A Growth Mindset Resource for Adolescents with a Learning Disability

by

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Abstract

The purpose of this project is to create a resource for students to understand mindset perspectives and how to move from a fixed mindset to a growth mindset in a secondary classroom. The focus is on activities and self-reflections to assist students to move forward in their thinking. Students will come to understand how they have persevered in the past and how to use mindset strategies in the future to overcome challenges that they face. Students with learning disabilities often have difficulty self-advocating for their needs and feel as though their past performance dictates their future performance (fixed mindset). Research-based evidence suggests that all students, particularly those with a learning disability, may benefit from growth mindset interventions to work through academic challenges as well as social and emotional struggles. Studies have shown that the implementation of growth mindset strategies has increased motivation, self-efficacy and academic achievement through a variety of approaches used in the classroom. Much of the literature focuses on how teachers are to incorporate growth mindset strategies, primarily with elementary students in the classroom. These studies are the basis in the creation of the growth mindset activity guide, as the methods used are beneficial for all students, regardless of their age and how the strategies are incorporated at the high school level.

*Keywords:* growth mindset, fixed mindset, self-efficacy, learning disability, high school, designated student
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Chapter 1

Introduction

A student’s mindset is affected by their self-efficacy, motivation and how they attach meaning to others’ behaviour or their own (Rhew, 2016). It is believed that we can have two types of mindset, fixed or growth. Students with a fixed mindset believe that intelligence cannot be changed and is static (Dweck, 2006). This means that students believe that no matter how hard they try to move forward, there will be no positive impact due to their efforts. As a result, students with a fixed mindset will often avoid challenges, give up easily when they face challenges, and put in little effort as they feel as though there is no potential for improvement (Yeager & Dweck, 2012). Those that have a fixed mindset have been found to ignore constructive feedback and are threatened by the success of others (Saunders, 2013). Students that have a fixed mindset are less likely to develop in their learning as they feel that there is nothing they can do to change their academic abilities (Dweck, 2006). A growth mindset differs from a fixed, in that students believe that intelligence can be developed and they embrace challenges, persevere when they face challenges and they utilize criticism from others to move forward in their learning (Dweck, 2006). Students with a growth mindset are often intrinsically motivated and there is a positive impact on academic achievement over time (Brougham & Kashubeck-West, 2017). A growth mindset enables children with the belief that they are able to tackle challenges and learn knowledge and skills they previously did not believe they could (Manchi, Visaria, Mukhopadhyay, & Dehejia, 2017). Growth mindsets greatly impact learners and what they are able to achieve and can be taught through strategies implemented within classrooms of students of any age. Students can be taught growth mindset strategies in multiple ways and adapted for various learners (Polirstok, 2017).
Students that have learning disabilities often have a poor self-concept and believe that their past experiences indicate their future achievements. Encouraging students with a learning disability to embrace a growth mindset will help designated students in a number of ways, by increasing their self-efficacy, self-concept, self-esteem and improve their ability to self-advocate for their needs (Rhew, 2016).

**Statement of the Problem**

Students who have learning disabilities often face difficulties with their academic ability, self-esteem and self-efficacy (Yeung, 2001). This may be particularly true when students are transitioning to high school, where they are facing greater pressure and can become more anxious with the amount of work they are expected to do in relation to higher expectations and the degree of responsibility in terms of ensuring that work is complete (Lackaye & Margalit, 2006). Students with learning disabilities may feel that they have certain limitations due to their challenges with academics. Negative self-perceptions may affect what and how students learn, for they may have a fixed mindset in which they believe they are not capable of moving their learning forward and are unable to learn new skills or concepts (Dweck, 2006). Working with students that have a learning disability and implementing a growth mindset intervention will increase their self-efficacy, motivation and achievement. Students with learning disabilities often struggle more than their peers and may have a fixed mindset, which is why they believe they are unable to grasp concepts that they have had difficulties with in the past (Hojati & Abassi, 2013). The identified challenge guiding this master of education in special education project is that students with learning disabilities have strong beliefs that they are unable to tackle certain tasks and encouraging a growth mindset will enable students to achieve more academically, while also impacting their self-efficacy and motivation.
Personal Context

The Growth Mindset Activity Guide is an important resource for the students that I teach, as it will show them that they are able to learn concepts that they previously thought were not possible. Highlighting how students have persevered in the past will ease students’ hesitancy to move forward when they face a challenge or an obstacle. Special education students are asked to self-reflect on their learning goals with their support teachers throughout the year, and with the use of the Growth Mindset Activity Guide, they will become more comfortable with the process and how they learn. Creating an atmosphere where students are comfortable with mistakes and asking questions will allow for more inclusive classrooms for all learners. Teachers will play a role in the activity guide, they will be encouraged to use feedback that aligns with creating a growth mindset for their students. As a classroom teacher and student support teacher, I see students with fixed mindsets on a daily basis. Encouraging students can become difficult, and it is my hope that the Growth Mindset Activity Guide will be a useful resource for all teachers to use and refer to with their students on a regular basis.

Rationale for Study of the Problem

An understanding of how to foster a growth mindset in students with learning disabilities is important, as they often struggle academically and have difficulty moving forward when they face challenges (Hojati & Abassi, 2013). Students are often quick to state that they are not able to do something because they have failed or had difficulty in the past. Working with students to encourage and to provide insight on how their brain works will help students in the moment as well as in the future. Designated students often have a low self-efficacy and lack motivation when they are facing something challenging (Lackaye & Margalit, 2006). Encouraging students with a low self-efficacy, can be difficult as students don’t believe that they are capable in
achieving a goal or task (Lackaye & Margalit, 2006). Bandura (1997) emphasizes that self-efficacy is related to past performances and experiences, as well as support received from others through the learning process. The sources of self-efficacy seem closely related to motivation and a fixed mindset. Students with a fixed mindset are often unable to persevere through tasks due to negative self-perceptions around intelligence and overall capability (Yeager & Dweck, 2006). Having a fixed mindset for those with learning disabilities can have long term effects and can leave students with negative self-perceptions and a negative self-concept (Lackaye & Margalit, 2006). The purpose of this research is to create a Growth Mindset Activity Guide that can support high school students with learning disabilities in developing a growth mindset. This is of importance to teachers who are encouraging their students regularly to take risks, overcome challenges and to highlight that students are able to learn and expand their intelligence. Students will benefit from the Growth Mindset Activity Guide, as they will learn about a growth mindset orientation and the vast effects it will have on their academic ability, motivation and self-efficacy.

**Guiding Questions**

How can high school students with learning disabilities develop the skills to build a growth mindset? Are students able to develop growth mindset knowledge and skills through lessons and strategies and implement these skills independently when required? How important is self-reflection for students to make connections to success in the past and to apply those reflections moving forward in their learning?
Growth Mindset Activity Guide Overview

Setting and Subjects

The resource will be displayed in a book format and can be used by any student to work through growth mindset strategies. Secondary teachers are able to access the resource to use in their classrooms. The resource can be used for designated students and non-designated students of any age, but the focus is for high school students, grades 8 – 12.

Instrumentation

There will be two surveys at the beginning of the activity guide, in order for students to determine what their current mindset and self-efficacy is, using the General Self-Efficacy Scale and the Student Mindset Assessment – Theory of Intelligence Scale (Dweck, 2000; Blackwell, 2002).

General Self-Efficacy Scale. The 10-item scale was created to assess a general sense of perceived self-efficacy. The questions can be used for a variety of ages ranging from adolescents to adults.

Student Mindset Assessment – Theory of Intelligence Scale. The questionnaire is designed to investigate students’ thoughts on their intelligence and if they feel if they have any control over what they know. Students choose between a 1 – 6 to scale where they answer a number of questions.

Design

Students are encouraged to use the resource in their student support class at the beginning of the school year and to work through the strategies with support from their teachers, as needed. Students are encouraged to complete the two surveys prior to beginning the activities to determine their baseline mindset. Student support teachers are encouraged to discuss the results
with their students, the importance of having a growth mindset, and how they are all capable of learning new information and previous concepts that they have yet to master.

**Definition of Terms**

The following terms will be used throughout the research study.

1. A *fixed mindset* has been defined “as the belief that traits such as intelligence are fixed or uncontrollable” (Dweck, 2006, p.7).

2. A *growth mindset* has been defined “as the belief that traits such as intelligence are malleable and can increase with effort” (Dweck, 2006, p.7).

3. *Motivation* has been defined as being “moved to do something…someone who is energized or activated toward an end is considered motivated” (Ryan & Deci, 2000, p.55).

4. *Self-efficacy* has been defined as “people’s judgements of their capabilities to organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p.391).

5. *Learning disabilities* result from impairments in one or more processes related to perceiving, thinking, remembering or learning (Understanding Learning Disabilities)

6. *Brainology* is an “online program that teaches brain science and study skills to students. In the program, students develop a growth mindset, the core belief that abilities, rather than being fixed, are developed over time” (Dweck, 2006, p.7).

7. *Resilience* is any “behavioural, attributional or emotional response to an academic or social challenge that is positive and beneficial for development (such as seeking new strategies, putting forth greater effort or solving conflicts peacefully).” (Yeager & Dweck, 2012, p. 303)
Overview of Project

This project is organized into four chapters. Chapter Two is a literature review that focuses on a framework for growth mindset and its effects on those with learning disabilities, as well as the relationship of a student’s self-efficacy. Chapter Three consists of a description and overview of the Growth Mindset Activity Guide and information as to why an interactive book is a suitable resource for students with learning disabilities. Chapter Four incorporates a review of the book, limitations, implications of the project and a conclusion related to the guiding questions that were at the root of the research.
Chapter 2

Literature Review

Introduction

The purpose of this project is to create a Growth Mindset Activity Guide for high school students with learning disabilities to shift their thinking from a fixed to a growth mindset. Studies will be discussed that highlight the importance of having a growth mindset and the impact it can have on high school students with learning disabilities. In this review of the literature supporting the development of a Growth Mindset Activity Guide, learning disabilities, self-efficacy and motivation will be discussed in relation to a growth mindset. The importance of mindset and self-efficacy on designated students in high school will be discussed in relation to incorporating mindset strategies into the secondary classroom. Students with a designation related to learning challenges may have experienced years of struggling with certain activities which can greatly impact their self-efficacy and in turn their motivation.

Working with various strategies aimed at a growth mindset will impact two factors; how a student feels about their self-efficacy and their motivation, both of which are often low for those with a learning disability (Traux, 2018; Woodcock & Jiang, 2018). Studies have shown that students with a growth mindset are able to achieve more academically as they are open to challenges, critical feedback and an overall general desire to learn (Traux, 2018). Students with learning disabilities may face challenges academically and socially and having a greater understanding of their mindset will allow educators to better support and plan for their diverse learners. Growth and fixed mindsets will be discussed as will what a special education learner brings to the classroom. The review will conclude with a critique of existing literature, and
interventions that could be implemented into a resource for students to promote mindset, self-efficacy and motivation for designated students.

**Designated Students in High School**

Adolescents face a number of factors when they transition from elementary school to high school, resulting in concerns academically, socially and emotionally, due to changes in their environment and in the level of academic expectation and responsibility. Students with a learning disability often struggle more than their peers. In particular, students with learning disabilities often face more motivational difficulties than their peers without learning disabilities (Hojati & Abassi, 2013). Designated students are those that have cognitive, behavioural or functional deficits (Espelage, Rose, & Polanin, 2016). Designated students often need support to move forward in their learning and to persevere when they face challenges. “Motivation has long been suspected as a factor influencing the achievement of students with learning disabilities (LD)” (Sidersis, Stamovlasis, & Antoniou, 2016, p.631), which would play a large role in how students are working and participating in classrooms.

Students can experience difficulty during the transition from middle to high school due to lost connections, which can lead to poor output and confidence in their academic abilities (Lackaye & Margalit, 2006). Lackaye and Margalit (2006) are two researchers that looked into the social-emotional effects of academic achievement of students with and without learning disabilities. Students with learning disabilities were often told to “work harder” when they experienced challenges, while they were working to the best of their ability. These experiences can lead to poor motivation, self-efficacy and ability to move forward during certain tasks. Students who had negative self-perceptions viewed themselves as poor students who did not work hard enough, rather than as students who needed strategies to persevere when facing a
difficult task (Lackaye & Margalit, 2006). Designated students often use their past performance academically as an indicator of how and what they will be able to produce in the future (Hojati & Abassi, 2013).

**The Importance of Mindset**

Students’ academic achievement varies greatly due to a number of factors, including their mindset with regards to intelligence (Claro, Paunesku, & Dweck, 2016). Dweck (2006) describes having a fixed mindset as one who believes that intelligence is fixed and cannot be changed. The negative implication of having a fixed mindset is that students believe there is nothing they are able to do to change their intelligence and level of understanding (Yeager & Dweck, 2012). In contrast, students that have a growth mindset learn from mistakes and challenges and believe that intelligence can be grown through practice and perseverance. The importance of a student’s mindset is that it can indicate how students work and learn in classrooms. Mindset was shown to have a connection to academic achievement, as well as a number of other social and emotional factors, which resulted in greater confidence in students (Maata & Jarvela, 2013). It was found that when students observed their peers succeeding, they in turn found greater confidence in their own abilities (Maata & Jarvela, 2013). In addition, students with a growth mindset are seen to have more positive relationships than their fixed mindset peers, as they respond less aggressively to others success and achievement (Verberg, Helmond, & Overbeek, 2018). In addition, a student’s mindset can limit or increase their ability to try new things and move forward in their learning. There is a correlation between growth mindset and a student’s belief of their ability to change personal qualities in all aspects of their lives (Barnes & Fives, 2016). Studies showed that a teacher’s mindset was equally important for students to strive to have a growth mindset themselves, as they need to believe that their students are able to grasp concepts that they may
not have initially understood (Woodcock & Jiang, 2018). Creating classrooms that are focused on student effort rather than their achievement are crucial for growth mindset students, both through teacher actions and through the words they choose when providing feedback (Brougham & Kashubeck-West, 2017). Working with growth mindset strategies is important for adolescents as they may have a pre-conceived idea of what they are capable of from past performance, their parents, peers and feedback they may have received (Bedford, 2017). Bedford’s (2017) research found that having a growth mindset can affect a student’s academic achievement, and impact a one’s motivation and self-efficacy in a positive way.

Bedford (2017) also measured the correlation between attitude, motivation, self-efficacy and the impact of a student’s mindset. Bedford discussed how past performances affect students so significantly that they lose the motivation to attempt a task where they have experienced challenges (Bedford, 2017). Growth mindset strategies have been shown to improve students’ academic abilities and create resilient learners, which in turn increased motivation by improving self-efficacy (Bedford, 2017).

Yeager and Dweck (2012) were looking into mindsets that promote resilience, which is directly related to how students respond to challenges and their thoughts on mindset (Yeager & Dweck, 2012). When students believe their intelligence is fixed and static, when they face an obstacle and are unable to understand something, they come to believe that it is because they lack inherent intelligence. The studies showed that the theories of intelligence could be taught in a school setting and that implementing interventions could affect academic behaviour by changing mindset and resilience. Yeager and Dweck (2012) researched mindsets that promote resilience and found that those with a growth mindset had a greater ability to overcome challenges. The researchers found that students’ grades improved through the interventions as
the students were able to meet challenges with more ease. Students also recognized that not understanding something did not reflect their intelligence (Yeager & Dweck, 2012). The methods used in building students’ resilience to move forward in their learning could be beneficial to those students with a learning disability. The students were able overcome to challenges and had a greater confidence in their abilities. They were also able to change their personal characteristics academically and socially, which is strongly aligned with the groundwork of growth mindset (Yeager & Dweck, 2012).

A number of studies have focused on the analysis of connections between growth mindset and school achievement (Zeng, Hou, & Peng, 2016; Claro et al., 2016). Zeng et al. (2016) studied the correlation between growth mindset, resilience and psychological well-being using The Growth Mindset Inventory by Carol Dweck (2006), The Brief Resilience Scale (BRS), developed by Smith (2008), the Flourishing Scale to measure students’ psychological well-being (PWB) by Diener, Wirtz, Tov, Kim-Prieto, Choi, & Biswas-Diener (2009), and The Utrecht Work Engagement Scale student was used to assess school engagement by Schaufeli, Martinez, Pinto, Salanova, & Bakker (2002). A positive correlation was found between growth mindset and student engagement, resilience and student psychological well-being. Claro et al. (2016) researched how a student’s beliefs about their brain and intelligence had more of an effect on their academic ability, in comparison to their financial background and possible limitations in accessing support. Several correlations within the study indicated that students with a growth mindset were able to achieve more academically, despite financial hardships (Claro et al., 2016). This study is valuable, in that it demonstrates that all students are capable of having a growth mindset and achieving well academically. These studies highlight the importance of having a
growth mindset as it has positive effects on school success as well as resilience and overall well-being.

**Self – Efficacy in Students**

Student success is related to a student’s self-efficacy, which is a student’s belief in their expectations about their competence and ability in mastering a skill or completing a task (Lackaye & Margalit, 2006; Bedford, 2017). Bedford (2017) describes how success can enhance self-efficacy, which can in turn improve a student’s performance in various tasks. While strong self-efficacy is ideal, it can also lead to complacency, where students are unable to reach their full potential due to an overestimation of abilities (Bedford, 2017). Peers can assist a student’s self-efficacy, as seeing peers achieving success can lead a student to believe that they are competent to complete the task/activity despite prior performance (Bedford, 2017). Self-efficacy is an important factor in student success. Understanding how self-efficacy can be fostered is important for all students.

**Learning Disabilities & Self-Efficacy**

Students with learning disabilities struggle academically and often have poor self-efficacy, as it is ‘deeply rooted in past achievement, difficulties and personal history’ (Lackaye & Margalit, 2006). Students took the Academic Self-Efficacy Scale which consists of 11 statements about students’ beliefs of how they cope with different academic tasks to succeed at school (Lackaye & Margalit, 2006). The study looked at a number of emotional factors that affect students with learning disabilities and they found that students felt lower levels of self-efficacy, sense of coherence, positive mood and hope compared to students without a learning disability (Lackaye & Margalit, 2006). The importance of a student’s belief in their abilities is that it will play a major role in how much effort they put forward in their work. By recognizing a
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student’s mindset, it will allow teachers to gain insight in what students believe they are capable of.

Bedford (2017) researched how student’s self-efficacy is related to their motivation. Students with strong self-efficacy were highly motivated to complete tasks, attempt challenges and had a desire to learn (Bedford, 2017). Self-efficacy was shown to have a connection to growth mindset, as the principles of growth mindset are strongly correlated with an individual who has strong self-efficacy and in turn, motivation. Growth mindset interventions were put into place using the Brainology program, an online program that teaches students about how to develop a growth mindset, and the results showed an increase in students’ motivation and self-efficacy. Self-efficacy and motivation are two ideals that stem from growth mindset; they are closely related and are strong indicators for student success (Bedford, 2017; Traux, 2018).

Motivating Struggling Learners

To increase student motivation, students need to feel as though they are capable to develop their skills and abilities to meet academic and life challenges (Yeager, Romero, Paunesku, Hulleman, Schneider, Hinojose, & Dweck, 2016). Highlighting the importance and meaning of tasks in a safe environment, allows for students to increase their motivation (Yeager et al., 2016). Social – psychological interventions where students determined what is relevant to them, as opposed to teachers telling students what is important, resulted in increased student motivation (Yeager et al., 2016). In addition to this shift, working with growth mindset interventions that highlighted brain malleability and increased connections through challenges, had a positive impact on how students worked in classrooms and in their level of motivation. Growth mindset was thought to relate to an increase in motivation for students as it “relates to brain processes, and brain processes relate to motivated behaviours” (Ng, 2018, p.6-7). Traux
(2018) found that motivation and growth mindset were closely related and greatly impacted by teacher feedback. Interventions took place where teachers were using “growth mindset feedback” that focused on comments based on effort rather than ability. This study is of importance, as teacher feedback and language motivated all learners in the classroom and increased growth mindset (Traux, 2018).

Manchi et al. (2017) and Ng (2018) looked into the relationship between intrinsic motivation and growth mindset. Intrinsic motivation can be explained as students who are motivated by a desire to learn and experience challenges, as opposed to extrinsic motivation, where students are motivated by rewards or acknowledgement from others as their motivator to learn (Manchi et al., 2017). Ng (2018) states that educators can promote intrinsic motivation in their students by having a deeper understanding of self-regulatory strategies, and through developing growth mindset, students will gain intrinsic motivation and the ability to self-regulate their behaviour to perform the given task (Ng, 2018). Manchi et al. (2017) looked at students’ academic achievements prior to interventions and they found that students that did not have any incentives, did not see any positive effects academically. Students that were high performers initially, did well with the growth mindset interventions, while it had little impact on the performance of those who underperformed prior to the interventions (Manchi et al., 2017). The researchers believed that the reward system would allow for students to recognize that effort and learning has a direct correlation to how students can change and improve their own abilities (Manchi et al., 2017).

Schmidt, Shumow and Kackar-Cam (2016) looked into a six-week study on growth mindset interventions to determine if an increase in student’s interest and engagement in Science class could be identified. The students were in grade 7 and grade 9, and used the Brainology
program guided by their teachers during classroom activities once a week, and explored similar concepts about the brain and its malleability (Schmidt et al., 2016). Rhew (2005) looked at using the Brainology program for special education students in grades 6 to 8, to improve their self-efficacy and motivation. Rhew (2005) used the pre-test and post-test method to test the effects of the Brainology interventions. The tests were related to reading and he used The Reader Self-Perception Scale 2nd Edition (Melnick, Henk, & Marinak, 2009) and the Motivation for Reading Questionnaire (Wigfield & Guthrie, 1997). The Brainology program requires a lengthy time period to implement, as it took nearly four months to gather data about student progress from pre-test to post-test. The researcher pointed out that having a curriculum that incorporates a growth mindset of instruction would be more beneficial than direct teaching of growth mindset through interventions. The pre-test and post-test were related to two reading questionnaires, the limitations for this study when dealing with special education students is that a large number of them have learning disabilities related to reading and comprehension, so the interventions may have to be for long periods of time to reach all learners. Both studies found improvement in academic achievement, learning and interest throughout the school year and it was shown to improve growth mindset in students (Rhew, 2005; Schmidt et al., 2016).

**Fostering a Growth Mindset in Students**

Barnes and Fives (2016) discuss how teachers can encourage a growth mindset for their students, simply by the language they use and the atmosphere they create through building strong, positive relationships. Using language that focusses on effort rather than achievement will highlight the importance of trying to achieve goals academically, rather than simply focusing on the end product or grade (Brougham & Kashubeck-West, 2017). Teachers that “promote and model risk and mistake tolerance” (Barnes & Fives, 2016, p.32), in their activities
will provide students with opportunities to try and attempt challenges regardless of past performances, the risk of failing or how they may be perceived by others. Mistakes should be seen to students as something that is common, not wrong. Teachers are encouraged to tell their students to point out their mistakes to highlight how they are crucial to learning (Barnes & Fives, 2016). Barnes and Fives (2016), notes the importance of high expectations for all students, regardless of what they are able to achieve. Questioning some students with higher level questions versus lower ones, reducing questions and providing easier work is showing students that there are less expectations, which is harmful to promoting growth mindset students (Barnes & Fives, 2016).

Polirstok (2017) discussed how growth mindset is related to how students will respond in the face of challenges. Polirstok (2017) describes using learning stories as a strategy that can be used to teach about growth mindset, where educators communicate stories to learners where they discuss:

(a) a discussion of a problem or project, (b) the learning challenges and the degree of difficulty the problem/project presents, (c) the actions the student chose that kept him or her engaged and working in the face of difficulty, (d) the way success with this problem/project was assessed, and (e) the extent to which this student was successful (p.3).

It was found that creating learning stories would be beneficial for students to relate to one another. Learning stories could also be a resource of motivation for students to refer back to when they are facing something challenging (Polirstok, 2017).

Other methods for teaching growth mindset are to incorporate adolescent literature so students are able to see the resilience and persistence of characters that they read about (Polirstok, 2017). It is believed that students’ beliefs and behaviours can be changed through
reading how others have succeeded in the face of considerable challenges, especially if they are in a similar situation or aspire to be like the person they are reading about in a biography (Polirstok, 2017).

“The Choice Map provides a graphic approach to following decisions and feelings that students themselves, or people they know, or characters they have read about and what they may experience” (Polirstok, 2017, p.4). The map provides a visual for students to understand the consequences that results from decisions and will illustrate options to switch from one mindset to the other. By allowing students to create their own map, students can individualize what they need in order to be successful.

Brainology is an online program that can be implemented into classrooms where students learn how the brain functions, learns, remembers and how it changes the more we use and challenge it (Polirstok, 2017). The program teaches the concepts as well as providing activities for students to work through, and requires a training module in addition to up to 10 hours of classroom activities (Polirstok, 2017). The program has improved some students’ academic and self-efficacy measures and increased their engagement and motivation in addition to having a better understanding of intelligence. The program has been successful with some students, while it has not been as beneficial with others (Polirstok, 2017).

Behavioural and cognitive approaches were discussed to be used in the classroom to promote a growth mindset for students who lack resilience and grit in completing more challenging activities (Polirstok, 2017). The approaches included peer tutoring, self-evaluation and verbal self-instruction where the students are monitoring their own performance and learning “how to persist in the face of self-defeating thoughts and behaviours” (Polirstok, 2017, p.5). Self-
Evaluation can help students to think differently about themselves as a learner and move toward a more open, growth mindset (Polirstok, 2017).

Conclusion

The research summarized in this chapter outlined growth and fixed mindsets, self-efficacy and how it affects students with learning disabilities. There are a number of resources included to help teach growth mindset in any classroom from Kindergarten to Grade 12. Students who have a growth mindset are more likely to take risks, embrace challenges and believe that they are capable of tasks that they were unable to achieve in the past (Claro et al., 2016). Students with learning disabilities often face greater challenges than their non-designated peers and working with students on their mindset and beliefs about their self-efficacy will allow students to experience greater success and self-confidence. The information in Chapter Three will address the research terminology for this project.
Chapter 3

Chapter Overview

The purpose of this project is to create a Growth Mindset Activity Guide for high school students with learning disabilities. Growth mindset interventions have been shown to make an impact on a student’s academic achievement and creating a resource for students will provide them with opportunities to develop strategies they are able to apply to their learning (Rhew, 2005). This chapter describes an overview of the product and how it should be implemented, as well as the importance of creating a resource for secondary students with learning disabilities.

The Importance of the Resource

The goal of this project is to create a resource for students to build a growth mindset, as it will allow students to persevere when they face challenges. Students with a learning disability were the focus, as they often struggle more academically than their peers (Hojati & Abassi, 2013). While there are a number of resources for building a growth mindset, many of the student-centered resources are for elementary aged students. Students in high school are more likely to have strong beliefs of their academic ability whether it is positive or negative (Lackaye & Margalit, 2006). Resources for secondary students have the potential to impact a student’s achievement levels and general beliefs in themselves in a positive way. High school students will be able to use growth mindset strategies when they enter the workforce, as they will face similar challenges that they face in school.

Project Description

The information in the Growth Mindset Activity Guide will be presented in a manner that students can easily read. Teacher will guide students to understand the concepts they are being taught, as well as help students work through the activities. The resource is a combination of
direct teaching and self-reflection strategies related to the mindset concepts being taught. The hope is that immediately after a lesson, students will be able to relate the concepts to themselves and determine how they feel, and how to engage in positive growth.

The project is of value because having a growth mindset will affect students in their daily lives at school, no matter what the course is, as well as their personal lives. The project itself will need to be implemented in classes that offer flexibility in terms of the curriculum. The concepts are beneficial for all course subjects, and the resource allows for teacher flexibility in how it was administered. A student support classroom has designated and non-designated students, so using the resource in this setting would be ideal. Ensuring that students are not overwhelmed and feeling as though they need to complete the guide in one sitting is important, otherwise students may rush to complete it, or lose focus and not be able to persevere to complete it.

The goal of the project is for students to recognize that they are able to change what they are able to achieve through practice and time. Students will see the connections between their mindset, motivation and self-efficacy and how much control they actually have in all of these areas. The guide is meant to enlighten and show students that they have all overcome challenges in some area of their life and by implementing these ideals into others areas of their life will also have a positive impact. Working on challenges, goals and overall attitudes of themselves is a goal that every individual could benefit from, regardless if they are a high school student or an adult.

**Methodology**

This project uses evidence-based methods to create a growth mindset resource for secondary students. Evidence-based research was chosen as there have been studies related to working with growth mindset interventions to improve students’ academic achievement, self-
efficacy and overall confidence in their abilities (Rhew, 2005; Manchi et al., 2017; Polirstok, 2017; Yeager & Dweck, 2012). While there have been studies with direct instruction about growth mindset, there currently are few related to resources for secondary students to access on their own. The general ideas that have been used for elementary students will be adapted for adolescents while incorporating activities and concepts that will be beneficial for high school students with a learning disability.

**Stages of Mindset for Students in the Resource**

The Growth Mindset Activity Guide will be created into sections for students, so they can access information about growth mindset as well as put the activities into practice. Students will reflect on experiences in the past and present and how to persevere when they face challenges. Students will also have two surveys related to their mindset and self-efficacy as students need to have self-efficacy in order to have a growth mindset (Lackaye & Margalit, 2006). The activity guide will have eight stages that are composed of learning content and self-reflection activities.

**Stage One.** Students will begin with thinking about what each of us can achieve, followed by looking at our strengths and struggles. Students will be asked to notice any trends or correlations between the two sections. Students will describe an obstacle they faced in the past and to describe how they overcame that obstacle, which is referred to as a student’s learning story. A learning story is important as it will provide proof for every student that they have been able to persevere in the past, so they can in the future as well (Polirstok, 2017).

**Stage Two.** Students will think of goals that they currently have and use the SMART goal strategy to create a feasible goal. Support is important for students, especially when facing a challenge, so students will think of their support system.
Stage Three. Students will complete a survey on mindset to determine if they are closer to a fixed mindset or a growth mindset. Students will then complete a self-efficacy quiz to determine how they believe they can face challenges and if they are capable. Students will follow the surveys with a self-reflection, where they will analyze their results and think about how it is related to their learning.

Stage Four. Students will learn about the brain and how it is important for each of us to make mistakes and experience challenges, as it strengthens our brain and creates more connections (Manchi et al., 2017).

Stage Five. Students will read about the differences between growth and fixed mindsets and reflect if they have ever felt as though they have been in these mindsets. This section will primarily include the content of what growth mindset is and the information will be presented in a manner that is appealing to adolescents. Students will read the benefits of growth mindset and circle an image about what phrases of mindset are most closely related to themselves.

Stage Six. Students will brainstorm about the possible connections between growth mindset, self-efficacy and motivation. After the brainstorming, they will read and respond to concepts of self-efficacy and motivation. Students will complete this section by reflecting and recording how they believe the three concepts affect one another.

Stage Seven. Students will take some of the content about mindset and relate it to themselves in creating a “choice map”, where they will come up with strategies to move through the challenges they described earlier. Students will use the growth mindset strategies and language to create a map that works for their individual needs. Within this resource, there will be a description of a choice map and the importance and usefulness of this activity.
Stage Eight. Studies have shown the benefits of using a pre-test and post-test an intervention method when implementing growth mindset strategies. In the final step of the resource, students will take the same two surveys on mindset and self-efficacy, that were done prior to any concepts being covered. This “pre-survey” and “post-survey” method will allow for students to witness progress they have made in their learning. The surveys will be followed by one last reflection, where students will think of how they will move forward with these new skills.

Significance

Students with learning disabilities can have characteristics of those with a fixed mindset. Creating a resource for adolescents to shift their thinking will help them academically and personally. Creating an activity guide for students to outline their past struggles and how to move forward will be beneficial for students’ lives after high school, where they will likely receive fewer supports academically. Providing students with strategies that they are able to implement and having an opportunity to personalize their book to their needs, will give students greater ownership and accountability over their learning.

Resources Accessed

Two surveys were used to gauge where the students were in terms of their mindset and their self-efficacy. The mindset survey was adapted from Carol Dweck by Emily Diehl (2008) and the general self-efficacy survey is the is from Schwarzer and Jerusalem (1995). Additional resources were taken from a number of sources and adapted as needed to best meet the needs of high school students.

Mindset Survey
The Mindset survey was created to gain insight on students’ mindsets, ranging from a strong growth mindset to a strong fixed mindset. The survey accounts for a combination of the mindsets. The survey can be self-administered and is 20 questions long and is scored on a 4-point scale, where the final score is added for a range between 0 - 60 points, where 0 – 20 indicates a strong fixed mindset and 45 – 60 indicates a strong growth mindset.

General Self – Efficacy Scale

The General Self- Efficacy Scale was created to assess a general sense of perceived self-efficacy. The scale can be used with adolescents over 12 as well as with adults. The survey can be self-administered and is 10 questions long and is scored on a 4-point scale, where the final score is added for a range within 10 – 40, where a higher score indicates a higher self-efficacy.

The Growth Mindset Playbook

This resource provides strategies for teachers to use with their students, that includes teaching about brain plasticity, reflection prompts as well as strategies for students to plan, monitor and evaluate their learning. The book not only provides strategies, but it also includes how to improve communication and ideas for constructive feedback.

Ready to use Resource for Mindsets in the Classroom

The resource provided for teachers, students, parents and administrators can assist in changing student perception of their abilities and potential. Student growth, failures and lessons on the brain are included in multiple ways that can appeal to diverse learners.

Considerations for Implementation of Project

The activity guide is to be used as a resource to foster a growth mindset, so whether it is implemented as a voluntary or involuntary resource may have an effect on how useful it is. The openness and willingness of the students to reflect on their learning is connected to the possible
changes that students can experience in their thinking through the activities and self-reflections. Students often do not self-reflect on past struggles, as they are continuously working at a fast pace in high school. Adjusting how students look at past performances, critiques and the root cause of their struggles will be a different path for students. The resource was created for all high school students, as well as those with learning disabilities or another ministry designation. Students with a designation may need support with determining their struggle and how to work through this with their student support team. All students will require safe spaces where they are able to share struggles, accomplishments and goals for the future.
Chapter 4

Reflection

I wanted to create a resource for students to use that would highlight what growth mindset is, and that they can be successful despite their past performances. It was crucial for the book to be in a format that would be appropriate for students at the high school level that would allow them to read through definitions and examples, and then be able to apply the concepts to themselves as learners. Creating something that would be hopeful, not detrimental, to their learning was necessary for students to be honest about the areas they struggle in and the goals that they have for themselves.

The research of this project explored growth mindset, fixed mindset and how they were related to motivation, self-efficacy and student success. As the research indicated, looking into motivation and self-efficacy are important concepts for students to understand for their learning. Students must recognize that they have all had moments where they have been motivated and had a high self-efficacy. Relating past performances of success to new struggles is an important strategy that was used to encourage students to try new challenges and continue to try their best. The format of the activity guide was designed so students could read through and understand the concepts and then work on applying the concepts to their situation through self-reflection strategies. Creating a format that had positive reinforcements for students was imperative to ensure that students would continue to use the resource. Feeling safe to look at struggles and to honestly answer the quizzes was an important piece to the guide itself.

The process of creating this activity guide allowed me to reflect on my own teaching practices while reflecting on the importance of growth mindset language and classroom interventions to promote student learning, motivation and self-efficacy. Teachers have
incredible capacity to influence how students perceive their academic abilities and their ability to conquer challenging tasks.

High school students are at an important age; they are often strong-minded about what they can and cannot do academically. Encouraging students at this age to implement growth mindset strategies has the potential to impact their lives positively in a variety of ways.
References


GROWTH MINDSET FOR LD STUDENTS

courses. *Interactive Learning Environments, 25*(7), 877-888.  
doi:10.1080/10494820.2016.1224253


Appendix

The Completed Project

Growth Mindset Activity Guide

A workbook for high school students to move from a fixed to a growth mindset

Kuldeep Basi

✔ Gain an understanding about our beliefs on learning

✔ Self – reflect on how we learn

✔ Find strategies that work best for us
Goals for teachers

While using the activity guide:
✓ Encourage students to self-reflect about their learning experiences
✓ Ensure students are working slowly and at a pace that works for them
✓ Create a safe space that allows for questions and support

In the classroom:
✓ Use positive language that praises courage, strategies and effort
✓ Teach the importance of failures, mistakes and challenges in learning
✓ Foster each student’s learning goals
✓ Provide honest critical feedback in the form of “not yet”

What we can achieve

We all have an idea of what we can achieve based on our capabilities through past performance, critiques and what we believe our strengths and weaknesses are. Often, when we have struggled in the past, we think that we always struggle! Continuing to work through our struggles can be hard, discouraging and often frustrating. The more we understand about our brain and how it works when we struggle, the more likely we are able to persevere.
### What Kind of Learner Are You?

<table>
<thead>
<tr>
<th>What are your strengths?</th>
<th>What are your challenges?</th>
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<table>
<thead>
<tr>
<th>Why are these strengths?</th>
<th>Why are these challenges?</th>
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</table>

<table>
<thead>
<tr>
<th>How do you feel when experiencing these strengths?</th>
<th>How do you feel when experiencing these challenges?</th>
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<table>
<thead>
<tr>
<th>What is the difference between your strengths and challenges?</th>
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<table>
<thead>
<tr>
<th>Think of a situation where you’ve persevered when facing a struggle. How did you do this?</th>
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### Learning Story

Learning stories provide us with proof that we have worked through challenges and obstacles in the past. When we are faced with a challenge, it is especially helpful to remember how we felt when we persevered!

Think of a situation where you overcame an obstacle. List the strategies you used below

- 
- 
- 

Could you apply the same strategies to another obstacle? If so, describe how.

- 
- 
-
What are our personal goals

We all have goals that we would like to achieve. Determining the steps and route to reach our goals is an important step and this will vary for each learner.

Think of some academic goals that you have for yourself at this moment:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
## SMART Goal

<table>
<thead>
<tr>
<th>S</th>
<th>SPECIFIC</th>
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<tbody>
<tr>
<td></td>
<td>Answer WHO, WHAT, WHERE, WHY, AND WHICH</td>
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</table>

<table>
<thead>
<tr>
<th>M</th>
<th>MEASURABLE</th>
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<tbody>
<tr>
<td></td>
<td>How is your goal measurable? How will you know when the goal is complete?</td>
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</table>

<table>
<thead>
<tr>
<th>A</th>
<th>ATTAINABLE/ACHIEVEABLE</th>
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<tbody>
<tr>
<td></td>
<td>Is the goal reasonable enough to be accomplished? How so?</td>
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</table>

<table>
<thead>
<tr>
<th>R</th>
<th>RELEVANT</th>
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<tbody>
<tr>
<td></td>
<td>Is the goal worthwhile and will it meet your needs?</td>
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</table>

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<tr>
<th>T</th>
<th>TIMELY</th>
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<tr>
<td></td>
<td>Give your goal a time limit. I will complete this goal by...</td>
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</tbody>
</table>

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**Support**

When we are learning something new, working through a challenge or returning to something we’ve learned in the past, a support system is important.

As a student, your support system may include: parents, siblings, family members, teachers, counselors, EA’s and friends

Who supports you when you struggle? Who motivates you to move forward? Who is a positive influence? Who is always on team YOU?

---

In one sentence, write your SMART goal (including all of the elements)

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GROWTH MINDSET FOR LD STUDENTS

Mindset Quiz

Place a check in the column that identifies the extent to which you agree or disagree with the statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your intelligence is something very basic about you that you can't change very much.</td>
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<td></td>
<td></td>
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<tr>
<td>2. No matter how much intelligence you have, you can always change it quite a bit.</td>
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<tr>
<td>3. You can always substantially change how intelligent you are.</td>
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<tr>
<td>4. You are a certain kind of person, and there is not much that can be done to really change that.</td>
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<tr>
<td>5. You can always change basic things about the kind of person you are.</td>
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<tr>
<td>6. Music talent can be earned by anyone.</td>
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<tr>
<td>7. Only a few people will be truly good at sports—you have to be “born with it”.</td>
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<tr>
<td>8. Math is much easier to learn if you are more or less innate from a young age rather than talent.</td>
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<tr>
<td>9. The harder you work at something, the better you will be at it.</td>
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<tr>
<td>10. No matter what kind of person you are, you are always change-sensitive.</td>
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<tr>
<td>11. Trying new things is difficult for me and I avoid it.</td>
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<tr>
<td>12. Some people are good and kind, and some are not—it’s not often that people change.</td>
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<tr>
<td>13. I appreciate when parents, coaches, teachers give me feedback about my performance.</td>
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<tr>
<td>14. I often get angry when I get feedback about my performance.</td>
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<tr>
<td>15. All human beings without a brain injury or birth defect are capable of the same amount of learning.</td>
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<tr>
<td>16. You can learn new things, but you can’t really change how intelligent you are.</td>
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<tr>
<td>17. You can do things differently, but the important parts of who you are can’t really be changed.</td>
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<tr>
<td>18. Human beings are basically good, but sometimes make terrible decisions.</td>
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<tr>
<td>19. An important reason why I do my school work is that I like to learn new things.</td>
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<tr>
<td>20. Truly smart people do not need to try hard.</td>
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</table>

Circle the number in the box that matches each answer:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ability mindset = fixed</td>
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<tr>
<td>2. Ability mindset = fixed</td>
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<tr>
<td>3. Ability mindset = growth</td>
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<tr>
<td>4. Personality/character mindset = fixed</td>
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<tr>
<td>5. Personality/character mindset = growth</td>
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<tr>
<td>6. Ability mindset = growth</td>
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<td>7. Ability mindset = fixed</td>
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<td>8. Ability mindset = fixed</td>
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<td>9. Ability mindset = growth</td>
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<tr>
<td>10. Personality/character mindset = growth</td>
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<tr>
<td>11. Ability mindset = fixed</td>
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<td>12. Personality/character mindset = fixed</td>
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<td>13. Ability mindset = growth</td>
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<td>14. Ability mindset = growth</td>
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<td>15. Ability mindset = growth</td>
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<td>16. Ability mindset = fixed</td>
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<td>17. Personality/character mindset = fixed</td>
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<td>18. Personality/character mindset = growth</td>
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<tr>
<td>19. Ability mindset = growth</td>
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<tr>
<td>20. Ability mindset = fixed</td>
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</table>

Grand total

Strength Growth Mindset = 45 – 60 points
Growth Mindset with some fixed ideas = 34 – 44 points
Fixed Mindset with some Growth ideas = 21 – 31 points
Strong Fixed Mindset = 0 – 20 points

Self-Efficacy Quiz

General Self-Efficacy Scale (GSE)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all true</th>
<th>Hardly True</th>
<th>Moderately True</th>
<th>Exactly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can always manage to solve difficult problems if I try hard enough.</td>
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<tr>
<td>2. If someone opposes me, I can find the means and ways to get what I want</td>
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<tr>
<td>3. It is easy for me to stick to my aims and accomplish my goals.</td>
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<tr>
<td>4. I am confident that I could deal efficiently with unexpected events.</td>
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<tr>
<td>5. Thanks to my resourcefulness, I know how to handle unforeseen situations</td>
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<tr>
<td>6. I can solve most problems if I invest the necessary effort.</td>
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<tr>
<td>7. I can remain calm when facing difficulties because I can rely on my coping abilities</td>
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<tr>
<td>8. When I am confronted with a problem, I can usually find several solutions</td>
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<tr>
<td>9. If I am in trouble, I can usually think of a solution.</td>
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<tr>
<td>10. I can usually handle whatever comes my way</td>
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Total: Total score calculated by finding the sum of all the items. For the GSE, the total score ranges between 20 and 40, with higher score indicating more self-efficacy.
Let’s reflect about our results
How did you feel during the survey?

Are you surprised with your results?

Do you feel that you can change as a learner? How?

What motivates you?

Can we change our brain?

Our brain is amazing and really does not get enough credit for all the things it is able to do! Similar to other muscles in our body, our brain gets stronger the more we use it! Brain malleability refers to how our brains can change. Our brains actually get stronger and make more connections when we struggle. Therefore, struggling is ACTUALLY a positive for our brain.

We struggle = We persevere = More connections = A STRONGER brain
Why it’s so important to be wrong!

Mistakes are actually necessary for real learning to occur! Too often at school, we think we need to be right, we need to look smart and that is how we are learning.

We all make mistakes, you, your parents, siblings, and even your teachers!

Fixed Mindset

Having a fixed mindset, means that you believe that your intelligence cannot be changed. For instance, if you struggle with Math, you believe you will always struggle with Math.

This mindset means that no matter how hard you try, you will not be able to grasp the concepts. A fixed mindset is associated with avoiding challenges, giving up easily when you have a challenge and generally putting in little effort into tasks. Constructive feedback is not taken well and you are threatened by the success of others.

Have you ever experienced a fixed mindset?

____________________________________________________________________

When did you feel this way?

____________________________________________________________________
Growth Mindset

Having a growth mindset means that you believe that intelligence be developed like other skills. Learning is similar to playing hockey in that we need to practice. We become better at hockey, the more we practice. The more we practice skills that we struggle with, the better we will get at them, regardless of how much we initially struggled.

Growth mindset is related to thriving when faced with a challenge, taking criticism well and being supportive of others when they are doing well. We are continuously moving forward in our learning. We understand the difference between not being able to grasp the concept yet (☺) versus never being able to get it (☺).

Have you ever experienced a growth mindset?

________________________________________

When did you feel this way?

________________________________________

How growth mindset positively effects a learner:
- More likely to take risks
- Embrace challenges
- See that you are capable
- Increased academic ability
- Greater perseverance
- Less concerned about being correct
- Seeking feedback not concerned about critique
- Self-confidence
- More motivated

Mark the benefits that you would LOVE to have!

How will you achieve this goal?

Refer to your SMART goal. Are any of the positive effects related to your goal?

BUT we must work daily on positive self-talk about ourselves!
What describes me?

Circle attributes that best describe you. Be honest!

How did you feel circling certain attributes over others?

How many growth mindset did you circle? Fixed mindset?

Do you feel as though you could move from fixed to growth in all areas? Or just some?

Growth mindset is related to self-efficacy and motivation. Try to write a definition for each of the terms!
Self-Efficacy

Self-efficacy is your belief of expectations about your competence and ability in mastering a skill or completing a task. Everyone’s self-efficacy can differ as we are all struggle in different areas.

Most often, how we feel about mastering a skill is related to our past performances. When we excel, we have a high self-efficacy. When we struggle, we have a poor self-efficacy.

Self-Efficacy thoughts

Can you think of areas where you would have a high self-efficacy?

________________________________________________________________________

________________________________________________________________________

Can you think of areas where you would have a poor self-efficacy?

________________________________________________________________________

________________________________________________________________________

Do you believe that your self-efficacy is related to your motivation in the areas you listed above?

________________________________________________________________________

________________________________________________________________________
Motivation

Motivation refers to your ability to complete a goal or activity. Motivation can vary greatly depending on what we are doing.

If it is something we enjoy, like playing Soccer we will be highly motivated to continue to play a game or to practice.

If it is something we dislike, such as going for a run, we will be discouraged and make excuses as to why we cannot participate in the activity or complete it to the end.
My motivation

What activities are highly motivating for you?

________________________________________________________________________
________________________________________________________________________

Can you think of something that would encourage you to complete tasks?

________________________________________________________________________
________________________________________________________________________

In your opinion, how is mindset connected to motivation?

________________________________________________________________________
________________________________________________________________________
Creating strategies to use when we struggle!

When we struggle, it can be difficult to make positive choices. A Choice Map, is a graphic approach that can be helpful when you need to make decisions when faced with a problem, specifically in two directions; a growth mindset route or a fixed mindset one.

Your map has the potential to move you forward in your learning by highlighting how you have persevered in the past. It is specific to you, as we all need different things to be successful.

Think of some things that have helped you in the past, as well as what you need from your support system to be successful:

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How to use the Choice Map

- On the START arrow at the crossroads, you have to make a decision.
- First ask Judge questions and notice how they affect your mood and confidence
- As yourself switching questions
- Finally, ask yourself learner questions and notice how they affect your mood and confidence
- What solutions and possibilities are now available to you

*We all ask both kinds of questions and we all have the capacity to choose which one to ask - moment by moment.*
Create your own choice map below:
Language to foster GROWTH MINDSET

![Image of a poster with a brain illustrating growth mindset concepts]
### Mindset Quiz

**Place a check in the column that identifies the extent to which you agree or disagree with the statement.**

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your intelligence is something very basic about you that you can't change very much.</td>
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<tr>
<td>2. No matter how much intelligence you have, you can always change it quite a bit.</td>
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<tr>
<td>3. You can always substantially change how intelligent you are.</td>
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<td>4. You are a certain kind of person, and there is not much that can be done to really change that.</td>
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<tr>
<td>5. You can always change how things about the level of person you are.</td>
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<td>6. Music ability can be learned by anyone.</td>
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<tr>
<td>7. Only a few people will be truly good at sports - you have to be &quot;born with it.&quot;</td>
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<td>8. Math is much easier to learn if you are male or maybe come from a culture where values math.</td>
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<tr>
<td>9. The harder you work at something, the better you will be at it.</td>
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<tr>
<td>10. No matter what kind of person you are, you can always change substantially.</td>
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<tr>
<td>11. Trying new things is stressful for me and I avoid it.</td>
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<tr>
<td>12. Some people are good at math, and some are not - it's not often that people change.</td>
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<td>13. I appreciate what parents, coaches, teachers give me feedback about my performance.</td>
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<td>14. I often feel angry when I get feedback about my performance.</td>
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<td>15. All human beings, without a brain injury or birth defect are capable of the same amount of learning.</td>
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<tr>
<td>16. You can learn new things, but you can't really change how intelligent you are.</td>
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<tr>
<td>17. You can do things differently, but the important parts of who you are can't really be changed.</td>
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<tr>
<td>18. Human beings are basically good, but sometimes make terrible decisions.</td>
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<tr>
<td>19. An important reason why I do my school work is that I like to learn new things.</td>
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<tr>
<td>20. Truly smart people do not need to try hard.</td>
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</table>

### Self- Efficacy Quiz

**General Self- Efficacy Scale (GSE)**

<table>
<thead>
<tr>
<th></th>
<th>Not at all true</th>
<th>Hardly true</th>
<th>Moderately true</th>
<th>Exactly true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can always manage to solve difficult problems if I try hard enough.</td>
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<tr>
<td>2. If someone opposes me, I can find the means and ways to get what I want.</td>
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<td>3. It is easy for me to stick to my aims and accomplish my goals.</td>
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<td>4. I am confident that I could deal efficiently with unexpected events.</td>
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<td>5. Thanks to my resourcefulness, I know how to handle unforeseen situations.</td>
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<td>6. I can solve most problems if I invent the necessary effort.</td>
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<td>7. I can remain calm when facing difficulties because I can rely on my coping abilities.</td>
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<tr>
<td>8. When I am confronted with a problem, I can usually find several solutions.</td>
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<tr>
<td>9. If I am in trouble, I can usually think of a solution.</td>
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<tr>
<td>10. I can usually handle whatever comes my way.</td>
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</tr>
</tbody>
</table>

**Scoring:**

- Not at all true
- Hardly true
- Moderately true
- Exactly true

All questions: 1 2 3 4

The total score is calculated by finding the sum of all the items. For the GSE, the total score ranges between 20 and 40, with a higher score indicating more self-efficacy.
How to move forward...
How do you feel with your results for the mindset and self-efficacy quizzes?

Did your thoughts and capability change after learning more about the effect of mindset and the brain?

Are there any IEP goals that would be achieved by having a growth mindset and increasing your self-efficacy?

Next steps for your mindset journey include:

Good luck in your growth mindset journey!