student through the process of sharing their story of struggle, their feelings during the struggle,

and how they were able to overcome this challenge. I took notes on what each student was sharing and read back to them what they had said. Based on the notes taken, each student and I composed a letter. These letters will be kept and handed back to the individual student that composed it when they need some encouragement in a challenge. Due to the summer break I was not able to follow up with another mindset assessment for each student.

In the two weeks I worked with my students exposing them to knowledge of the brain, understanding of neuroplasticity, and the power of the growth mindset process, I observed them making deep connections and gaining in excitement about their individual abilities. I observed the students showing signs of metacognition by wondering and asking questions about the potential neuro-connections their brains could form.

Recommendations

My recommendations begin with suggestions for educators, including literacy practitioners and literacy therapists. I then offer suggestions to families with a child or children with dyslexia.

As a person with dyslexia, a mother of a child with dyslexia, and a Certified Academic Language Practitioner working with children with dyslexia, I believe it is paramount and invaluable to not only care well for students but also for their families. This family care builds more understanding, knowledge, and confidence for families and therefore strengthens a child's familial capital (Yosso, 2005). Educating families on the importance of a solid, multi-sensory, explicitly taught, intervention as well as mindset. Creates an open line of communication and helps provide resources for families to use along their journey.

Know Your Mindset

Educators have the ability and great responsibility to teach quality curriculum, with evidence based methods, tailored to the students. Building on this foundation, it is also important for educators to be cognizant that their approach with students is guided by mindset. The educator's mindset is conveyed every day whether they realize it or not. In one study researchers revealed the potential for instructors holding a fixed view of intelligence to judge a student as someone with low abilities based on one initial poor performance (Rattan, Good, & Dweck, 2011).

As with my own journey of introducing mindset, I recommend beginning with a simple pre-assessment to gain a better understanding of mindset as the educator, such as the one that I used for myself and my students (Mindset Works Inc., "Mindset Assessment," 2015).

Just like with students, it is important to know any baseline knowledge before beginning. A person's thoughts and feelings around the pre-assessment process will be your first indicator of their current mindset.

Grow the Brain

Once a current mindset is established, it is time to grow it beginning with education about the malleability of the brain. Knowing and understanding the flexibility of the brain is crucial in building a growth mindset and teaching someone else. Most educators have a basic idea of how the brain works, but taking the time to get a better understanding of how the brain grows will be beneficial. Current neuroscience research shows how the brain and more specifically neuropathways grow constantly, but is it positive or negative? People strengthen neuropathways every day and it is important to be cognizant of the pathways that are reinforced and the ones that are denied growth.

The more educators make connections to past material with students the stronger their neuropathways will become (Ricci, 2013). The less educators make connections with past material or the students' background knowledge the less those positive connections will grow. This is especially important for students with dyslexia. They already have an intimate understanding of what it is like to have a brain that is neurobiologically different than most of their classmates. This strengthening process is vital to the success of a student with dyslexia. The expertise educators gain in understanding how the brain processes information will only deepen the understanding and level of compassion for how dyslexia affects students.

A great place to begin this growing journey is with some helpful books, articles, websites, and videos.

- *Mindset: The new psychology of success, updated edition* (Dweck, 2016)
 - This book walks the reader through Dweck's decades of research and the discovery of mindset. Dweck shares how mindset influences every endeavor taken on. This edition also addresses the phenomenon of false mindset and mindset applied to the culture in to a group or an organization.
- *Overcoming dyslexia: A new and complete science-based program for reading problems at any level.* (Shaywitz, 2003)
 - Shaywitz offers clear and concise science based information regarding the origin, effects, identification, and diagnosing of dyslexia. This book is full of practical techniques and recommendations for helping a child with dyslexia step by step.
- *Self-theories: Their role in motivation, personality, and development* (Dweck, 2000)

- Dweck imparts her decades of research behind the discovery of mindset. She exposes how self-theories create adaptive and maladaptive cognitive patterns that guide a person's life.
- Mindset Works Website - <https://www.mindsetworks.com/default>
 - Dweck and her colleagues offer a great hub of resources regarding mindset. From teaching to parenting, Mindset Works provides research, articles, videos, and even software that can be used to encourage a growth mindset. This website offers easy access to foundational research around: altering school culture, reaching at-risk minorities, and shifting teaching practices. This website also discusses how mindset promotes resilience and how implicit theories impact academic and emotional functioning in middle school.
- Dweck's TED Talk in Sweden regarding mindset: *The Power of Yet* - <https://youtu.be/J-swZaKN2Ic>
 - Dweck guides the viewer through the power that is held in believing in the yet to come. This is an introduction into the theory of mindset, how it affects people, and what a change in mindset can offer.
- *Mindsets in the classroom: Building a culture of success and student achievement in schools* (Ricci, 2013)
 - Ricci shares insightful ideas on critical thinking, learning from failure, mindset, and tools to building a growth mindset in a school culture. Ricci offers templates, examples, and guidance on implementing growth mindset in the classroom.

Encourage Rather Than Empty Praise

Feedback and praise are two vital components and learning and intervention. Naturally educators want to give feedback and praise to students but is the feedback helping or causing harm?

When praise for good performance or success is linked to intelligence, children may take on a performance versus learning goal. Telling children they are “smart” because they succeeded at something can cause a child to avoid learning opportunities that might be challenging for fear that they might look dumb. They become focused on proving their intelligence by getting high scores and performing well. Not only does this pattern deny them growing learning opportunities, it also may affect their perception of low performance. Instead of seeing a low performance as opportunity to grow, in strategies and effort, they may perceive it as a reflection of low intelligence in themselves (Mueller & Dweck, 1998).

In another study, researchers showed that instructors holding a fixed view of intelligence tend to judge a student as someone with low abilities based on one poor performance. (Rattan, Good, & Dweck, 2011). This preconceived judgment led the instructor to offer comforting or consolatory feedback to students and assure them that their inability to succeed is okay and then lowered class expectations. These lowered levels of expectations and engagement negatively affect students belief in themselves, in their grade for the class, and their ability to get the help they might need (Rattan, Good, & Dweck, 2011).

Praise and feedback is helpful and effective when kept strategy-oriented. Feedback that is strategy focused empowers children to see that educators are invested in them as a student and that through effort and new strategies there are other ways to solve their current challenge. Praising process and effort helps to foster motivation, and it reminds students of what they have

done to be successful and what strategies they could employ to be successful again. Process and effort praise focuses on the strategies, perseverance, improvement, and engagement that the students have put forth (Ricci, 2013). Process praise sounds like this:

“I like the way you tried all kinds of strategies to solve this problem. Good job sticking to it!”

“ Show me your work, and let’s try to figure out your process so far, then we can decide what steps you could take next.”

“ I can really see you’ve been practicing your handwriting. What a great improvement!”

“Mistakes are welcome here!”

“You kept going, even when it was hard. Great job!”

“The next time you think you can’t do it, just add a ‘yet’ at the end.”

Share Brain Knowledge with Students

Although brain function might not be your field of expertise, there are great ways of sharing the newfound brain information. Brain function and malleable intelligence are truly integral components for students to understand for growth mindset. The journey of discovering current mindset and deepening understanding of the brain is essential for educators. This journey is essential for students too. They will need guidance on their path as well.

I recommend beginning with the pre-assessment to discover their current mindset. This will then build into growing their knowledge of how the brain works. Just as with the intervention process, this information also needs to be explicitly taught, multisensory, and routinely revisited. It is essential for students to understand that intelligence is constantly

changing based on effort, strategies, persistence, and motivation. This knowledge can be shared through child friendly games, books, and videos.

I think these can be especially encouraging discussion because many children with dyslexia believe they are “stuck” with a brain that is different and “can’t” achieve as well as their peers. This is a great opportunity to shine light on the fact that the students are using new strategies every day in their invention. They are showing increased motivation in their work in and out of the classroom. Through the student’s effort in applying the new strategies learned they are making great progress through their persistence. It is important for them to also know that intelligence is something that can be hampered depending on these factors as well. This gives educators a platform to encourage them to continue all their hard work, persistence, motivation, and efforts over the summer when they have a break from school.

Support Families

Educating student’s parents about the malleability of the brain and mindset is a key component of the learning process for a student. Everyone in this process will benefit from an understanding of the brain, the power of a growth mindset, and encouraging strategy-oriented praise for their children. Educating parents will continue fostering the great work that students have begun in their intervention time. This will also be a process that will happen over time. As your students learn more so will their parents through their children.

To promote this growth it will be important to provide the parents with materials and resources so they can also practice and apply new growth mindset skills. Mindset Works offers a great assessment tool for parents to discover their current mindset as well as tools and resources.

Classroom Teacher Connection

A student's classroom teacher is an important and influential adult figure in their life. They have the daily advantage of viewing a child's academic progress and struggles. Even if an educator might not know the best method of intervention for a struggling student with dyslexia, they are almost always aware and ready to do what is most helpful for their student. With the permission of a student's parents, it is beneficial to connect with the regular classroom teacher. This relationship can be extremely helpful for the educator, the parents, and especially the student.

Often classroom teachers are quite open to continuing to foster the growth that is made in intervention. Keeping the classroom teacher up to date on the student's current and future lessons, as well as the areas of growth and struggle you have observed, will allow the interventionist to make recommendations on differentiated instruction that the dyslexic student would benefit from. Differentiated instruction can include phonemic based spelling lists, phonemic based books in the classroom, and the ability to write in cursive consistently.

I have also found it emotionally helpful for teachers to have books, and discussions about children with dyslexia in the classroom. These formats help other students be informed about dyslexia, which alleviates fear and confusion they might have. Here are a few suggestions of the many books regarding dyslexia to share in class;

- *What Is Dyslexia?: A Book Explaining Dyslexia for Kids and Adults to Use Together*, by Alan M. Hultquist, illustrated by Lydia Corrow (2008)
 - This book is a helpful tool to bring awareness about dyslexia for a parent or teacher to share with children. Some of the topics covered in this book

the cause of dyslexia, the various issues people with dyslexia face, and the great amount of courage people with dyslexia have.

- *Thank you, Mr. Falker*, by Patricia Polacco (1998).
 - This is a heart wrenching and heart warming story of a little girl named Trisha that has dyslexia. The story describes the struggles, confusion, teasing, and self-doubt Trisha experiences in school. Along comes Mr. Falker, one teacher that makes all the difference. This is the tale of Patricia Placco's experiences as a child.

Helping your student's classroom teacher gain valuable information about malleable intelligence, dyslexia, and how the brain works will help to ensure that they see your shared student not from a deficit lens but from one of great growth and strength. This enables both parties to share observations and make recommendations on what a student is excelling in and areas that need more practice. This relationship will be building knowledge about the student and can be a great resource for increasing the effort to strengthen the neuropathways that are being developed in intervention. Imagine the student benefitting from not only a great intervention, but also a strong supportive team of parents and their classroom teacher.

Conclusion

The purpose of this research narrative was to explore the idea that with a growth mindset, the struggles with dyslexia will have a reduced negative impact on a person's self worth.

Research and my preliminary findings suggest that growth mindset has the potential to build dyslexic student's self-efficacy, resilience, and perseverance in the face of challenges. What I have also realized through the research and working with students is that the teacher's mindset is

just as important, if not more important than the student's mindset. My hope is for parents, practitioners, and students to understand that mindset affects our perspective and is a framework through which we see and experience life.

Appendix 1: Student 1

Student 1	
Pre-assessment Results (as delivered by the Mindset Works website after taking the online survey) 5/17/2017	<p>Your Current Mindset: Right now, you are unsure about whether you can develop your intelligence. You probably care about performing well and you do want to learn, but you may still think that achievement should come easily and feel a bit discouraged when you perform poorly at something.</p> <p>You are moving toward a growth mindset, but there may be a few ideas holding you back from achieving all that you are capable of doing. It could be that you are reluctant to risk failure, or feel concerned about others' judgments of you, because you see performance as a measure of your ability. Or you may have a few areas where you are not certain that you can "cut it." If you are holding back from taking on challenges or trying new things, you probably have more potential than you are using!</p> <p>People who believe that they can increase their intelligence through effort and challenge actually get smarter and do better in school, work, and life over time. They know that mental exercise makes their brains grow smarter—the same way that exercise makes an athlete stronger and faster. And they are always learning new ways to work smart and build their brains.</p> <p>A growth mindset is something that you can develop. Would you like to find out how you can practice more of a growth mindset and reach your full potential? Visit www.mindsetworks.com/programs to learn more about programs we offer to help you and your school cultivate a growth mindset.</p>
Video	Student loved the video and made great connections.
Discussion	Really made connections in the discussion, shared that the student had created some new neuropathways regarding behavior and was excited to keep using them so that they would get stronger and that they would be the pathways that would be used the most.
Book 1 - Your Fantastic Elastic Brain	Student seemed to enjoy this book based on facial expression and inquisitive questions asked.
Book 2 - What Do You Do With a Problem	Student made the most profound connect with this book. Student engaged in the story, leaned in as I read, and had thought provoking remarks and questions afterward about his/her brain.
Letter to Future Student	Letter to future student was a bit of challenge for the student to create. Student was quite willing to share thoughts, and needed consistent direction to stay focused on parameters of the letter. This is a typical behavior student exhibits. Incredible thought process with directional encouragement.

Appendix 2: Student 2

Student 2	
Pre-assessment Results (as delivered by the Mindset Works website after taking the online survey) 5/22/2017	<p>Your Current Mindset: You understand that your intelligence is something that you can increase. You care about learning and you're willing to work hard. You do want to do well, but you think it's more important to learn than to always score well. This is what we call the "growth mindset." Even though you have a good foundation, there are some areas where you could benefit from learning how to cultivate your growth mindset practices. For example, you may seek challenges and perform at a high level, but sometimes feel uncomfortable with criticism even if well intended, or be rather hard on yourself for mistakes. You may have more potential than you are using! People who believe that they can increase their intelligence through effort and challenge actually get smarter and do better in school, work, and life over time. They know that mental exercise makes their brains grow smarter—the same way that exercise makes an athlete stronger and faster. And they are always learning new ways to work smart and build their brains.</p> <p>A growth mindset is something that you can continue to develop throughout life. Would you like to find out how you can strengthen your growth mindset and reach your full potential? Visit www.mindsetworks.com/programs to learn more about programs we offer to help you and your school cultivate a growth mindset.</p>
Video	Video seemed a bit too fast for student. Student appeared to be confused by this introduction. Student is the youngest in the group.
Discussion	Discussion was good and connecting
Book 1 - Your Fantastic Elastic Brain	Student connected the most with this book. Student enjoyed the pictures and descriptions based on his/her facial reaction, level of engagement, and thoughtful questions afterwards.
Book 2 - What Do You Do With a Problem	Did not share this book with student at this time. I will share this book along with the perfection book in the fall.
Letter to Future Student	Future letter was very encouraging and kind. Student made a point to encourage the future student to keep trying.

Appendix 3: Student 3

Student 3	
<p>Pre-assessment Results (as delivered by the Mindset Works website after taking the online survey)</p> <p>5/23/2017</p>	<p>Your Current Mindset: Right now, you are unsure about whether you can develop your intelligence. You probably care about performing well and you do want to learn, but you may still think that achievement should come easily and feel a bit discouraged when you perform poorly at something.</p> <p>You are moving toward a growth mindset, but there may be a few ideas holding you back from achieving all that you are capable of doing. It could be that you are reluctant to risk failure, or feel concerned about others' judgments of you, because you see performance as a measure of your ability. Or you may have a few areas where you are not certain that you can "cut it." If you are holding back from taking on challenges or trying new things, you probably have more potential than you are using!</p> <p>People who believe that they can increase their intelligence through effort and challenge actually get smarter and do better in school, work, and life over time. They know that mental exercise makes their brains grow smarter—the same way that exercise makes an athlete stronger and faster. And they are always learning new ways to work smart and build their brains.</p> <p>A growth mindset is something that you can develop. Would you like to find out how you can practice more of a growth mindset and reach your full potential? Visit www.mindsetworks.com/programs to learn more about programs we offer to help you and your school cultivate a growth mindset.</p>
Video	Student was quite excited and engaged with this video. Bright eyes, leaning in, big smile.
Discussion	Student was enthusiastic about our discussion. Student was incredibly attentive when I shared my struggle and shared openly when it was the student's turn to share. Student seemed to value hearing a struggle from his/her teacher. I think this was the most impactful part for this student.
Book 1 - Your Fantastic Elastic Brain	Student was engaged with this book based on questions and head nodding as I read.
Book 2 - What Do You Do With a Problem	Well received by facial expressions. I think the perfectionist book will be good for this student in the fall.
Letter to Future Student	We did not have enough time before summer break to create letter

Appendix 4: Student 4

Student 4	
Pre-assessment Results (as delivered by the Mindset Works website after taking the online survey) 5/23/2017	<p>Your Current Mindset: You know that you can increase your intelligence by learning, and you like a challenge. You believe that the best way to learn is to work hard, and you don't mind making mistakes while you do it. This is what we call the "growth mindset." Even though you have a great foundation, there may be some areas where you could benefit from learning how to cultivate your growth mindset practices. Maybe you could use techniques to make the most of negative feedback, or explore the possibility of growth in areas that you have neglected. You might gain from strategies to boost learning and productivity. Or you might like to learn how to help others develop growth mindset thinking. You probably still have lots of ways to grow! People who believe that they can increase their intelligence through effort and challenge actually get smarter and do better in school, work, and life over time. They know that mental exercise makes their brains grow smarter—the same way that exercise makes an athlete stronger and faster. And they are always learning new ways to work smart and build their brains. A growth mindset is something that you can continue to develop throughout life. Would you like to find out how you can strengthen your growth mindset and reach your full potential? Visit www.mindsetworks.com/programs to learn more about programs we offer to help you and your school cultivate a growth mindset.</p> <p>Loved the assessment....very growth minded and had a good discussion around this, results show a growth mindset</p>
Video	Student was energized by the video
Discussion	Great sharing around struggles. Student was receptive to my story and was quite willing to share their experience
Book 1 - Your Fantastic Elastic Brain	Student loves to be read to and this book was quite inviting. Student loved discussing the brain.
Book 2 - What Do You Do With a Problem	This book generated great questions and responses from student.
Letter to Future Student	Student missed the last session that was planned to do student letter

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