Parent Engagement:
A Resource to Foster and Support Growth Mindset in Students

by

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Abstract

The purpose of this project was to create a resource to help parents understand the nature of growth mindset and its importance; to support them at home in their efforts to promote growth mindsets within their children; and, to honour the reality that educators and parents each play an important role in fostering the development of more resilient and confident students. The project is in response to my work within my school district, because the topic of positive mindset has become a focus in recent years. In response to the school district’s priority, I noticed that colleagues, parents, and students began to ask questions about growth mindset and its characteristics. While colleagues and I had the privilege of professional development directed to the topic, we were confounded when asked to help parents to understand the issue: not only was the concept difficult to explain, there were no available resources written in parent friendly language that could help at home. I soon realized there needed to be a document to outline information and strategies that could be used at home to connect with those implemented at the school level. Being familiar with the format of the parent engagement tool kits developed by the Council of Ontario Directors in Education, I used their resources to inform the development of this project. This resource was designed, edited and revised based on informal feedback from many stakeholders, including administrators, classroom teachers, consultants, fellow graduate students, and parents. This project may be valuable to educators and parents in the community because vetted information on growth mindset is compiled into one easily accessible document and a complementary website. An implementation guide is also included to facilitate dissemination of the resource.
Acknowledgements

The past three years have been filled with a lot of hard work and dedication to my learning and this project. In many ways, I was unsure what to expect when I began this journey into the MEd program, but I have come to realize that this time and effort spent on my studies has become one of the most rewarding and fulfilling experiences I have accomplished. As a beginning teacher, I quickly began to understand and appreciate the importance of parent engagement. It is important to foster environments and provide opportunities that encourage parent engagement in and outside of the classroom, because it benefits students and their success. I was very fortunate to be a part of planning committees with the Algonquin and Lakeshore Catholic District School Board that focused on parent engagement—piquing my interest in this topic. That interest has grown into a passion where I have become determined to help parents and schools work simultaneously together, because a team approach benefits student learning.

I need to thank those individuals who took time out of their day to informally review my resource and provide me with valuable feedback to enhance the quality of the product. Their responses are much appreciated. I cannot thank my colleagues and administrators enough for their support over the past three years, because their support and encouragement has certainly helped me complete this project.

One of the biggest influences on my learning and me is Dr. Lynda Colgan. She has inspired me, through her own work, to find ways to reach out and assist parents and the learning community any way that I can. Her dedication and passion for education is simply contagious. Dr. Colgan has been my supervisor and mentor throughout this project and my graduate studies, and helped guide me to where I am in my learning. I am honoured to say Dr. Colgan is a good
friend of mine, and I cannot thank her enough for her patience, advice, and continued feedback that have supported me throughout this journey.

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As much as I have completely loved this journey and experience, there have certainly been challenging times during my studies. My family and friends have been a huge support system to me and words cannot express how thankful I am for all the love and support that has been given to me from them. I also know God has been supporting me throughout this journey and I believe that choosing growth mindset as a focus was a sign from Him. I would have never assumed I had a fixed mindset prior to my studies. However, throughout my learning I began to discover that was in fact true. The more growth mindset readings I read, the more I began to apply Carol Dweck’s growth mindset strategies in my own life. As cliché as it sounds, my studies began positively influencing who I was and the mindset I used–I began using growth mindset approaches in my classroom and in my life. I must thank Dr. Dweck (even though she does not know me), because her work has not only inspired me, but has become a positive influence in my own life, and I know this project will have the same impact for those who use this resource.
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Chapter 1 Introduction

I have had the privilege to learn and grow as educator over the past four years as an elementary school teacher with the Algonquin and Lakeshore Catholic District School Board. Throughout the early stages of my career, I have been fortunate to be employed in several different contract roles including teaching Arts as an itinerant teacher and being a full-time classroom teacher for the children in the primary, junior, and intermediate divisions. I have had the opportunity to work in a wide variety of school settings including urban, rural, high-and low-socio-economic status, and multicultural contexts. Through my continuing studies at Queen’s University’s Faculty of Education (Additional Qualification Certification and graduate level), and my work in several schools, I have developed an understanding of how important it is to create positive relationships with all stakeholders within the learning community. Building positive rapport with students and their parents has become a personal professional priority because I believe (based on my anecdotal experience) that students are more successful when there is a cohesive team to support the individual student at school and at home. As an educator, I also realize that no one knows his or her child better than a parent or legal guardian. This is why I believe that providing authentic opportunities for parents to see themselves as contributing members of the teaching team is a key factor in student success.

I have always encouraged parents to be actively involved in my classroom, whether it is through volunteering opportunities in the classroom or on field trips, inviting parents to see student presentations, or even updating classroom websites so that parents can see what we are

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1 In this project, the term parents will be used to refer to all parents, guardians, and legal caregivers who have the primary responsibility of looking after a child.
doing in the classroom to have meaningful conversations with their child about the learning at school. I am constantly looking for new ways to reach out to parents to build positive rapport with them. Based on reflection on my experience, I believe that my own positive and active relationship with the parents of my students has led to more positive classroom environments. It seemed to me that when parents and I communicated regularly, the individual students in my classroom seemed to be happier, more engaged and motivated, aware of the value of education in terms of future success and more successful academically. My efforts have been aimed at ensuring parents that they feel welcome to be an active member of the teaching team. I endeavour to stay connected with parents through phone calls (to share both positive news and express concerns), interviews (at times that are convenient to working parents), newsletters, email, a classroom website, and twitter updates. I always end every conversation by saying “if there are any questions or concerns please feel free to contact me at any time.” It is important to me that I convey to the parents of my students that I am genuine in my efforts to welcome them to talk to me at any time that is convenient for them, and that I will honestly consider their input and suggestions. My goal is to build an equitable partnership that focuses on individual student success.

Over the last three years, I have also been actively engaged in system-wide parent engagement initiatives in Kingston, Belleville, and surrounding communities. I have worked with teachers, board administrators, and parents on Ad Hoc committees to create and organize family education evenings. The first Kingston Community Conversation event was held in 2013. The event was organized as a conversational evening that brought small groups of parents together to share ideas and set priorities. Since then, the system-wide program has evolved into a series of family events that has expanded into the Quinte region. The Ad Hoc Steering
Committee members met several times throughout the year with parent council representatives from local schools to discuss topics of interest for the evenings. Education night topics have included innovation, confidence, mathematics, and literacy. The Kingston Community Conversation committee recognizes the importance of inviting parents to be decision-makers in planning the focus and format of all events (Abrams & Gibbs, 2002). Our Ad Hoc Steering Committee learned that without parental involvement during the planning stages attendance for the events was low. When the committee began more active communication with the parents in planning, attendance numbers greatly increased. These first-hand experiences catalyzed my desire to learn more about what researchers were saying about the benefits and barriers to meaningful parental engagement and find more topics identified by parents as ones of concern. This led me to begin my M.Ed. program with a focus on parent engagement.

My experience with efforts to provide opportunities for parents to learn about several important topics has led to the realization that helping and supporting parents must be responsive and continuous.

I have also enjoyed many rich and rewarding opportunities to teach a variety of students with a wide range of academic, emotional and social needs over the years. As a classroom teacher, I believe that I invest much effort toward building positive rapport with my students because I believe that if students feel comfortable in our classroom, then they are more likely to be successful and achieve their learning goals. I emphasize the culture of the classroom, working to build trust among peers and between students and myself. To this end, I employ classroom discussions, motivational videos, restorative circles\(^2\), and personal disclosure, i.e., sharing with

\(^2\)Restorative circles are classroom meetings where everyone shares their thoughts and feelings. It is a process to support those in conflict and to dialogue as equals. This builds community and a sense of belonging within the classroom.
my students the challenges I face as a learner; how much work and effort I exert to overcome challenges; and, talking about how I feel when I am finally successful. I believe everyone in life faces challenges that can be stressful and that is why it is important to understand how to use proven strategies to cope with challenges and overcome obstacles in a positive way. I believe that students need to learn how to learn and how to confront mistakes and errors along their educational journey. I also believe that without the right attitude and disposition, it is quite easy to give up when faced with a task or situation that is personally or academically challenging.

**Purpose**

The overall purpose of this project was to create an invitational and accessible resource for parents to support the development of growth mindset. The project is in response to my work within the school system, as I recognized that positive mindset had become a growing focus during professional development sessions in recent years in response to growing awareness about mental health issues for students and families. Mental health and well-being had become a priority for positive intervention to support individuals within the system who are struggling and require support. The Ontario Government began publishing resources such as *Supporting Minds: An Educator’s Guide to Promoting Students’ Mental Health and Well-being* (2013). The primary focus of this document was to provide an understanding of:

- child and youth mental health and addiction problems;
- how educators can support students’ mental health and well-being through building positive classroom environments;
- how educators can reduce stigma behind mental health and how to talk with parents regarding questions or concerns; and
- how to recognize and respond effectively to mental health problems amongst students.
The Council of Ontario Directors of Education (CODE) provided support for parents by publishing several parent tool kits such as *Parent Engagement: Relationships (2014)* and *Parent Engagement: Teen Edition (2012)* that focused on providing parents with strategies:

- about how to talk with their child about stress, mental health, and well-being;
- to keep up with what is going on in schools and how to support their children in various age groups; and
- to support conflict resolution and childhood resilience.

At the same time, many of my colleagues and I noted that many of our students were needing growing support to overcome challenges and obstacles when faced with new learning opportunities. It appeared that more of our students were feeling incapable of succeeding and were easily giving up on tasks. They were showing signs of anxiety and stress, and easily became overwhelmed—factors that impacted their ability to concentrate and complete tasks to their ability, and sometimes lead to task abandonment. These experiences deepened my professional commitment to focus on growth mindset. Growth mindset is directly linked with resiliency as Carol Dweck (2006) discusses:

“[t]he passion for stretching yourself and sticking to it, even (or especially) when it’s not going well, is the hallmark of the growth mindset. This is the mindset that allows people to thrive during some of the most challenging times in their lives.” (p.7)

This MEd project provides practical suggestions and resources for parents to use to support the development of a home environment that encourages growth mindset. This resource, *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students,* will add to the materials available to parents and may open more conversations among educators and parents about the positive benefits of embracing a growth mindset.
Key Terms

Community

Defining a community is important for this project because student mindsets are influenced by all of the individuals who are a part of their community. When a classroom embraces and respects diversity for all learners, the people within that environment are creating a community together. This community grows together by accepting group standards, respecting and encouraging one another; it allows for participation of all individuals, and in this sense, inclusive classrooms are communities (Erten & Savage, 2010; Hutchinson & Martin, 2012). The school learning community includes students, educators, educational assistants and those who work within the school, and parents. However, students learn outside of school as well, and therefore a learning community includes more people than those that are found within a school-based context. Students have social lives that may include clubs and sports teams, belonging to a church, and neighbourhood friendships. Students may also have siblings, extended family members, and coaches in their lives. Therefore, an entire community encompasses the school-based learning community along with individuals who are a part of the students’ lives outside of school. Students who feel that they are a part of a community that includes social and academic inclusion, benefit immensely. Those benefits appear to include a higher sense of self-esteem, academic performance and attendance, and mental health (Hornby & Witte, 2010; Katz & Porath, 2012).

Mental Health

Due to the fact that mindsets can negatively affect a child’s mental health, this project acknowledges that mental health can affect a student’s ability to think clearly, his mood, and the ability to behave and function successfully in daily life (Ontario Ministry of Education, 2015),
i.e., mental health is an important aspect of one’s overall well being, as it relates to the enjoyment of life, the maintenance of fulfilling relationships, and the ability to cope with adversity and stress (Ontario Ministry of Education, 2015).

*Mindset*

The mindset is the “mental frame or lens that selectively organizes and encodes information, thereby orienting an individual toward a unique way of understanding an experience” (Crum, Salovey, & Achor, 2013, p.717). The perceived mindset guides the actions and responses of individuals in various situations, affecting one’s judgements, evaluations, behaviour, health, and learning (Crum et al., 2013; Dweck, 2006; Schleider, Schroder, Lo, Fisher, Danovitch, Weisz, & Moser, 2016).

A fixed mindset is the “belief that your qualities are set in stone” (Dweck, 2006, p. 4). Dweck (2006) argues that having a fixed mindset creates a need for individuals to feel pressure that they must constantly prove themselves and show how intelligent and successful they are. With a fixed mindset, one perceives that he was born with a certain amount of intelligence and a certain personality and focuses on what he has or does not have (Dweck, 2006; Schleider et al., 2016). For example, those who hold a fixed mindset often focus on others’ perceptions: appearing to be “smart” or “dumb,” “accepted” or “rejected,” or “winner” or “loser” (Dweck, 2006). Those with a fixed mindset do not believe in the ability to learn and grow from mistakes, because they are focused on what they attribute to be inborn characteristics.

Growth mindset “is based on the belief that your basic qualities are things you can cultivate through your efforts” (Dweck, 2006, p.7). This belief acknowledges one’s appreciation of the fact that everyone is different in their initial characteristics, but can still change and grow through effort, practise, application, and experience (Dweck, 2006; Schleider et al., 2016). Those
who hold a growth mindset believe that the limit of their full potential is unknown but may be achieved through dedication, hard work, and practise (Dweck, 2006). Instead of being focused on self-satisfaction and pressure never to fail, people with a growth mindset focus their attention on learning and the opportunity to become better (Dweck, 2006). These individuals are no longer thinking about being “smart” or “dumb,” instead concentrating on the processes of learning and improvement.

**Parental Engagement and Parent Involvement**

The most common form of parental involvement is some form of communication between educators, schools, and parents; whether that is in the form of newsletters, notes, telephone calls or in-person meetings (Bennett, Bruns, & Deluca, 1997; Harry 2008; Hornby & Witte 2010; Martinez, Conroy, & Cerreto, 2012). In this sense, parental involvement is an “umbrella term that describes all models and types of liaison between parents, schools and other community institutions that provide for children” (Khan, 1996, p. 60). When discussing parental involvement, this project refers to parent interactions with schools and with their children to promote academic success (Hill et al., 2004).

Just like parental involvement, parental engagement focuses on a shared connection with power and authority for a two-way conversation between caring adults (Alberta Education, 2011). On the surface level, parental involvement is being aware of what is occurring in regards to one’s child and education. Parental engagement takes that awareness to a deeper level, in that the parent becomes actively involved in all aspects of their child’s educational life, including academic and affective domains (Alberta Education, 2011).
Resiliency

Resiliency is defined as a person’s ability to adapt and react positively to adverse and challenging situations (Werner, 1992). Positive emotions and attitudes build resiliency skills, i.e., one is able to develop flexible thinking and problem solving skills and use such skills when feeling challenged (Werner, 1992). Resiliency is utilized to support self-esteem and self-efficacy (Werner, 1992) and can be categorized as any “behavioural, attributional, or emotional response to an academic or social challenge that is positive and beneficial for development” (Yeager & Dweck, 2012; p. 303). This includes seeking new strategies, putting forth a great effort, and peacefully solving conflicts (Yeager & Dweck, 2012). In order to foster resiliency, one must believe that he controls his actions and develop the self-efficacy to believe that he is competent and capable of handling the challenges that he may face (Pawlina & Stanford, 2011).

Self-efficacy

Self-efficacy is a person’s own beliefs “about their capabilities to exercise control over their own level of functioning and over events that affect their lives” (Bandura, 1993, p.118). Therefore, self-efficacy influences how people think, feel, and react in different situations through cognitive (personal goal setting), motivational (guiding their actions based on their beliefs), affective (dealing with emotions regarding stress and depression), or selection (choice of activities or environments people part-take in) processes (Bandura, 1993).

Self-esteem

The notion of “self-esteem” originated with William James’ (1890) work on the multiple dimensions of the self and how a person has self-feelings that prompt either self-seeking or self-preservation. This means, a person uses her feelings and emotions to fulfill her own interests and needs, or to protect herself from pain and humiliation. Developing the concept further was
Morris Rosenberg (1965) who defined self-esteem as the overall feelings of self-worth. In turn, according to Rosenberg, self-esteem develops confidence in one’s abilities and results in the development of self-respect.

*Well-Being*

For the purposes of this project, well-being is defined as including one’s positive emotions and moods (e.g. contentment and happiness), the absence of negative emotions (e.g. depression), satisfaction with life, and positive functioning with a sense of fulfillment (Centers for Disease Control and Prevention, 2016). According to the Centers for Disease Control and Prevention (2016), there are many aspects of well-being that include:

- physical well-being;
- economic well-being;
- social well-being;
- development and activity well-being;
- emotional well-being;
- psychological well-being; and
- life satisfaction.

Therefore, well-being is one’s ability to judge life positively and with satisfaction.

*Rationale*

Parent engagement is nurtured when parents believe that they are valued and have the knowledge and skills to be contributing members of their child’s educational journey—allowing parents to feel more confident and become more involved in their child’s education (Bennett et al., 1997; Jones, 2010; Koki & Lee, 1998; McDermott & Rothenberg, 2000). This is essential because research has shown that student achievement greatly improves when parents become
engaged in their child’s learning (Galindo & Sheldon, 2012). Schools that are the most inclusive towards parents will help alleviate the pressures or discomfort some parents may feel (Bennett et al. 1997; McDermott & Rothenberg, 2000). The empirical research substantiates my own first hand experience that parents want to know that someone is listening to them and that their child’s needs are being addressed. In reviewing the research, it seems that “those who wish to increase parental involvement and extend the benefits it offers must focus at least in part on the parents’ perspectives” (Hoover-Dempsey & Sandler, 1997, p. 36). Research also shows that parent engagement that is focused on student learning has the greatest impact on student achievement compared to other forms of involvement (Henderson and Mapp, 2002)—in particular family support of their children’s learning at home is linked to improved student outcomes (Fan & Chen, 2001; Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins, & Closson, 2005; Jeynes, 2005).

To encourage and foster parent engagement, the Ontario and Alberta provincial governments have made efforts to ensure more parental engagement and inclusion opportunities are offered and respected. Parents in Partnership: A Parent Engagement Policy for Ontario Schools (2010) formally recognizes and supports a vision of parents as both valued partners and active participants in their children’s education. Building on the essential relationships between parents and schools, the policy:

- recognizes, encourages and supports many forms of parent engagement;
- recognizes and supports the important role parents have contributing to their children’s learning at home and at school;
- identifies strategies to remove barriers to parent involvement (e.g. communications and language);
supports parents in acquiring the skills and knowledge they need to be engaged and involved in their children’s learning; and,

supports school/parent partnerships at the local level (e.g. home/school dialogue with individual parents, as well as Parent Involvement Committees and school councils).

The policy recognizes that parents have a primary influence on their children’s attitudes towards school, their learning and their future success, and the many ways that parents make a difference.

The policy notes that “school practices to involve families make a difference in whether or not—and which—families become involved, as well as how they become involved” (p.12).

_Achieving Excellence: A Renewed Vision for Education in Ontario (2014)_ articulates Ontario’s commitment to:

“Provide greater support to ensure parents and guardians are welcomed, respected and valued by the school community as partners in their children’s education.” (p.7)

- and to -

“Foster increased parent engagement through ongoing communication about what their children are doing in school and how parents, guardians and caregivers can further contribute to their learning.” (p.19).

To ensure parents are provided with many opportunities to become involved and make their opinions heard, the Ontario Ministry of Education (2010) has made a commitment to provide funds for parent communities through the Parents Reaching Out Grants (PRO Grant). These grants provide rich and engaging opportunities for parents and families, by enabling parents to become decision makers and come together as a team where all opinions are listened to and respected. This PRO Grant allows for opportunities such as the _Kingston Community Conversation_ to exist. Such projects extend parental involvement to a more meaningful
experience beyond promoting academic success (Alberta Education, 2009), resulting in parental engagement.

Another argument to underscore the importance of parent engagement in supporting the development of a growth mindset is Bandura’s (1997) finding that children whose parents are encouraging and affirm their capability, develop a greater belief in their own ability to learn and perform. This motivates students to persevere and embrace challenges while putting forth a greater effort (Bandura, 1997). This theory is reflected in Hoover-Dempsey and Sandler’s (1997) work because they suggest that parental engagement enhances children’s academic self-efficacy, intrinsic motivation to learn, and self-regulation, all of which contribute to a child’s success in and outside of school. Fan and Williams (2010) discuss that parents who value and hold high expectations for their child’s academic success is an important aspect of parent engagement because it can influence a child’s growth mindset, academic engagement, and self-efficacy. To this end, some schools are beginning to include growth mindset as part of their improvement plans (including parent outreach) because of the empirically-supported correlations among growth mindset, achievement, and mental health and well-being.

A student’s mental health and well-being is a concern for educators, parents, and the Ontario Ministry of Education. The Ontario Ministry of Education’s educator resource, Supporting Minds: An Educator’s Guide to Promoting Students’ Mental Health and Well-being (2013), was published to support educators with student mental health and well-being by discussing at length:

- anxiety;
- depression;
- bipolar disorder;
- attention, hyperactivity and impulsivity problems;
- behavioural problems;
- eating and weight-related issues;
- substance abuse;
- gambling; and
- self-harm and suicide.

This document not only discusses each of these issues in depth, but also provides valuable strategies for educators to use to support student mental health and well-being. An underlying aspect of positive mental health and well-being is self-esteem. The document does not address the topic of growth mindset because it was published before Dweck’s work became high profile within educational circles; however, the interrelationships among growth mindset, mental health and well-being are evident, as the language of the definitions demonstrate.

When there is a student struggling or easily giving up, explaining the importance of having a growth mindset is a challenging concept for parents to explain and for students to understand; however, once the concept is clear and its consequences recognized, both parents and students seem to support the importance of developing a growth mindset. In order for students to shift their thinking from a fixed mindset to a growth mindset, educators, students, and parents need to have both knowledge and a set of practical strategies that will support their efforts to teach about, nurture or adopt a growth mindset. Using the CODE documents as a model, which strive to improve family-school partnerships and nurture reciprocal learning about important topics, this project seeks to provide a practical guide for parents on the topic of growth mindset. At the time when this MEd project was undertaken, there were no such resources in Ontario; thus, this ready-to-use resource is aimed at supporting, developing, and explaining the
importance of growth mindset. This resource may fill a significant gap at the current time. My sincere hope is that this resource will contribute to family and student resilience through its focus on growth mindset, and, thereby support positive mental health and well-being. It is anticipated that: Parent Engagement: A Resource to Foster and Support Growth Mindset in Students, may serve as the catalyst to initiate important conversations among all members of the learning community.

**Method**

Data for this resource was collected through a selection of scholarly articles and literature. I had completed a scoping survey on the Internet in search of growth mindset, parent engagement, and relevant Ontario Ministry of Education policy documents. The Backwards Design model was used to design and inform the structure of the document, Parent Engagement: A Resource to Foster and Support Growth Mindset in Students and resources published by CODE, [e.g., Parent Engagement: Student Success (2012), Parent Engagement: Teen Edition (2012), Parent Engagement: Relationships (2014), and Parent Engagement: Inspiring Your Child to Learn and Love Math (2015)] served as exemplars in creating Parent Engagement: A Resource to Foster and Support Growth Mindset in Students. When the initial draft of the project was completed, informal, formative feedback from colleagues in education and parents was sought. As a result of my own research and input from reviewers, my project includes several complementary components including a parent resource guide, activities that foster growth mindset, reproducible fact sheets, and a list of available resources for parents.

**Overview of the Project**

In this chapter, I introduced the topic and outlined the rationale and purpose for this MEd project. In Chapter 2, I present a literature review that examines the importance of parent
engagement, the importance of growth mindset, and how growth mindset projects are currently being developed and initiated. Chapter 3 discusses the methodology and review process used to improve the project. Chapter 4 presents the possible implications of the project and the vision of how it will contribute to the areas of parent engagement and growth mindset. This section will conclude with my final thoughts and reflections. Chapter 5 introduces the new parent resource, *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students*, created and developed for this MEd project.
Chapter 2 Literature Review

The objective of this section is to provide the reader with an awareness of the current literature of parental engagement and growth mindset. Throughout this chapter the following topics will be examined and discussed: barriers to parental engagement, how to foster parental education, growth mindset in classrooms, and growth mindset at home. It becomes important to understand not only the importance of parental engagement and growth mindset, but also how parental engagement positively affects a student’s growth mindset. This chapter concludes with a summary of the findings as they relate to what can be done to support the development of a growth mindset.

Parent Engagement

As noted throughout this project, the benefits of parent engagement are generally recognized in policy documents and public discourse, and by educators and researchers (Henderson & Mapp, 2002; Hoover-Dempsey et al., 2005; Jeynes, 2003, 2005). Supporting this belief, Harris, Andrew-Power and Goodall (2009) refer to the support of parents as “…the single most important contributory factor to student achievement” and note that “in terms of raising student achievement, parents matter significantly” (p. 2). The literature suggests that student success and achievement is positively influenced by parent engagement despite the varying levels of socio-economic status and the parents’ level of education (Jeynes, 2003, 2005). Therefore, it would seem important for school outreach to engage parents in their child’s learning at home.

In order for parental engagement to occur, there needs to be an understanding that both parents’ and educators’ beliefs influence practice and the child (Stoiber, Gettinger, & Goetz, 1998). Once that understanding is in place, educators and parents may be better able to form a
partnership in which both parties are seen as equally respected members of a team, working together for the success of the child (Bennett et al., 1997). It becomes important to have parents engaged because of the individual learning needs within any school or classroom community and because collaborative efforts among team members has been shown to be benefit (Tett, 2001). In order to sustain parental engagement, it is advised to ensure parents feel they are valuable contributors, a respected resource, and sharers of power, responsibility and ownership (Alberta Education, 2011; Tett, 2001). Epstein (2011) identifies six ways that parents can be involved in their child’s education: by encouraging their children’s participation in all facets of schooling (e.g., formal, informal, extracurricular);

- by communicating with school staff (e.g, Principal, teacher, coach);
- by volunteering in schools;
- by assisting with homework;
- by participating in school decision-making committees; and, by
- serving as a liaison between the school and home.

Through these roles, parents may be better equipped to:

- communicate with one’s child about school achievement and life aspirations;
- provide academic assistance and motivation for their child to stay focused in their studies at home;
- communicate openly with the school about their child’s behaviour and school achievements;
- set an example that school needs to be a priority; and,

become important collaborators within the school community. An important pillar of education is involving community members and encouraging parental engagement (Ainscow & Sandill,
Bennett et al. (1997), and Jeynes (2003) reported that students had greater academic achievement when their parents were engaged; however, additional questions could have been asked about the students’ confidence and behaviour. One may judge parental involvement a success based on a student’s academic performance, however parent engagement has a wider spectrum of benefits than just school-based grades and achievement scores. To better assist students, parent engagement positively influences efforts made by the students (Bennett et al., 1997). It seems that student attendance, attitudes, behaviour and mental health, parent confidence, and parent-teacher relationships are improved as well (Hornby & Lafaele, 2011).

**Barriers to parent engagement.** Creating environments that encourage more parental engagement can be challenging for educators. There are many families who find it difficult to build a positive and open relationship with schools. Sometimes that difficulty stems from the parents’ own past experiences with schools that unfortunately include negative experiences (for example, parents could have found schooling difficult themselves, parents feeling that their efforts were not appreciated or parents believing that their voice was neither heard nor valued).

Another barrier to parental engagement is a parent’s feeling of self-efficacy—the belief in one’s ability to succeed or accomplish a task (Hoover-Dempsey & Sandler, 1997; Jeynes, 2005; Koki and Lee, 1998). For example, parents who feel they were not good at school themselves, combined with a lack of confidence, may feel that they cannot help their child and then may not become engaged with their child’s education. Often a parent’s lack of self-efficacy and confidence keeps them far away from school life—whether it is due to lack of education themselves or fear of the unknown. Abrams and Gibbs (2002) discussed that parents who are not as familiar with educational language are less engaged in their child’s education.
Another barrier preventing parental engagement is socio-economic status (Hornby & Lafaele, 2011; Jeynes, 2003, 2005). For many parents, the lower the socio-economic class they are in, the less likely they are to feel that they can assist their child with schooling, which can interfere with engagement (Hornby & Lafaele, 2011; Jeynes, 2003, 2005). There are differences among various demographics since some parents have more education, confidence, free time, flexible schedules, and access to transportation and childcare. (Hornby & Lafaele, 2011; Jones, 2010; McDermott & Rothenberg, 2000). These differences amongst parents can often become a barrier for parent engagement if not acknowledged and ameliorated.

Abrams and Gibbs (2002) discuss many barriers related to socio-economic status and race of parents. Their study (Abrams & Gibbs, 2002) focused on parent engagement strategies and practices of inclusion and exclusion. They interviewed mothers of various ethnic backgrounds and economic status whose children attended a public elementary school in Northern California. This school had 26% two-parent households and 50% female-headed households below the poverty line, with the surrounding area’s median income being $21,554. The majority of students enrolled in the school lived in the local neighbourhood (flats), with the exception of about 20% who lived in a wealthy community (hills) (Abrams & Gibbs, 2002). The student and parent community was ethnically diverse (35% Latino, 35% African American, 20% White, and 10% Asian). Striving for parental engagement, the school had three main committees for parents. The first group, a parent-school-community-coalition, was formed to govern all extra-curricular programs the school would offer. All activities needed approval from this group that was composed of three community members, six staff, and three parents. The members of this group were women who lived in the flats and were African American, White, and Latina (Abrams & Gibbs, 2002). The federal government mandated the second group, a bilingual
advisory committee, to consult on the bilingual program at the school. This committee was composed of several Latina mothers, bilingual teachers, and administration (Abrams & Gibbs, 2002). The final group, a parent-teacher association, functioned to raise funds to support classrooms and extra-curricular programs. This group was composed of white women from the hills area (Abrams & Gibbs, 2002). Abrams and Gibbs (2002) developed a three-year case study to learn about the school through interviews (10 mothers who chaired or co-chaired the committees and 3 mothers who were inactive with the school), focus groups, surveys, observational notes (during all committee meetings), and analysis of school records. The interviewed mothers were chosen to ensure each of the four school populations (African American, working-class flats; Latina, working-class flats; White, working-class flats; White, upper-middle class hills community) were included (Abrams & Gibbs, 2002).

The interviews of the women provided insight to why socio-economic status and ethnic backgrounds can be barriers to parental engagement. The many different opportunities (leadership, volunteering as helpers, decision-making power, committees, etc.) to become involved with the school offered parents an avenue for inclusive engagement (Abrams & Gibbs, 2002). However, many parents reported that they still did not feel they were valued contributors compared to White women from the hills (Abrams & Gibbs, 2002). Educational language seemed to be one of the biggest barriers for Latina, African American, and White (working-class from the flats) women as there was a challenge to understand English or they were not comfortable with academic languages for they lacked higher education compared to the White women from the hills (Abrams & Gibbs, 2002). Frustration was evident as non-hills residents felt their voices were not equally heard because decisions were made only from the people that could be present at the meetings. Several women talked about requesting to be more involved in
decision making processes but, for the same reasons McDermott and Rothenberg (2000), Jones (2010), and Jeynes (2003) discussed in their articles (e.g., transportation, childcare, working constraints), they were unable to attend meetings (Abrams & Gibbs, 2002). Several women mentioned that they felt they were looked down upon for not participating on the school committees, and they wished they were recognized for their other commitments with other schools’ committees and taking care of and learning about their own child’s needs (Abrams & Gibbs, 2002). The study by Abrams and Gibbs (2002) presents many challenges that socio-economic status and diversity can present and remind us that each individual has a view that should be considered when decisions are made. When parents appear not to be involved, it is important to ask ourselves ‘why’ and remember that parents could be involved in other ways outside of volunteering at school or on a committee. It then becomes imperative that teachers and administrators work together and reach out to all parents of all income levels and ethnic backgrounds to assist in overcoming barriers that prevent parents from being more engaged (Bennett et al., 1997).

**Fostering parent engagement.** As an educator who believes in the importance of creating partnerships with parents so that they are engaged in their children’s learning, it becomes vital to build positive rapport with parents to involve them in the school environment. Without supporting parents and developing a positive rapport to encourage involvement, parent engagement is not possible. Parents need to become more confident and have great relationships with the school, which is accomplished through parental involvement (McDermott & Rothenberg, 2000). McDermott and Rothenberg (2000) suggest that parents tend to increase their involvement in “school activities when they feel their children are respected and their communities and heritages are valued” (p. 10). Becoming aware of others’ histories and cultures
may allow educators to become more aware of their own preconceptions and biases (Harry, 2008), and may cause parents to feel more welcomed within the school setting. Parents’ comfort level with schools rise when educators increase communication with them—allowing the opportunity for them to be more involved and valued (Bennett et al., 1997; McDermott & Rothenberg, 2000). It then seems that, at the heart of parental engagement, is inclusion itself: the school’s efforts to remind parents that they are valuable members of the team teaching and supporting their children. Abrams and Gibbs (2002) point out that those who are more familiar with educational language (e.g., specialized vocabulary, acronyms, jargon) and settings are more inclined to engage in their children’s schooling.

Abrams and Gibbs (2002) explain how important it is to work with parents to create an understanding of educational language because if parents do not understand such language, it becomes a barrier preventing parent engagement. Through my work with parents on school councils and the Ad Hoc Committee, it became important to explain the policies regarding parent engagement and the importance of such policies. Once parents became familiar with the opportunities that existed (such as the PRO Grant), deeper conversations regarding family needs and interests started to occur and shaped the focus of our district’s family education events. Even though Abrams and Gibbs (2002) conducted an American study, their findings are relevant with the Kingston Community Conversation as what was discovered in their study, our Ad Hoc Committee took into consideration when planning education events. One of the frustrations in the study (Abrams & Gibbs, 2002) was how several voices were not always heard because some individuals in the community could not attend the meetings. Recognising this, when our Ad Hoc Committee met with representatives from the local schools’ parent councils, no decisions were made until those representatives had a chance to take information discussed in the meetings back
to their local school communities for discussions and feedback. Then the committee would reconvene after school council representatives had time to discuss ideas with their own communities. This would provide opportunity for more voices to be heard, and for parents to have the chance to be a part of the decision-making process on some valued level. This process allowed parents to advocate not only for themselves but also for their children as they could make suggestions for the direction in which schools support the community’s needs and interests.

The *Kingston Community Conversation* not only provided an inclusive opportunity for parents to be a part of creating several family education events through participating on decision-making committees, but also provided opportunities for parents to support their children in school, communicate with schools, volunteer with schools, and serve as a liaison between the school and home. Therefore the *Kingston Community Conversation* provided the important roles for parents to encourage parent engagement as outlined by Epstein (2011). Through these roles, the educational language barrier would begin to break down as more parents started becoming more involved in the process and attendance for the parent engagement events started to increase. Through conversations with parents during the education nights, it became evident that parents were becoming more actively involved in their children’s homework and the parents’ understanding about how to support their children was increasing. Parents collaborated with educators to create educational events that focused on Mathematics, Resiliency, Literacy, and Technology. Parents were engaged because these were topics that the parents and families wanted to learn more about and wanted to learn how to assist their children with their learning of those topics. Through my informal conversations and surveys, parents attending the *Kingston*
Community Conversation series left the events with a higher sense of self-efficacy and confidence in their abilities to assist their children.

Another important barrier to parent engagement was the socio-economic status and how parents had concerns with transportation, childcare, and schedules that may not be as flexible (e.g. work and leisure activities) (Hornby & Lafaele, 2011; Jeynes, 2003, 2005). The Ad Hoc Committee also began to understand this barrier through parent feedback and discussions with the parents during the planning stages of the Kingston Community Conversation series. The Ad Hoc Committee felt it was imperative to provide supper and make the education event a family affair. This allowed students to attend workshops and babysitting was provided for those too young to participate in the workshops. This ensured parents did not feel the pressure to find and pay someone to watch their children. The location was determined by the Ad Hoc Committee as a location where there was also a bus stop so families had the option of riding public transportation to and from the event. Finally, the nights on which the education events were held were also determined by the parent voice during the planning stage. For example, parents in the Kingston community highly suggested Thursday nights to host the events, as there were not as many commitments for the families in their schools on a Thursday evening. The Kingston Community Conversation series was a completely free event for families because the PRO Grant provided the means to run, organize, and fund the series. Series such as the Kingston Community Conversation, acknowledged the fact that parent engagement is not just about helping with homework, but helping parents understand their important role in developing their children’s positive attitudes towards school, their learning, and their future successes.
**Growth Mindset**

Mindsets are an important aspect of one’s personality as they guide the actions and responses of individuals (Crum et al., 2013; Dweck, 2006; Schleider et al., 2016). Such beliefs can positively influence an individual to develop positive well-being, or it can cause negative feelings such as the beginning of depression and anxiety (Dweck, 2006). One thing that has been established by the work of Dweck (2006) is that mindsets can be interchanged, i.e., people have the ability to adopt different mindsets. Therefore, if an individual has a fixed mindset, with support and resources, this person can adopt a growth mindset and vice versa.

To help shape individuals’ mindsets, two theoretical frameworks are applied: the entity framework and the incremental framework. The entity theorist believes that his ability is fixed and adopts a negative belief regarding effort and performance goals as he believes a person is born with enough intelligence and ability to accomplish tasks (Gunderson, Gripshover, Romero, Dweck, Goldin-Meadow, & Levine, 2013); the entity framework supports the fixed-mindset. The motivation framework is called the incremental framework: incremental theorists value the learning process because effort and a challenging opportunity pushes her to learn, grow, and develop (Gunderson et al., 2013). The incremental framework is associated with a growth mindset.

**Characteristics of a fixed mindset.** Fixed mindset adopters have an internal monologue that is focused on judgement (Dweck, 2006). Fixed mindset individuals thrive when a task with which they are faced is within their grasp. When they are daunted by a task, these people often conclude that they are not smart enough for the task, and lose interest and give up easily (Dweck, 2006). Therefore it becomes imperative that those who use a fixed mindset do well right away when they begin a task to ensure they maintain interest (Dweck, 2006).
This fixed mindset is a barrier for development and change because the person’s confidence is often more fragile (Dweck, 2006). People who adopt a fixed mindset need to nurse and protect their confidence because they feel failure will be a part of their identity (Dweck, 2006). Therefore, one of the biggest fears of a person with a fixed mindset is trying their best and still failing because there is no excuse upon which to call (Dweck, 2006). These pressures can lead to depression, anxiety, a sense of failure, and a lack of self-esteem.

**Characteristics of a growth mindset.** A person who adopts a growth mindset focuses on the process of learning and how intelligence is learned through effort (Dweck, 2006; Gunderson et al., 2013; Nussbaum & Dweck, 2008). Effort becomes an important priority for these individuals. Learners with a growth mindset find challenging tasks fun and engaging because they must work hard and invest significant effort to develop their ability in order to achieve an accomplishment (Dweck, 2006). This is a rewarding experience for these individuals, because they believe that no genius is born with their ability, but their ability is shaped through the effort they put in throughout the continual learning process—they understand learning does not end (Dweck, 2006). During the learning process, a growth minded individual will recognize there are stressful and difficult times, however they use stress as a motivator to face the problems and challenges they encounter (Crum et al., 2013; Dweck, 2006).

Growth mindset is a starting point for change, because the individual understands that “an assessment at one point in time has little value for understanding someone’s ability, let alone their potential to succeed in the future (Dweck, 2006, p.29). Therefore, a growth mindset can help learners to become confident and resilient learners who have improved self-esteem and positive mental heath and well-being (Boaler, 2013; Dweck, 2006; Good, Aronson, & Inzlicht,
Mindset and school achievement.

**Students with fixed mindsets.** Students with the fixed mindset tend to achieve lower test scores while providing excuses such as being stupid or blaming the teacher (Dweck, 2006). In spite of the excuses cited by the student, they actually often believe that they are continuously judged on the basis of their abilities (Dweck, 2006). This negative judgement can lead to depression since the person may be driven to exert a lot of focus on attaining high grades at all costs. Under these conditions, pressure often mounts and becomes unbearable for the individual (Dweck, 2006). Individuals with a fixed mindset often use excuses as a way to protect their egos in front of their peers (Dweck, 2006); therefore a sense of belonging is difficult to attain for fixed mindset individuals because they are constantly comparing how smart they believe themselves to be with others in classroom, and if they feel they fall short of their peers, their sense of belonging may diminish as time wears on (Dweck, 2006).

**Students with growth mindsets.** Students with a growth mindset tend to achieve higher test scores because they see learning new subjects as an opportunity to discover something fresh and get different ideas about career opportunities for the future (Dweck, 2006). Students with a growth mindset constantly monitor what is occurring and feel that they are helped instead of being judged when it comes to their parents and teachers providing feedback and support (Dweck, 2006). This allows the students to see the challenging opportunity to learn something new as a way to move forward.

Learning process. In order to support the development of a growth mindset, it becomes important for students to understand the science behind brain plasticity and how, when humans
learn something new, our brains grow and make new pathways (Boaler, 2013, 2016; Dweck, 2008). These new neural pathways have the ability to get stronger the more they are exercised and stretched like a muscle during exercise. Experts contend that it is crucial for students to be engaged in thought-provoking tasks that challenge them to learn new concepts and ideas (Boaler, 2013, 2016; Dweck, 2008). Boaler (2013, 2016) notes that several studies have resulted in empirical evidence that suggests that when teachers have explained the principles of neuroscience and brain plasticity to students, there has been a change in attitude: students adopt a growth mindset and demonstrate improvement in achievement (grades 7 through college).

Students benefit from explanations and examples that demonstrate that by working hard at academic tasks, their brain will make new connections and become stronger so that they become more accomplished (Dweck, 2008). Experts purport that this will help the student to better appreciate the importance of the learning process and make it easier for that individual to adopt a growth mindset (Dweck, 2008).

Scientifically speaking, human brains grow during the process of learning when synapses fire off inside our brains (Boaler, 2016). In order for the synapses to fire off, mistakes need to be made during the learning process (Boaler, 2016). Through mistakes, our brain is able to grow and create new pathways for understanding (Boaler, 2016). Often when mistakes occur, one can feel bad or even embarrassed, however it is important for students to understand that it is only though mistakes that our brains actually grow and we can learn (Boaler, 2016).

Van de Walle, Karp, and Bay-Williams (2016) use Figure 1 below to discuss this learning process inside our brains. The blues dots represent pre-existing knowledge and ideas while the red dot is symbolic for an emerging idea that is being constructed (Van de Walle et al., 2016).
The lines in the diagram represent the connections being made between ideas that help shape the meaning and understanding of those particular ideas (Van de Walle et al., 2016).

![Diagram](image)

**Figure 1** This image is from Van de Walle, Karp, and Bay-Williams (2016, p.27). This explains how pre-existing ideas and knowledge (blue dots) are used to construct new ideas (red dot) and develop connections between ideas. The more connections, the deeper one understands.

**Educators supporting a growth mindset.** Teachers can support student success and the development of a growth mindset through the use of the language used within the classroom. It is important for educators to value and understand the characteristics of a growth mindset in order to explicitly teach students about the importance of adopting a growth mindset.

Dweck (2006) explains that educators should be aware of the ways in which they praise students in the classroom. For example, she suggests that it is common for some educators to use praise when students finish tasks quickly and that educators may inadvertently imply that an individual is good at math because they are quick at solving mathematical problems. Instead, when students complete tasks with ease and are quick at solving the tasks, Dweck (2006) suggests educators acknowledge that the student completed the problem accurately and quickly while acknowledging to the students that the educator should have picked a more challenging...
task to be completed. Dweck (2006) suggests that this response regarding choosing an easy task for the students leads to the educator apologizing for wasting the students’ time with tasks that do not push their learning forward (Dweck, 2006). Now, instead of inadvertently implying that one must be quick at mathematical problems in order to be good at math, the educator is emphasizing the process of learning and how an individual must be challenged in order to learn and make new connections (Dweck, 2006). This example emphasizes the importance of effort and how learning should always challenge an individual, i.e., that when tasks are too easy we do not learn (Boaler, 2013; Dweck, 2006, 2008). This example also illustrates the teachings of brain plasticity: teachers and students need to value challenging tasks because through them mistakes are made and learning can occur (Boaler, 2013, 2016; Val de Walle et al., 2016). Therefore, educators need to ensure they are using praise that promotes effort, perseverance, confidence and motivation over intelligence and outcome (Dweck, 2008; Nussbaum & Dweck, 2008; Pawlina & Stanford, 2011).

Praising the learning process not only makes the relationship between effort and success clear, but it also builds students’ self-confidence because students can see the progress they are making and appreciate the improvement in the quality of their work (Masters, 2014). O’Neill’s (2011) research studying 51 children (aged 6-10) learning how to play their first musical instrument supports the claim that promoting effort and perseverance leads to the development of confidence and motivation, which in turn enhances a growth mindset in learners. O’Neill (2011) discusses that praising the music students’ efforts helped to encourage the students to persevere and be resilient when they faced many challenges. O’Neill (2011) discovered that such praise and encouragement guided students to be more self-confident as the students became dedicated, hard working musicians who could admire their achievements and acknowledge the obstacles
and barriers they had to overcome by practising. These music students developed mastery motivation because they had “a positive outlook and view[ed] the difficulty they encountered as a challenge to be mastered through effort” (O’Niell, 2011, p.34). Such motivation becomes an important aspect of growth mindset because students focus their learning on the process, effort, and improvements they achieve.

Educators are advised that they should be teaching for improvement. There is a greater gap in students’ achievement levels in today’s classrooms as many students are at different stages in their learning (Masters, 2014). Teachers are required to give final grades which seems to contradict the growth mindset approach because when student performance is graded based on year-level expectations some less advanced students consistently receive low grades (Masters, 2014). Consistently achieving a low grade does not acknowledge the effort, learning process, or the growth a particular student may have achieve, and therefore the grade undermines the student’s development of a growth mindset (Masters, 2014). However, by focusing on giving constructive, improvement-oriented feedback throughout the course and allowing students to re-submit work to show improvement and understanding will help support the development of a growth mindset because it concretizes the ways in which the learning process is valued (Boaler, 2016). Teachers who adopt a fixed mindset tend to label students and look for indicators of “high ability,” often concluding that those students are the only ones who are likely to achieve well in their classes (Dweck, 2008). Teachers who adopt a growth mindset tend to see the potential for a broader range of students to do well in their classrooms (Boaler, 2013; Dweck, 2008). This suggests that it is important to design teaching for improvement, because it will help to eliminate the “success” and “fail” categories and replace them with “growth” and “improvement” categories (Dweck, 2006). The “growth” and “improvement” categories allow educators and
students to acknowledge and value personal progress in student learning (Masters, 2014). Through formative assessment processes, educators may help their students to appreciate and recognize that depth and quality of the work is far more important than the speed at which students complete tasks (Boaler, 2016).

To assist educators in adopting a growth mindset and efforts to assist more students to become successful, the practice of ability-grouping should be re-evaluated (Boaler, 2013). When educators place students in homogenous groups based on ability, a fixed mindset is in place, communicating an implicit message to students that they have fixed abilities (Boaler, 2013). However, when educators use mixed-ability groupings, achievement and participation has been shown to improve because more opportunities are provided for success by teaching high level content to more students and students do not receive any messages that learning is only for the high achievers (Boaler, 2013). Intentionally or not, teachers who use ability-based groupings adopt a fixed mindset, and should be encouraged to re-think their plans to ensure that the benefits of heterogeneous groupings and the growth mindset are experienced within their classrooms. These changes may result in improvement in all learners as the learning process becomes more valued (Dweck, 2006). For this to occur, students need explicit instruction to understand the use of constructive feedback in the learning process (Dweck, 2006). This approach expects all students to make learning progress throughout the school year as it provides learning activities an opportunity to be designed to maximise further learning and set student learning goals (Masters, 2014). It is suggested that this will contribute to the development of a growth mindset, which in turn will positively impact the student’s confidence in lasting ways (Dweck, 2006).
Growth mindset in mathematics.

The need for growth mindset in mathematic learning. There is currently a focus on mathematics education in Ontario at this time because the Education Quality and Accountability Office (2016) released a report stating that half of the Ontario grade 6 students are currently achieving below the provincial standard in mathematics. According to the Programme for International Student Assessment (2016), Canada’s student mathematic performance has been in decline since 2006 (even though scores are above average compared with the world). Examining Canada’s mathematic scores, Ontario students seem to score slightly less than Canada’s average (Programme for International Student Assessment, 2016). Understanding that mathematic scores are on a decline, it becomes imperative to understand why in order to help improve mathematical learning. Math anxiety and negative dispositions towards mathematical learning are becoming barriers that must be overcome. Otherwise, students cannot devote enough attention to solving math problems because they are consumed with worry (Programme for International Student Assessment, 2015). Knowing this, it is becoming important for educators, like the author of this text, to understand how mathematics teaching and student achievement are related and how reciprocal improvement can be realized. Realizing the importance and the benefits of adopting a growth mindset that has been discussed thus far, it seems imperative to explore how adopting a growth mindset can benefit students in their mathematics learning: a subject that many students and parents find challenging and stress-inducing. Boaler (2016) claims that 95% of students in schools have the ability to achieve high standards in math learning and that a growth mindset will help students demonstrate achievement.

Growth mindset and test scores. Supporting Boaler’s (2016) claim is the study completed by Good et al. (2003) who examined the ways in which a growth mindset intervention
for grade seven students improved student scores on standardized tests. Good et. al (2003) conducted their study in a rural Texas school district with 138 seventh-grade students (67% Hispanic, 13% African American, and 20% Caucasian). Participants were randomly selected by school administration. Participants were then placed in one of four conditioning groups: (a) an incremental group where students learned about how intelligence is malleable; (b) an attributional group where students learned about tendencies to experience initial challenges when beginning grade seven; (c) a combination group where students learned a combination of what the incremental and attributional groups learned; and, (d) a control group where students learned about drug use (Good et al., 2003). Students were paired with college student mentors to meet in person for 90 minutes in mid-November and then again at the beginning of the second semester (end of January), while all other forms of communication were completed via email (Good et al., 2003). Mentors were randomly assigned to work with individual students in 3 of the 4 groups of participants (Good et al., 2003).

Participants in the study worked with their mentors to create a web page similar to a public service announcement to serve as a support to future students experiencing struggles in grade seven (Good et al., 2003). Participants had restricted Internet access that only allowed participants to browse websites related to their grouping (i.e. the control group only had access to internet pages that discussed drug use and the affects on student achievement) (Good et al., 2003). At the completion of the study, participants’ test scores in language and math were evaluated to see if the growth mindset interventions had an impact on their learning (Good et al., 2003). The results of the study showed a significant increase in test score performance for those who had received the growth mindset intervention, whereas the participants in the control group did not receive as high of an achievement score (Good et al., 2003). Therefore Good et al. (2003)
support Boaler’s (2016) claim that Dweck’s (2006, 2008) growth mindset principles can be transferred to mathematics education because developing a growth mindset appeared to help students achieve higher levels of success.

**Mathematical learning process.** Boaler (2016) also argues that in order for students to develop a growth mindset in mathematics, they need to understand and appreciate both mathematical content and process. The majority of students currently hold the view that mathematics is a subject associated with “right” or “wrong” answers and multiple question sheets to be completed to demonstrate learning and understanding (Boaler, 2016). What this view does is reinforce the notion of a fixed mindset approach; consequently, students and teachers are likely to fixate on correct answers. Boaler suggests that if we want students to develop a growth mindset and value the learning process, it becomes important to create a math program that gives students real-world application questions (Boaler, 2016). Boaler contends that by designing math programs that are based upon open-ended application questions, allows students to explore possible solutions and experience authentic opportunities to learn (Boaler, 2016). Students then, according to Boaler, become more appreciative of the learning process, resulting in the development of the growth mindset, instead of being fixated on the right or wrong responses.

When students’ experience of mathematics is limited to questions with only right or wrong responses and if they continually make mistakes, it becomes difficult for those individuals to believe that learning is a process and that they have a possibility to succeed (Boaler, 2013). This is one of the many reasons why there are recommendations by mathematics education experts to restrict the number of math worksheets being used in the classroom. Using closed-response worksheets in the classroom to reinforce one single concept, skill or strategy may not
be helpful because it supports a fixed mindset in terms of focusing the attention on “smart” or “dumb”, “correct” or “wrong” (Boaler, 2016). Moreover, worksheets in the mathematics classroom have the potential to induce boredom through repetition and reliance on rote memory, and may emphasize a disconnect between “school” math and “real world” math (Boaler, 2016). Worksheets support the idea that math questions result in binary answers (“yes” or “no”), which may lead to misconceptions about the nature of mathematics and mathematics solutions by learners.

Boaler (2016) discusses Thurston’s (1990) explanation of how a person’s brain uses compression as we learn new mathematics. Thurston (1990) explains that a person may struggle with learning a new mathematical concept, but eventually with hard work and effort, the learner begins to understand the math step-by-step. Once the learner is able to understand the math as a whole and gain that mental perspective, the learner is able to compress and file that information away so that it can be recalled when the learner requires it (Thurston, 1990). Therefore, when concepts are learned and compressed, an individual can access that information at any time. However, this process of compression can only compress concepts and not long lists of methods and rules (Boaler, 2016). Therefore, if educators want students to become more successful in mathematics, Boaler suggests that it is important to focus on the “big ideas” of math, application and transfer to real-world contexts. This instructional focus may help students to develop a growth mindset and may lead to improved student achievement in mathematics.

Giving students authentic mathematics problems and showing them how mathematics is used in our daily lives may engage students if the problems are thought-provoking and require effort and perseverance (Boaler, 2016). One strategy suggested by Boaler is to give students challenging and open-ended questions for which multiple solutions are possible. These “rich
tasks” are challenging and accessible to many learners, and are often considered to be a puzzle. For example, such tasks allow visual learners to apply pictures for visualizing the mathematics, by using a familiar representation to explore the task and apply their own ideas and thinking. In this way, visual learners can put forth their ideas without the fear of making mistakes, and can contribute in positive ways within their heterogeneous groupings.

For example, Boaler (2016) suggests asking students to think of the answer to “18 multiplied by 5” and to show how they got the answer. When Boaler (2016) used this question herself, six people showed completely different methods on how to get the answer of 90: (a) one person split up the question by multiplying 5 by 9 twice and then adding the answer; (b) one person understood that they could divide 18 by 2 and multiply 5 by 2, resulting in 9 multiplied by 10 to equal 90; (c) another student broke up a rectangle dimension into sections of 5 by 10 and 8 by 5 so that they then could multiply those dimensions and add their answers to get 90; (d) another person added a rectangle with dimensions of 2 by 5 onto the 18 by 5 so that they could multiply 20 by 5 and then 2 by 5, so they could subtract the answers to equal 90; (e) another person broke the original dimensions down into two different parts so they could easily multiply 5 by 15, and multiply 5 by 3, and then add the answers to equal 90; (f) the final person was able to answer the question correctly by breaking the rectangle into three sections to be where they would multiply 18 by 2, 18 by 2, and 18 by 1 so that those answers could be added together to equal 90. This question allowed individuals to engage in the activity as it was composed of all the elements that a rich and engaging task recommends (Boaler, 2016).

Such rich tasks then allow the students to collaborate and engage in classroom discussions that simultaneously challenge students to use their reasoning and critiquing skills while they attempt to solve mathematical problems (Boaler, 2016). This process develops the
student’s growth mindset and enables them to approach tasks with more confidence and self-efficacy.

**Growth mindset at home.** Growth mindset does not just pertain to the classroom and school, because mindsets are developed over time and contexts, and are influenced by social environments, interactions, and home life (Dweck, 2006; Gunderson et al., 2013; Moorman & Pomerantz, 2010; Schleider et al., 2016).

**When parents have a fixed mindset.** Empirical evidence suggests that a parent who adopts a fixed mindset believes that his child’s ability is fixed with little chance of change (Moorman & Pomerantz, 2010). This can cause distress for parents and within families when their child performs poorly on a task because they are so fixated on the outcome that they begin to believe their child has a permanent deficit as they lack competence at that current moment (Moorman & Pomerantz, 2010). This distress can easily begin to build into fear that there will be implications for their child’s success in the future (Moorman & Pomerantz, 2010).

When parents adopt a fixed mindset they become focused on the outcome and results that they use greater performance-oriented teaching with control to ensure their child has the correct answers (Moorman & Pomerantz, 2010). For example, Schleider et al. (2016) discuss how fix-minded parents will often become distressed when their child is struggling with homework, and so the parents often take over and provide answers instead of encouraging independent problem-solving. Even though parents have the best intentions to support their child in their learning, often this fixed mindset and behaviour undermines the child’s motivation and achievement in school and learning (Dweck, 2006; Moorman & Pomerantz, 2010). When parents give their children a fixed-mindset ideal, they are asking them to fit into a mould of the brilliant, talented child or be deemed unworthy (Dweck, 2006).
**When parents have a growth mindset.** In order for students to develop a growth mindset, it is important that strategies at home and school align to support incremental principles. When parents adopt a growth mindset, they believe that their child’s abilities are malleable and are continuously developing (Dweck, 2006; Gunderson et al., 2013; Moorman & Pomerantz, 2010). Therefore, when their child is challenged and unsuccessful at a current moment in time, parents with the growth mindset understand that learning is a process and with effort towards building a skill or knowledge regarding the unsuccessful task, their child has the chance to become more successful (Moorman & Pomerantz, 2010).

Most importantly, when parents adopt a growth mindset they tend to become more engaged in their child’s learning and focus on creating learning opportunities for the child to develop mastery oriented skills (basic principles), autonomy skills (independence), and resiliency skills (coping strategies) when faced with challenges (Dweck, 2006; Moorman & Pomerantz, 2010). When a parent views her child’s ability as one that is malleable, she tends to employ constructive practices that enhance emphasis on the learning process which in turn enhances the quality of her involvement in her child’s learning (Moorman & Pomerantz, 2010; Schleider et al., 2016). One of the most frequently suggested ways for parents to develop their own growth mindset and be a positive role model for their child is to highly value and emphasize the process of learning above the product or results of tasks (Dweck, 2006; Gunderson et al., 2013; Moorman & Pomerantz, 2010; Schleider et al., 2016). When parents adopt this stance, it is suggested that children will be more positive about learning and their potential to make a difference in the world (Dweck, 2006).

**The use of praise.** One main strategy for parents to develop a growth mindset in their child is through the use of praise (Dweck, 2006; Gunderson et al., 2013). As Gunderson et al.
(2013) note, “[p]raise is an important vehicle through which children become aware of the beliefs and values of their caregivers” (p.1526), which means that children have the opportunity to construct belief systems based on the types of praise they hear. Dweck (2006) and Gunderson et al. (2013) categorize the types of praise into two main categories: praise for effort and actions (e.g. “it is nice to see how much effort you are putting into your studies”), and praise for traits or the person (e.g. “you are smart”).

Those two categories of praise directly correspond with the development of a particular mindset. Incremental theorists use praise for effort and actions as it develops and instils the growth mindset, whereas entity theorists use praise for traits as they employ the fixed mindset. Person praise increases a child’s self-esteem; however, it adopts a fixed mindset focused on the task where the child develops sensitivity to their performance of tasks and their individual abilities, which can interfere in their ability when faced with a challenge (Boaler, 2013, 2016; Dweck, 2006; Gunderson et al., 2013). Essentially, process praise leads to the development of the growth mindset.

To prove this, Gunderson et al. (2013) composed their study that included 53 children and caregivers in the Chicago area. Participants were composed of people that represented the demographics in the area in terms of income, race, and ethnicity (64% of the children were Caucasian, 17% African American, 11% Hispanic, and 8% two or more races). Children and parents were visited in their homes every four months beginning at the child’s age of 14 months. The parents and research assistants were only told the language development of the child was being recorded and observed, when in fact the study was focusing on the use of praise and the development of growth and fixed mindsets. When the children were 7 to 8 years old, the grade two and grade three students completed questionnaires based on motivational frameworks.
Gunderson et al. (2013) analysed the transcripts of how parents spoke and praised their children with the responses of the questionnaires completed by the students to determine if there was a correlation between the types of praise and the motivational framework used by the students. Their findings supported their one hypothesis that the more process praise children received at a young age the more likely they would develop the growth mindset (Gunderson et al., 2013). To ensure the results were accurate and not skewed by other variables (ethnicity, socio-economic status, and gender) Gunderson et al. (2013) employed regression models to test the other variables (ethnicity, socio-economic status, and gender) to ensure there was no difference in the results.

Through this process, Gunderson et al. (2013) validated that the use of process praise was the true prediction that children will adopt the growth mindset. Therefore, in order to help develop a growth mindset in children, it becomes important for parents to use praise that focuses on the process of learning (Boaler, 2016; Dweck, 2006; Gunderson et al., 2013). The use of growth mindset by parents and the strategies discussed in this paper will also assist in developing a student’s mental health and well-being.

**Relating growth mindset to mental health and well-being.** Developing a growth mindset may assist with the reduction of depression and stress, and simultaneously improve a person’s resiliency and self-esteem.

**Self-esteem.**

*A study on defensiveness versus remediation strategies.* A person’s self-esteem has major consequences for their own mental health and well-being (Nussbaum & Dweck, 2008). Nussbaum and Dweck (2008) completed three experiments within this study to focus on understanding how self-esteem is affected through mindsets and self-theories. Nussbaum and
Dweck (2008) examined how undergraduate students had the ability to choose either a defensive\(^3\) or a remediation\(^4\) approach to challenging tasks they completed and the feedback they received on their work.

Participants were categorized into two types of theorists; either an entity theorist or an incremental theorist (Nussbaum & Dweck, 2008). Entity theorists believed in the fixed intelligence; meaning, this fixed mindset believed that additional effort to master tasks was ineffective and the risk of failure could then confirm their inability and compromise their self-esteem (Nussbaum & Dweck, 2008). Increment theorists believed in the opposite; as their growth mindset enabled them to believe that there is no permanent ability but rather learning is a process, and therefore intelligence can be acquired (Nussbaum & Dweck, 2008). With the understanding of entity and incremental theorists, it is important to note that Nussbaum and Dweck (2008) discovered that those who had fixed mindsets (entity theorists) and faced academic setbacks in a particular subject area were likely to have spent less time on studying and even avoided the subject in the future. Those students with a growth mindset (incremental theorists) used academic setbacks as motivation to work harder and spend even more time studying (Nussbaum & Dweck, 2008).

*Experiment 1.* For the first experiment, twenty-nine undergraduates (14 females and 15 males) from an East Coast university were asked to complete a speed-reading study. Participants were randomly selected to be in one of two experiment conditions–entity condition or incremental condition. Those in the entity condition read an article supporting the entity theory

\(^3\) Defensive approach means a person chooses to pass up opportunities to repair deficiencies (mistakes or misunderstandings) in order to tend to self-esteem concerns (Nussbaum & Dweck, 2008).

\(^4\) Remediation approach means the person acknowledges mistakes and chooses to look for opportunities to continue and improve their learning (Nussbaum & Dweck, 2008).
condition, and those in the incremental condition read an article supporting the incremental theory condition. Upon completion of the article, participants were then given the speed-reading task of reading an excerpt from Freud’s *The Interpretation of Dreams* in only four minutes, and then complete eight multiple choice reading comprehension questions (Nussbaum & Dweck, 2008). Nussbaum & Dweck (2008) discussed that the design of the study ensured that participants did not have enough time to complete the task to ensure that all participants would struggle with not only the completion of the task but with producing quality answers (Nussbaum & Dweck, 2008). Participants were all told they scored in the 37th percentile—a predetermined score (Nussbaum & Dweck, 2008). Participants were then given the opportunity to examine strategies used by previous test takers whose scores ranged from the 14th to the 98th percentile.

Participants within Nussbaum & Dweck’s first experiment (2008) were examined to understand how their self-esteem was affected by receiving the academic setback. One of the significant findings was how entity theorists and incremental theorists differed in how they handled negative feedback and restored their self-esteem. Entity theorists used a fixed mindset, as they preferred to compare their achievement to those who scored lower than them (Nussbaum & Dweck, 2008). This downward comparison suggested those participants used a defensive self-esteem-restoring process because examining peoples’ responses that scored lower than them helped to ease the deflation they felt when they received the academic setback, and they ignored reviewing strategies used by those who scored higher on the test than them (Nussbaum & Dweck, 2008). Incremental theorists used a growth mindset, as they preferred to examine the strategies employed by those individuals who scored higher than them because they saw this as an opportunity for improvement, and therefore attempted to use a remediation approach.
Experiment 2. In the second experiment of Nussbaum & Dweck’s study (2008), engineering participants (13 female and 13 male) were selected from a West Coast university and given an opportunity to either redress their performance or defensively engage in self-esteem-repair. The second experiment began with the same procedure as outlined in the first experiment with the reading comprehension articles linked to either the entity or incremental theory of intelligence (Nussbaum & Dweck, 2008).

Participants completed comprehension questions and then were told they would complete an engineering test that covered four modules (Nussbaum & Dweck, 2008). Participants were told that all four modules were important and good engineers were proficient in all modules (Nussbaum & Dweck, 2008). Participants received predetermined feedback that included perfect scores for three modules and 40% on the fourth module (Nussbaum & Dweck, 2008). At the completion of the test, participants would then enrol in a training module of their choosing for only one of the modules and then complete a post-tutorial test for that module (Nussbaum & Dweck, 2008). Therefore participants could choose to complete a module they already mastered to ensure a high score, or they could choose to complete a module they failed in order to provide an opportunity to learn and improve (Nussbaum & Dweck, 2008).

Those who were entity theorists once again chose self-esteem-repairing tasks by choosing programs they had mastered in order to guarantee success, while those who were incremental theorists chose to complete tutorials for which they realized they needed help and wanted to improve in their learning (Nussbaum & Dweck, 2008).

Experiment 3. This final experiment in Nussbaum and Dweck’s study (2008) recruited eighty undergraduate participants at a West Coast university (38 females and 42 males). This experiment was identical to the first experiment but included two new conditions (positive
feedback and distraction) (Nussbaum & Dweck, 2008). Participants were randomly chosen to read an entity-induced or incremental-induced article and respond to questions. Once completed, participants were separated into three conditions: (a) one where participants received negative feedback where they were told they scored in the 37th percentile (identical to experiment 1); (b) one where participants received positive feedback as they were told they scored in the 91st percentile; (c) one where participants received negative feedback but completed a distractor test instead (Nussbaum & Dweck, 2008). Participants who were in the distractor condition did not have the opportunity to compare their results with strategies used by others who completed the test.

Nussbaum and Dweck’s study (2008) provided an opportunity to examine how students’ self-esteem is affected during the learning process and how mindset affects a person’s ability to respond to different situations. Even though students in the study received negative feedback, self-esteem was not lost because entity theorists use downward comparisons to regain self-esteem that was temporarily lost, while incremental theorists used the feedback as a challenge to improve, which boosted their self-esteem (Nussbaum & Dweck, 2008). The concerning aspect to the study was the finding that the entity theorists—with the fixed mindset—responded to the threat of negative feedback by comparing themselves to others who performed more poorly, and thus the “cost of repairing their self-esteem was the sacrificing of an opportunity to learn from their mistakes” (Nussbaum & Dweck, 2008, p.610).

Overall. Self-esteem is important to one’s mental health and well-being, but it is also essential to continue to learn and be a part of the learning process where mistakes occur. If students employ the defensiveness strategies, like those entity theorists, it will stand in the way of learning, and therefore the focus needs to be placed on teaching and applying a growth
mindset to lead “people away from defensiveness and toward confronting and addressing their shortcomings” (Nussbaum & Dweck, 2008, p. 611). This way, a student’s self-esteem is still protected while emphasizing the importance of the learning process.

**Emotional learning and resilience.** Protecting a student’s self-esteem can be easier said than done when thinking about all the pressures adolescent students face (Romero et al., 2014). Adolescent students face many challenges that include changing peer relationships, biological changes of puberty, and many emotional experiences (Romero et al., 2014). During adolescence, it becomes important that students have a good sense of self-esteem because there can be many emotional challenges experienced with increasing levels of negative emotions, which then can result in a “greater likelihood of developing mood disorders such as depression” (Romero et al., 2014, p. 227). Students who believe intelligence and emotions are malleable are not only likely to value learning and believe in effort, but they tend to be more resilient when facing setbacks (Dweck, 2006; Gunderson et al., 2013; Romero et al., 2014; Yeager & Dweck, 2012).

Romero et al. (2014) discuss how students who believed their emotions are changeable had fewer depressive symptoms and a greater well-being. This means it is important for individuals to develop a growth mindset in terms of intelligence and emotion to increase the likelihood of positivity and the believability of feeling good about themselves. In a Romero et al. study (2014), students in grade 6 who did not feel good about themselves or had negative feelings and thoughts, were able to improve their well-being as they began to understand emotions are malleable. This growth mindset becomes very important for students when facing emotional challenges—such as transitioning to new environments, puberty, changing peer

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5 Adolescent students in this document references students in grades 6-8 (middle school-aged children).
Romero et al. (2014) discuss how adolescent students are developing more malleable theories about intelligence and emotions. Therefore it is important during this timeframe that growth mindset is learned and modelled. As Romero et al. (2014) states, “students who believe intelligence is malleable are more likely to work harder or try new strategies when faced with a challenge” (p.232), and therefore developing this growth mindset will help develop more resilient students who will have a better understanding of emotional intelligence (Good et al., 2003). This also means they are less susceptible to depression and more susceptible to better mental health and well-being (Yeager & Dweck, 2012).

Pawlina and Stanford (2011) provide a great example of how pre-school aged children (4- and 5-year olds) can use a growth mindset to develop resiliency and well-being. Pawlina and Stanford (2011) noticed children who were under their care displayed characteristics of having a fixed-mindset. Those children would say things like “that’s too hard; I want to do something easier” (Pawlina & Stanford, 2011, p. 30) and become frustrated in their efforts during tasks that the children felt were challenging. Pawlina and Stanford (2011) then began to focus their class discussions on what it is like to do things that are challenging and the importance of resiliency (described to the children as “bouncing like a ball when they feel disappointed or frustrated, instead of flopping like a bean bag” (p. 31)). They were able to use the classroom meetings as a way to teach the pre-school aged children about how challenges grow our brains and through that learning we can develop a sense of happiness and confidence as it can become exciting to learn new things (Pawlina & Stanford, 2011).
The pre-school age children then began to create a list of activities (learning to zip up a jacket, walk across a balance beam, throwing a Frisbee flat, dribbling a basketball, kicking a soccer ball, working on balance, and climbing a tree) that they could practice. As students practiced those activities, Pawlina and Stanford (2011) tracked the progress of the students’ learning on a posted activity board. Pawlina and Stanford (2011) discussed with the children the importance of learning, the growth of their abilities through their practice, and how their learning is a process that takes time and hard work. Pawlina and Stanford (2011) purposely focused on the growth mindset development.

With this shift in focus that Pawlina and Stanford (2011) implemented, students began to shift their inquiry to understand how they could improve and make their brains grow. Students such as Annie (who practiced the monkey bars each day for several weeks, would keep trying after each time she fell) and Zella (who kept practicing how to spell her name correctly and when she finally could rejoice and said it was because she practiced hard) provide perfect examples how children at a young age can adopt a growth mindset (Pawlina & Stanford, 2011). The growth mindset development then began to have an impact on the children and their problem-solving skills as children like Juan and Milo started to focus on finding multiple solutions to problems in order to solve a problem (Pawlina & Stanford, 2011). Children in Pawlina and Stanford’s (2011) care developed their overall well-being because they began to adopt the growth mindset and realized they could be successful and resilient.

**Stress.** Another component of mental health and well-being that also affects depression and self-esteem is the amount of stress one feels (Crum et al., 2013). Depending on the mindset, stress has the opportunity to enhance productivity, health and well-being, and learning and growth (Crum et al., 2013). This occurs when an individual endorses a stress-is-enhancing
mindset. With a growth mindset approach towards stress, stress can enhance mental toughness, provide new perspectives, deepen relationships, provide a greater appreciation for life, and strengthen priorities (Crum et al., 2013). Those with the growth mindset demonstrate improvements in both behaviour and attitude, which not only increases effort, motivation, and enhanced enjoyment of learning, but embraces a stress-is-enhancing mindset that has a “stronger desire to receive feedback” (Crum et al., 2013, p.727) to help meet demands, values, and goals of the stressful situation.

Stress can also have detrimental affects, such as depression (Crum et al., 2013). Children who have parents who adopt the fixed mindset are more likely to become anxious, stressed, or depressed than children who have growth-minded parents (Schleider et al., 2016). The fixed-minded parents become focused on the child’s possible failure that the individual child becomes aware of this model and begins to add pressure on themselves to succeed or avoid challenging concepts and tasks to ensure they do not fail (Schleider et al., 2016). Parents who display the fixed mindset often display tendencies of being controlling and critical as a way to ensure quality results; however, their children may then grow sensitive to their parents comments about results and begin worrying about their individual performance, judgement, and evaluation—leading to anxiety, stress, or depression (Schleider et al., 2016). Inadvertently, these parenting practices “teach children that failure is shameful and unacceptable, heightening their anxiety when mistakes are likely” (Schleider et al., 2016, p.3628).

Summary

As empirical research from the literature shows, parent engagement is a vital aspect of education. Parents understand and know their own child more than anyone else; therefore, it is essential that every parent feels they are a community member that is a welcomed part of a team
supporting their child. From the research discussed, it is quite evident that students benefit from the immense support of their engaged parents; and as a result of their parents’ involvement will be positively influenced in academic, social, and cognitive ways to become more successful.

Recognizing and acknowledging the various barriers that parents may face when it comes to engaging in their own child’s education, may help educators to work towards their elimination at best, and amelioration, to the extent possible. With schools and educators being more welcoming towards parents and their ideas, the anxiety and discomfort a parent may feel about education will begin to dissipate. As the research notes, some of the anxiety and stress regarding the level of comfort parents have in becoming engaged in their child’s education surrounds their own self-efficacy and their own belief that they are unable to assist with their child’s schooling (Abrams & Gibbs, 2002; Hornby & Lafaele, 2011; Jeynes, 2003, 2005). Developing and providing explanatory and action-oriented resources in parent-friendly language for parents to use to extend learning (cognitive and affective) experiences into the home may assist in breaking down some research-substantiated barriers to parent engagement in education.

The benefits of a growth mindset are purported to be much more than “school lessons.” The literature suggests that a child who has a growth mindset and receives consistent messages of support for that stance, in school and at home, is more likely to become an adult who is resilient, with positive mental health and a good sense of personal well-being.

The fact that there is not a lot of available research studies focusing on early elementary-aged students and growth mindset is a limiting factor in this review. However, while there is a limited amount of articles relating to early elementary-aged students, as most of the information provided was originally focused on adolescent and college-aged students, there still seems to be applicable findings to all students (including elementary-aged).
For example, even though Nussbaum and Dweck’s three-experiment study (2008) focused on college-age students and Gunderson et al. (2013) focused on students from the age of 14 months to the age of 7 and 8, both studies still provide evidence about the ways in which growth mindset is applicable to all students and the ways in which it contributes positively to mental health and well-being. It is interesting to note that Nussbaum and Dweck (2008) placed their participants under some pressure while they examined their growth mindset, self-esteem, and well-being, in that they originally told their participants that their results on the tests mattered and then gave them very low scores so that they could measure and assess their self-esteem and growth mindset attitude. Gunderson et al. (2013) took an opposite approach when they measured how praise influences the growth mindset. Gunderson et al. (2013) decided to take a more natural approach: examining the influences on the students instead of imposing situations on them. This difference in studying the affects of growth mindset and the positive mental health and well-being on the participants is significant because each study resulted in similar conclusions—it was determined that praise and feedback affected whether or not a person would adopt a growth mindset (incremental theorist). Praise that focused on the process of learning, and those who adopted incremental theorist approach valued learning from mistakes and deficiencies, which had the ability to boost their self-esteem, mental health, and well-being, as those individuals did not have a fixed-mindset based on outcome and results. This is an important consideration for enhancing resiliency skills.

The key linking factor across all literature examined is the connection between growth mindset, resiliency, and positive mental health and well-being. For example, the Romero et al. study (2014) that focused on adolescents found that the development of a growth mindset allows students to become more resilient when faced with challenges and it gives students the ability to
work harder and try new strategies. Pawlina and Stanford’s (2011) findings were the same even though the participants were pre-school children. Pawlina and Stanford (2011) conclude that children of all ages have the ability to develop a growth mindset, including the very young, and that it is never too early to support the development of resiliency skills that may lead to positive mental health and well-being, and the improvement of self-esteem and self-efficacy.

Growth mindset is not just for academic intelligence, but can also be applied to emotional challenges and stressful situations. If students develop a growth mindset in their elementary years, they may better acknowledge that all experiences are part of the entire learning process. In all the age groups examined within this literature review, there was an improvement in resiliency skills and a boost in positive mental health and well-being for the students who adopted a growth mindset. Therefore, the younger the students adopt the growth mindset, the earlier they will value the process of learning and thus protect their self-esteem, and reduce negative stress and depressive symptoms, as they will develop a greater sense of well-being.
Chapter 3 Methodology

This chapter describes the methodology used to collect and analyze data that provided the basis for this Masters in Education project. In order to create an easily accessible, research-based resource for parents on the topic of growth mindset, data for this project needed to be collected through a very careful and thorough selection of policy and scholarly documents. This chapter explains how research documents were selected for this project and contains a summary of the findings that influenced the project. The findings were used to inform the development of my project, an information and action-oriented resource package for parents in Ontario.

Getting Started

As a beginning teacher conferencing with fellow colleagues, it became quite clear that there was a focus to teach growth mindset and ensure that we, as teachers, created a classroom and school environment that fosters the growth mindset. However, there seemed to be a lack of knowledge about the definition and characteristics of growth mindset and a dearth of strategies to foster the development of such an environment. There were many people informally discussing how they were teaching growth mindset, but questions as to the accuracy and appropriateness of those methods kept occurring. It seemed as though fellow educators recognized the importance of the concept but shared many questions about implementation methods. There are bulletin boards, posters, tweets on Twitter, and newsletters that can be found to support a growth mindset; however, they are not vetted to be accurate or effective. Through my discussions with educators and parents, there seemed to be a serious lack of trustworthy, research-based, data-driven documents supporting growth mindset, and fellow educators were stating that they were unsure how to accurately explain growth mindset to students and parents. When focusing on growth mindset in schools, it is important that parents understand the reasons for the focus on
growth mindset as well as to be made aware of strategies to support its development. If educators are unsure about how to explain growth mindset in clear and simple language, it is not likely that parents will be equipped to appreciate its significance nor support the school’s efforts by implementing complementary strategies at home.

**Selection of Documents**

The selection of research articles, books, and documents were chosen with the overall finished project in mind, which was to develop an easily accessible, research-based resource for parents. The literature used to guide this project was selected based on availability (accessible), relevancy (contained applicable information on the impact of growth mindset), and currency (up-to-date information). A total of 59 relevant publications were referenced in this MEd project.

It was imperative to complete a scoping survey on the Internet to locate materials about growth mindset and parent engagement, as well as identify any relevant Ontario Ministry of Education documents. To my surprise, at the time of this project, I was unable to locate growth mindset parent resources available from any provincial school district or the Ontario Ministry of Education. I broadened my scope across Canada and still did not easily find any parent resource regarding growth mindset. The tool kit resources CODE has published provide much support for parents; however, support for growth mindset is not one of them.

My research began focusing on Carol Dweck’s body of work because she is the scientist who coined the terminology, and therefore she deserves credit for the massive movement I have seen in school districts trying to establish a growth mindset in their students. Carol Dweck’s *Mindset: The New Psychology of Success* (2006) provides readers with an engaging overview of growth mindset, however it does not cover an in depth look at school achievement. From reading this document, several of her research studies were then examined.
From Dweck’s research (Dweck, 2006, 2008; Gunderson et al., 2013; Nussbaum & Dweck, 2008; Romero et al., 2012; Yeager & Dweck, 2012) I began formulating questions regarding how a student’s mental health and well-being is influenced by adopting a growth mindset. CODE’s resources Parent Engagement: Student Success (2012), Parent Engagement: Teen Edition (2012), and Parent Engagement: Relationships (2014) examined positive relationships and a variety of mental health concerns such as depression and stress. I also examined The Ontario Ministry of Education educator resource Supporting Minds: An Educator’s Guide to Promoting Students’ Mental Health and Well-being (2013), to support educators with student mental health and well-being; however, growth mindset was not discussed in any of these documents.

Lastly, one of the recent troubling trends in Ontario Education is the declining Mathematics test scores. Questions began to formulate on the affects growth mindset could have on student learning and mathematics. Jo Boaler (2013, 2016) takes Dweck’s research and provides documents explaining how adopting a growth mindset and an environment that fosters such mindsets will positively influence student achievement in mathematics.

**Summary of Findings**

The findings from the research articles, books, and documents reviewed revealed it is important for educators, students, and parents to understand growth mindset and foster environments that support the development of using such a mindset. I was then able to realize that there was no single document provided by schools and school boards that support parents in understanding what growth mindset is, how growth mindset positively influences student achievement and mental health and well-being, and how parents can influence and foster growth mindset in their children. Table 1 provides an overview of the literature findings.
Table 1: Summary of Growth Mindset Literature Used to Inform the MEd Project

<table>
<thead>
<tr>
<th>Categories of Literature</th>
<th>Number of Literature Articles/Books/Documents</th>
<th>Summarized Key Points</th>
<th>Section found within the Parent Resource</th>
</tr>
</thead>
</table>
| Defining Growth Mindset  | 16                                            | • Mindsets guide the actions and responses of individuals while influencing a person’s judgements and behaviour  
                                • 2 main types: fixed and growth mindsets  
                                • Mindsets can be interchangeable  
                                • Growth mindsets focus on the learning process and embrace challenges  
                                • Students achieve higher success, are motivated, and have a more positive mental health and well-being | Used throughout the document |
| Parent Engagement        | 39*                                           | • Social environments, interactions, and home life influence a growth mindset  
                                • A parent’s mindset influences their child  
                                • Growth mindset increases a willingness to engage in a child’s learning  
                                • Important for parents to value the learning process  
                                • Emphasize constructive feedback and uses process praises  
                                • When parents are engaged student achievement increases | “Growth Mindset at Home”  
                                “Appendix” (Fridge Poster) |
<table>
<thead>
<tr>
<th>Student Achievement</th>
<th>35</th>
<th>“Growth Mindset: Learning”</th>
<th>“Growth Mindset: Mathematics”</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students need to understand the learning process to appreciate the complexity of learning and adopt the growth mindset</td>
<td>• Achieve higher test scores with a growth mindset</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Monitor what is occurring and feel they are supported in their learning when adopting a growth mindset</td>
<td>• Understand that challenging tasks provide opportunity to move forward and learn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Teaching for improvement fosters a growth mindset</td>
<td>• A growth mindset alleviates math anxiety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Real-world math engages learners to take chances and learn from mistakes on challenging open-ended questions. This allows students to be focused on their learning instead of being “right” or “wrong”.</td>
<td>• With a growth mindset approach, stress is seen as a positive as it builds mental toughness, enhances productivity through motivation, and creates a desire for feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• A growth mindset helps to alleviate fear of failing, anxiety, depressive symptoms, and pressure to succeed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health and Well-Being</th>
<th>32</th>
<th>“Growth Mindset: Mental Health &amp; Well-Being”</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Self-Esteem is increased with a growth mindset</td>
<td>• Resiliency is improved when adopting a growth mindset</td>
<td></td>
</tr>
<tr>
<td>• Believing emotions are malleable reduces negative symptoms such as depression</td>
<td>• With a growth mindset approach, stress is seen as a positive as it builds mental toughness, enhances productivity through motivation, and creates a desire for feedback</td>
<td></td>
</tr>
<tr>
<td>• With a growth mindset approach, stress is seen as a positive as it builds mental toughness, enhances productivity through motivation, and creates a desire for feedback</td>
<td>• A growth mindset helps to alleviate fear of failing, anxiety, depressive symptoms, and pressure to succeed.</td>
<td></td>
</tr>
</tbody>
</table>

* Most of the articles used for parent engagement validated my understanding that parent engagement is important. They were used to support my reasoning as to why I targeted this project mainly for parents, even though educators will benefit from this work too. The “Summary and Key Points” will focus on the information used in the parent resource.
Absence of Information. Through the examination of the literature, it became quite clear that there was reliable and trustworthy information regarding growth mindset that touched upon many diverse aspects of student success, however all that information was not easily accessible within a single document. A glaring omission and gap in the literature was the discussion of the definition, characteristics and importance of growth mindset and implementation strategies to implement activities and actions in the classroom to support the development of a growth mindset.

The Ontario Ministry of Education provides documents to help support the professional learning of all educators and the implementation of all policies that affect student learning and well-being. To help improve student learning, the Ontario Ministry of Education released documents such as Parents in Partnership: A Parent Engagement Policy for Ontario Schools (2010), Supporting Minds: An Educator’s Guide to Promoting Students; Mental Health and Well-Being (2013), Achieving Excellence: A Renewed Vision for Education in Ontario (2014), and Quick Facts for Parents: Learning about Mental Health (2015) to support parents and educators. CODE has also released Parent Engagement: Teen Edition (2012), Parent Engagement: Student Success (2012), and Parent Engagement: Relationships (2014) to assist parents in understanding mental health concerns and to give parents tools to assist their child. Due to the correlation between using a growth mindset, and a student’s positive mental health and well-being and academic achievement, the omission of the importance of having a growth mindset in these documents is perplexing. CODE recently released Parent Engagement: Inspiring Your Child to Learn and Love Math (2015) that finally addresses the importance of having a growth mindset–referred to in their document as having the “math mindset”. In Ontario schools there is a push to foster and develop growth mindsets and there needs to be a document.
that explicitly helps inform parents what growth mindset is, and how to create environments that foster and support that particular mindset.

One of the barriers to parent engagement is self-efficacy as parents who believe they were not good in school themselves feel they cannot help their child with school and are less likely to be engaged (Hoover-Dempsey & Sandler, 1997; Jeynes, 2005; Koki and Lee, 1998). Parents who attribute their children’s success to effort rather than luck, have a greater effect on their children’s achievement. Parents who believe that intelligence is malleable are more likely to assume that they, and their children, can control outcomes through their efforts (Hoover-Dempsey & Sandler, 1997). It then seems important for the Ontario Ministry of Education to begin including information on growth mindset for parents if they wish them to be engaged and to help improve the overall excellence of education in Ontario. The absence of a single resource designed for parents regarding growth mindset that discusses what it is, why it is beneficial for student learning and positive mental health and well-being, and strategies to use to foster a growth mindset implies there is a gap in the existing literature that this current project and corresponding parent resource aims to fill.

**Resource and Structure Design**

The end goal of this project needed to be an easily accessible resource that parents and educators could have to help them understand the concepts of growth mindset. The resource needed to speak directly to parent audiences, and therefore it needed to be easily accessible, reader-friendly, and simple to use. This resource needed to be visually appealing, and have a user-friendly appeal to the design. Therefore, using the CODE tool kits as a model for this project became a focus. It also became clear that the booklet needed to explain what growth
mindset is, the value of having a growth mindset, and how to foster environments that support such mindsets.

Using the gathered information, a draft of the resource *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students* was created to ensure parents were supported with the knowledge of growth mindset, how student achievement and learning is affected, how growth mindset positively influences the mathematical learning process, what growth mindset looks like at home and strategies that can be used, how growth mindset supports positive mental health and well-being, and to provide families with a list of valuable resources. To further enrich the resource and to provide parents with a wide scope of information in one document, links of TedTalk, research discussions, and exemplar videos were embedded. Understanding that this document needs to be readily accessible to families, a list of all videos used were listed in the document so that families who may have a hard copy of this resource can still look up the supplemental videos.

**Implementing feedback.** To ensure this resource and project is of value, it was important to seek informal feedback from school community members to ensure accuracy, reliability, accessibility, and the readability of the document. Figure 2 shows the demographics of the individuals who reviewed the resource document. Individuals in the “Other” category are colleagues in the roles of school board superintendent and psychologist, as well as current and former graduate students interested in inclusion and mental health. Some reviewers selected more than one category when filling out the survey.
This MEd project was informally sent to 31 people asking them to review the resource, *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students*, and fill out a brief survey to provide feedback to enhance the quality of the resource. The response rate was 94% with 29 people responding.

Reviewers were asked if the resource was accurate with a simple “yes”, “no”, or “other” option for them to click. Figure 3 displays all reviewers but one agreed that all information in the resource was accurate. There was one reviewer who chose the option “other” because the word repetition was not included with how synapses are created when learning. This was corrected in the final draft.
As identified in Figure 4, reviewers decided that this resource was a very readable document. One of the factors that affected the readability of the document was spelling and punctuation errors that were carefully examined and corrected. Typical responses I received on the readability are the following:

“The format you used with the headings, point form, charts etc. help to make your points easy to find and easily understood”

– S.G., former educator and consultant interested in parent communication

“Very well organized and easy to navigate. The cover page catches the eye.”

– C.M., principal
"The format is easy to follow"

– H.H., parent

The one response that rated the document a 2 out of 5 for readability stated that the document was too text heavy and did not include enough practical examples.

Please rate the readability of the document. (29 responses)

![Graph showing the rating distribution among 29 responses.]

**Figure 4** Response to “Please rate the readability of the document”.

Reviewers were asked three additional questions to determine if the format of the resource was useful, if they would use the resource, and if they had any recommendations to improve the resource. Typical responses are highlighted below.

“Love the format – engaging and fluid with logical progression.”

– K.S., Superintendent of School Effectiveness

“The format of the tool kit is very useful. The information is easy to read and not overwhelming for the reader. The links provided are very relevant to the topic.”

– D.F., principal
“Your use of language is excellent, the visual representations are applicable and captivating, your interactive segments are exceptional, and you provide excellent resources and reference material.”

– D.M., school board psychologist

“Reading it helps me as a parent to praise and encourage a growth mindset of my children.”

– M.C., parent

“I feel this document contains all of the information necessary in an easy to read format. The organization of the document makes it easy to find the information required quickly.”

– D.A., parent

“I would definitely use this tool kit as a reference to help parents, students, and my own children.”

– S.C., parent and teacher
“It would be really useful because although the staff and students understand what growth mindset is, many parents do not have the same understanding”

– M.F., EQAO Consultant, in discussion with a principal at a Toronto District School

It was important that I addressed recommendations that I received so that the quality of the project could be improved. There were three people who felt the resource would benefit some parents, but with it being too text-heavy, believed that some families would be too intimidated to use the materials. To help address this issue, an additional brochure was created to provide a simpler format that used less text. Making the resource a digital copy will also allow schools to send home individual sections at a time to parents if they so choose. The fridge poster was also designed to highlight a practical way of fostering growth mindset at home and to keep something handy for a quick glance. In fact, a few parents requested a fridge poster to be created.

Lastly, one of the main concerns reviewers had was getting parents the actual document because handing out the resource could be overwhelming for some parents. There were a few responses that requested an implementation guide for potential facilitators interested in hosting a growth mindset workshop for parents so that the resource would not overwhelm anyone. Understanding the value in having a parent workshop, I then created an implementation guide and PowerPoint slides to complement the parent resource. A website was created to ensure parents and facilitators will have access to the resource and supporting materials, because they can be downloaded free of charge. The website is located at https://sites.google.com/site/fostergrowthmindset/. Figure 5 shows a screenshot of the website’s homepage. It is important that this document is organic and grows over time as new research
becomes available. Therefore, I have also included contact information on the website that encourages individuals to provide feedback on the resource and ask any questions they may still have.

**Figure 5** Screenshot of the opening page of the website.
Chapter 4 Discussion and Reflections

In this chapter, I begin by reflecting on my learning that emerged from developing this project. I will highlight my intentions of this project and conclude with my final thoughts regarding the completion of this project.

Discussion

During the time of completing this project, there was no single resource that combined the topics discussed throughout this project into an easily accessible document for parents. Educators and parents informally mentioned how they required a resource to understand growth mindset and how to foster and support a growth mindset in their children. Dweck’s *Mindset: The New Psychology of Success* (2006) is a valuable read for educators and parents; however, there still was a need to have something that parents could quickly look at and understand the basic principles and how they could be applied to enhance the successes of their children. The goal of this project was to give parents the “one-stop shop” kind of treatment where parents could attain the knowledge and then be supplied with additional resources and where to find them for their convenience if they were interested in more information.

Over the past three years, there has been a lot of time spent talking with colleagues and parents about parent engagement, planning many educational community events, and reading and analyzing a variety of scholarly articles about parent engagement, inclusion, and growth mindset. I have been very fortunate to work as a full-time teacher in Ontario during my studies in this MEd program. I believe my work as an educator allowed me to critically think about the research I was reading and apply suggestions from those articles in my own teaching practice. This was not an easy process, because working full-time and being enrolled in the MEd program consumed a lot of my time and focus. There were many times where stress and the feeling of
being overwhelmed took over; but thankfully, I managed to find ways to balance between work and studies. With the guidance of my supervisor, we were able to chunk my project into manageable sections that helped me focus on individual aspects of my project. This process alleviated some of the stress and pressure I placed on myself to succeed with high quality.

The more readings I managed to accomplish on growth mindset, the easier it was to realize I had previously used a fixed mindset and I began to adopt a growth mindset. When I started living my life with a growth mindset in place, I started to notice a decrease in the stress and pressure I was feeling to succeed at a high level. Instead, I was becoming focused on the learning process I was a part of, and naturally the quality of my work was enhanced. For example, when my work was sent out to people for informal feedback I would have normally put this pressure on myself to ensure my work was perfect before asking for feedback. I always wanted to ensure there were no mistakes within my work because I would become embarrassed that I did not create something of high quality. However, changing my mindset allowed myself to fully embrace the learning process to the point that I was not humiliated because of the feedback, I was able to see that errors or mistakes that were pointed out did not mean failure, but rather an opportunity to enhance my work. I was able to use the valuable feedback that I received to ensure the quality of the project was outstanding.

One of the first things my supervisor and I learned from the informal feedback on the project was that there was a real need for a document like this. I believe that this project can make an important contribution to the field because there is currently no resource available that a qualified cadre of reviewers deemed to be accurate and useful. To hear from classroom teachers, administrators, consultants, and most importantly parents, that this resource is valuable and needed by a range of people sincerely made every ounce of effort and dedication worth it.
**Intentions**

I plan to ask to present this project for my own school council and the school council representatives of my school district. I want parents to realize that this resource exists and provide them with opportunities for them to have their own copy. From there, I intend to take this project to other local school boards to ensure this resource is available for all parents in our community.

I believe parents from across our province would benefit from having access to this resource. This resource will be available on my school website and the school district website. The resource will also be uploaded to the website that was created specifically for parents to be able to download their own copy of the resource. The Education Community Outreach Centre at Queen’s has agreed to upload the suite of materials for parents and educators who regularly use their website for valuable resources.

I would be honoured to present my project at professional development sessions in the upcoming years. I plan to be available to share my project with many colleagues and fellow educators because their support is needed to share this project with parents. It is important for me to get this project into as many hands as possible. This is why I firmly believe having the informal feedback strengthened this project. Incorporating the feedback ensured a variety of individuals will find this resource valuable and practical. Knowing this, I plan to send a copy of the resource to the Ontario Ministry of Education for support in distributing *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students* to schools throughout Ontario.

**Final Thoughts**

Completing this project allowed me to grow as an educator and an individual—something I will always be grateful for. In my own teaching practice, I have shifted classroom focus to
creating an environment that fosters growth mindset. I currently have students in grades 6-8 that are able to explain what a growth mindset is and why adopting such mindsets are important. There was even a student speech given on the importance of growth mindset. I bring this up because this is why I became an educator and why I decided to enrol in the MEd program. I want to spend my time helping people and guiding them to do their very best; and I firmly believe that this project will help individuals achieve their absolute best. I know I have talked about seeing the growth in myself, but knowing I am using the knowledge I have acquired through this program to better assist my students has been the greatest accomplishment of all.

I realize parents and guardians are an important pillar in the education system. Therefore it is vital to ensure they are included in classrooms and feel they are valuable contributors. It is also essential to support parents and guardians as much as we support our students. Building a positive rapport with parents and guardians is important to me and I am thankful to have the opportunity to provide parents with a resource they have informally mentioned to me that is needed. Having parents tell me how much they love this project and how useful it is for them has validated this entire experience for me.

In conclusion, I am proud that this new parent resource, *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students*, will be something valuable and practical for parents and educators. I am excited and honoured to have created a resource that will help foster growth mindset, and see student achievement, mental health and well-being positively influenced.
References


Chapter 5 The Project
Parent Engagement:

A Resource to Foster and Support Growth Mindset in Students
Overview of this Booklet

The purpose of this document is to provide a resource for parents/guardians to support the development of growth mindset in your children.

This document will explain:
- what a growth mindset is
- the impact of having a growth mindset has on learning
- what parents/guardians can do for children at home to help develop an environment that encourages growth mindset

This resource will outline:
- the positive impact growth mindset can have on students
- the characteristics people display when they embrace the growth mindset

The goal of this document is to provide parents/guardians with implementation strategies that support the fostering of growth mindsets within their children so they can be more resilient and confident in their learning.

To further support the growth mindset understanding, there are suggested resources listed throughout the booklet. In addition, there are several embedded links within this document that can be accessed by clicking the pictures within the document. For those who have a hard copy of this document, in the resource section there is a listing of the links that are embedded within the document in order of appearance.
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1. Glossary

**Mental Health**

Mental health affects one’s ability to think clearly, one’s mood, and one’s ability to behave and function successfully in daily life. Therefore, mental health is a part of one’s overall well-being, as it relates to the enjoyment of life, the maintaining of fulfilling relationships, and the ability to cope with adversity and stress\(^1\).

**Mindset**

A mindset mentally influences an individual’s way of understanding an experience\(^2\). The perceived mindset guides the actions and responses of individuals in various situations. Mindsets can affect one’s judgements, evaluations, behaviour, health, and learning\(^3\).

A **fixed mindset** is having the perception that your qualities are set in stone as you are born with a certain amount of intelligence and personality\(^4\). Those with the fixed mindset do not believe in the ability to learn and grow from mistakes, as they are focused on what characteristics they are born with.

A **growth mindset** is having the perception that your qualities are things you can cultivate through your efforts and hard work because individuals can change and grow through effort, practice, application, and experience. People with a growth mindset focus their attention on learning and the opportunity to become better, and put emphasis on the process of learning and improving their abilities\(^5\).

**Resiliency**

Resiliency is a person’s ability to adapt and react positively to challenging situations. Positive emotions and attitudes build resiliency skills, as one is able to develop flexible thinking and problem solving skills, and use such skills when feeling challenged. If someone is resilient, he or she does not easily give up, and has the ability to recover quickly from difficulties. This means, a resilient person tends to “bounce back” from difficult experiences. Resiliency supports self-esteem and self-efficacy\(^6\). In order to develop resiliency, one must understand that they control their actions.

**Self-efficacy**

Self-efficacy is a person’s own belief that they are competent and capable of handling challenges that they may face\(^7\). Therefore, self-efficacy influences how people think, feel, and react in different situations\(^8\).

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\(^{1}\) Ontario Ministry of Education (2015)  
\(^{2}\) Crum et al. (2013)  
\(^{3}\) Crum et al. (2013); Dweck (2006); Schleider et al. (2016)  
\(^{4}\) Dweck (2006)  
\(^{5}\) Dweck (2006)  
\(^{6}\) Werner (1992)  
\(^{7}\) Pawlina & Stanford (2011)  
\(^{8}\) Bandura (1993)
Self-esteem

Self-esteem is the overall feeling of self-worth and is the judgement of oneself. A person’s self-esteem is influenced by how he or she uses their feelings and emotions to fulfill their own interest and needs, or to protect themselves from pain and humiliation. It can develop confidence in one’s abilities, resulting in the development of self-respect\(^9\).

Well-Being

A person’s well-being includes one’s positive emotions and moods (e.g. contentment and happiness), the absence of negative emotions (e.g. depression), the satisfaction with life, and having a sense of fulfillment. There are many aspects of well-being that include:

- physical wellness
- economic wellness
- social wellness
- development and activity wellness
- emotional wellness
- psychological wellness
- life satisfaction

Therefore, well-being is one’s ability to judge life positively and feel good about themselves\(^10\).

\(^9\) Rosenberg (1965)
\(^10\) Centers for Disease Control and Prevention (2016)
2. Growth Mindset

2.1 Mindsets

Mindsets are important aspects of one’s personality as they guide the actions and responses of individuals. Mindsets influence a person’s judgements and behaviour to develop positive well-being, or cause negative feelings such as the beginning of depression and anxiety\(^\text{11}\). There are two types of mindsets that a person may adopt: a fixed mindset or a growth mindset\(^\text{12}\). Mindsets can be interchanged as people have the ability to adopt different mindsets\(^\text{13}\). Therefore, if an individual has a fixed-mindset, with support and resources, this person can adopt a growth mindset and vice versa.

The fixed mindset adopts a belief that individuals are born with enough intelligence and ability to accomplish tasks\(^\text{14}\).

The growth mindset adopts a belief that values the learning process because challenging opportunities and effort enables one to learn\(^\text{15}\).

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\(^{11}\) Crum, Salovey & Achor (2013); Dweck (2006); Schleider, Schroder, Lo, Fisher, Danovitch, Weisz, & Moser (2016)

\(^{12}\) Boaler (2013); Crum et al. (2013); Dweck (2006)

\(^{13}\) Dweck (2006)


\(^{15}\) Gunderson et al. (2013).

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2.2 Characteristics of a Fixed Mindset

Individuals who use a fixed mindset:

- focus their attention and energy towards the product of their learning because they feel they are either “smart” or “dumb”\(^\text{16}\).
- become focused on judgement\(^\text{17}\).
- thrive when given a task within their grasp.
- lose interest, feel they are “dumb”, and give up easily when challenged with a task that they feel they are not smart enough for.
- need to nurse and protect their confidence, because as they feel failure will be a part of their identity\(^\text{18}\).

One of the biggest fears of a person with a fixed mindset is trying his or her best and still failing. These pressures can lead to:

- depression
- anxiety
- sense of failure
- lack of self-esteem\(^\text{19}\)

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\(^{16}\) Boaler (2013); Dweck (2006); Gunderson et al. (2013)

\(^{17}\) Dweck (2006)

\(^{18}\) Dweck (2006)

\(^{19}\) Dweck (2006)
### 2.3 Characteristics of a Growth Mindset

Individuals who use a growth mindset:

- focus on the process of learning and how intelligence is developed and learned through effort\(^{20}\).  
- find challenging tasks fun and engaging because they must work hard and invest effort to develop their ability to achieve the accomplishment\(^{21}\).  
- believe their ability is shaped through effort and use stress as a motivator to face the challenges they face\(^{22}\).  
- understand assessment is a snapshot of learning at one particular time and therefore does not determine his or her future potential and ability\(^{23}\).  
- can become a more confident and resilient learner with improved self-esteem and positive mental health and well-being\(^{24}\).

### 2.4 Quick Glance

![Click here for Dweck’s brief explanation](image)

**“What mindset do you use?”**

<table>
<thead>
<tr>
<th>Characteristics of a Fixed Mindset</th>
<th>Characteristics of a Growth Mindset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believes you are born with a fixed intelligence and abilities</td>
<td>Believes intelligence is developed and learned through effort</td>
</tr>
<tr>
<td>Easily gives up when faced with challenges</td>
<td>Embraces challenges</td>
</tr>
<tr>
<td>Avoids tasks that are too difficult</td>
<td>Motivated to persevere</td>
</tr>
<tr>
<td>Ignores feedback</td>
<td>Uses feedback as a chance to improve their learning</td>
</tr>
<tr>
<td>Threatened and jealous by the success of others</td>
<td>Inspired by other people’s success</td>
</tr>
<tr>
<td>Achieves less than their full potential</td>
<td>Achieves higher levels of success</td>
</tr>
</tbody>
</table>

\(^{20}\) Dweck (2006); Gunderson et al. (2013); Nussbaum & Dweck (2008)  
\(^{21}\) Dweck (2006)  
\(^{22}\) Crum et al. (2013); Dweck (2006)  
\(^{23}\) Dweck (2006)  
\(^{24}\) Boaler (2013); Dweck (2006); Good, Aronson, & Inzlicht (2003); Nussbaum & Dweck (2008); Pawlina & Stanford (2011); Romero, Master, Paunesku, Dweck, & Gross (2014); Yeager & Dweck (2012)
3. Growth Mindset: Learning

3.1 How Does Learning Happen?
It is important to understand:

- when we learn something new, our brains grow and make new pathways.
- human brains grow during the process of learning when synapses fire off inside our brains to make new connections.
- for synapses to fire off, mistakes and repetition need to be made for the creation of new pathways for understanding.
- students benefit from explanations and examples that demonstrate that by working hard at academic tasks, their brains will make new connections and become stronger so that they become more accomplished.

Understanding this will allow the student to better appreciate the importance of the learning process and make it easier to adopt a growth mindset. This is why it is essential students become engaged in thought-provoking tasks that challenge them to learn new concepts and ideas.

3.2 Mindset and School Achievement
Students who understand the principles of the brain tend to adopt a growth mindset and demonstrate improvement in achievement.

Teaching for improvement helps to eliminate “success” and “fail” categories by replacing them with “growth” and “improvement” categories. Focusing on improvement fosters the growth mindset and student achievement increases.

3.3 Students with Fixed Mindsets
These students:
- tend to achieve lower test scores and use excuses such as being stupid or blaming the teacher.
- use such excuses to protect their egos in front of their peers.
- constantly compare their success with their peers’ based on how smart they believe they are compared to others within the class.
- believe they are judged on their ability.
- can focus on negative judgement, leading to depression from feeling pressure to succeed and achieve high grades.

3.4 Students with Growth Mindsets
These students:
- tend to achieve higher test scores on assessments, and embrace learning as a new opportunity.
- constantly monitor what is occurring and feel they are helped by the supportive feedback they receive.
- understand that challenging tasks provide opportunity to move forward in their learning.

25 Boaler (2013, 2016); Dweck (2008)
26 Dweck (2008)
27 Boaler (2013, 2016); Dweck (2008)
28 Dweck (2006)
4. Growth Mindset: Mathematics

4.1 The Importance of Growth Mindset
- According to PISA, Canada’s student mathematic performance has been in decline since 2006 (test scores are still above the average compared with the world) and Ontario students score slightly less than Canada’s average.
- In Ontario EQAO Math test results show that half of the grade 6 students are currently achieving below the provincial standard.
- Math anxiety and negative disposition towards mathematical learning are becoming a barrier to successful math learning as students are becoming too focused dealing with math anxiety that their brains cannot devote enough attention to their math learning\(^\text{29}\).

4.2 Growth Mindset and Test Scores
- Growth mindset will help students alleviate math anxiety and negative disposition, and math learning will improve\(^\text{30}\).
- Growth mindset coaching significantly increases student test score performance (Good et al., 2003).
- Having the mindset that embraces challenges fosters a positive learning environment where students are no longer afraid to take chances and make mistakes in their math learning. Students become more focused on their learning instead of believing that they cannot solve problems. The end result is achieving higher scores because they are instead focusing on practicing mathematical problem solving skills.

4.3 Math Learning Process
- Need to eliminate the “right” and “wrong” and instead focus on real world-applicable math problems.
- Growth mindset appreciates the learning process and real world problems. This allows students to experience authentic math learning, instead of being fixated on being “right” or “wrong”.
- When students fixate on “right” or “wrong” and continually make mistakes, it becomes too difficult for students to achieve success and believe in the learning process.
- Some worksheets in the classroom develop rote skill, but they can reinforce the “right” or “wrong” categories and induce boredom in math.
- Tasks need to be engaging and open-ended to allow for possible solutions. These challenging tasks require learners to use effort and persevere using their own ideas without fear of making mistakes.
- It takes hard work and effort to learn a new math concept. When the learner is able to gain a mental perspective of the math concept, the concept is stored in the brain for easy access\(^\text{31}\). Math concepts can only be stored – not methods and rules – supporting the importance of teaching big ideas and concepts.

“Students need time to struggle.” – Dan Finkel

\(^{29}\) Programme for International Student Assessment (2016)
\(^{30}\) Boaler (2016)
\(^{31}\) Thurston (1990)
5. **Growth Mindset at Home**

### 5.1 Why Your Mindset Matters
- Social environments, interactions, and home life influence a growth mindset.
- A child is more likely to develop a growth mindset when their parent(s)/guardian(s) model a growth mindset.
- A growth mindset increases a willingness to become engaged in the child’s learning.

### 5.2 Exhibiting a Fixed Mindset
- Parents/Guardians believe their child’s ability is fixed with little chance of change.
- Can cause distress when child performs poorly on a task in fear there is permanent deficit because they lack skill at the current moment.  
- Uses performance-oriented teaching to ensure the child has correct answers.
- Can be distressed about their child struggling with homework and tends to take over and provide answers. With the best intentions to support the child, this often undermines the child’s motivation and parents/guardians are enhancing the fixed-mindset ideal by inadvertently asking the child to fit into the mold of the brilliant, talented child or be made to feel they are not measuring up to expectations.

### 5.3 Adopting A Growth Mindset
- Parent/Guardian believes their child’s abilities are continually developing.
- Understand learning is a process and is not concerned with their child being challenged at a particular moment in time, as they understand with effort and practice that the child can develop knowledge and skills.
- Highly value and emphasize constructive feedback and the learning process above the product or results of the tasks the child completed.
- When parents/guardians adopt this perspective, children will be more positive about their learning and their potential to make a difference in the world.

### 5.4 The Use of Praise

<table>
<thead>
<tr>
<th>Person Praise</th>
<th>Process Praise</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Instills a fixed mindset</td>
<td>* Fosters a growth mindset</td>
</tr>
<tr>
<td>* Praise for traits or the person (e.g. “you are smart”)</td>
<td>* Praise for effort and actions (e.g. “look at the effort you put into your studies”)</td>
</tr>
<tr>
<td>* Creates temporary increase in child’s self-esteem, however the child develops sensitivity to performance of the tasks</td>
<td>* Focuses on the learning process and not the outcome</td>
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</tbody>
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32 Moorman & Pomerantz (2010)  
33 Dweck (2006); Moorman & Pomerantz (2010); Schleider et al. (2016)  
34 Dweck (2006, 2008); Gunderson et al. (2013); Moorman & Pomerantz (2010)  
35 Dweck (2006, 2008); Gunderson et al. (2013); Schleider et al. (2016)

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6.1 Self-Esteem

- **Self-Esteem** impacts a child’s mental health and well-being.
- Having a growth mindset enables the child to understand that knowledge can be acquired and use academic setbacks as motivation to work hard and spend more time studying. When improvement is achieved, those with the growth mindset increase their self-esteem.
- Students with a fixed mindset focus so much on the achievement and product of the tasks. When they are challenged and have difficulty, they experience a decrease in self-esteem. To restore their self-esteem, students avoid correcting errors and future tasks, and often compare their work to peers who weren’t as successful to restore self-esteem. Having this fixed mindset restricts learning opportunities in order to protect self-esteem.

6.2 Stress

Stress has the potential to have positive and negative effects on a person. The following figure explains how a child using either a fixed or growth mindset can handle stress.

**With a growth mindset, stress can:**
- help prioritize tasks
- help enhance productivity and learning
- provide new perspectives
- create a strong desire for feedback

**With a fixed mindset, stress can:**
- lead to depression
- lead to being anxious/fear of failure
- enhance sensitivity towards parent comments
- create pressure to succeed and avoid challenges

6.3 Emotional Learning & Resilience

- During adolescence students need to develop positive self-esteem because there can be many emotional challenges experienced with negative emotions – which can result in depression.
- Students with a growth mindset are more resilient when facing setbacks because they value the learning process, believe in effort, and believe that intelligence and emotions are malleable.
- Believing your emotions are changeable is linked with students having greater well-being and displaying fewer depressive symptoms.
- Students with a growth mindset embrace challenges and become resilient as they acknowledge it takes practice to learn and accomplish tasks, and people develop at different paces.

- Dweck, 2006; Gunderson et al., 2013; Romero, Master, Paunesku, Dweck, and Gross, 2014; Yeager and Dweck, 2012

Click here for “Boosting Self-Esteem”

Click here for “The Power of Resilience”
7. Resources

7.1 Additional Resources

Council of Ontario Directors of Education

http://www.ontariodirectors.ca/parent_engagement.html

Queen’s University Community Outreach Centre

http://educ.queensu.ca/coc

Youcubed

https://www.youcubed.org

Ontario Ministry of Education

7.2 List of Embedded Links (in order of appearance within the document)

1. Growth Mindset vs. Fixed Mindset: https://www.youtube.com/watch?v=KUWn_TJTrnU

2. Stupidity is the Currency of a Fixed Mindset – Carol Dweck on Inside Quest: https://www.youtube.com/watch?v=V1gqzdEahTw


4. Growth vs Fixed Mindset: https://www.youtube.com/watch?v=brpkjT9m2Oo

5. How We Learn: Synapses and Pathways: https://www.youtube.com/watch?v=BEwg8TeipfQ

6. The Power of Belief – Mindset and Success (Eduardo Briceno): https://www.youtube.com/watch?v=pN34FNbOKXc

7. PISA – Programme for International Student Assessment: http://www.compareyourcountry.org/pisa/country/can


10. How You Can be Good at Math, and Other Surprising Facts about Learning – Jo Baoler: https://www.youtube.com/watch?v=3icoSeGqQtY


12. Three Ways to a Growth Mindset: https://www.youtube.com/watch?v=d4uKCZTMyy4

13. Carol Dweck – The Effect of Praise on Mindsets: https://www.youtube.com/watch?v=TTXrV0_3UjY

14. How To Build Healthy Self-Esteem in Children – Carol Dweck: https://www.youtube.com/watch?v=jfzjHmNORso

15. Building Your Child’s Self-Esteem: https://www.youtube.com/watch?v=jvufTp2c2LU

16. Boosting Children’s Self-Esteem: https://www.youtube.com/watch?v=CiHeZvFMcvY

17. The Power of Resilience – Sam Goldstein, Ph.D.: https://www.youtube.com/watch?v=isfw8JJ-eWM

18. The Power of Believing That You Can Improve – Dr. Carol Dweck: https://www.youtube.com/watch?v=_X0mgOOSpLU
8. References


If you say or hear the following...

“I can’t make this any better.”

“I can’t believe I made a mistake.”

“This is good enough.”

“This is too hard.”

“I will never be as good as ______ at this.”

“I give up”

“That is not working.”

“My friends can do that and I can’t.”

“I just can’t do…”

“You are smart.”

Try saying the following instead:

“What am I missing and how can I try to make this better?”

“Everyone makes mistakes. Mistakes are a part of life and how we learn!”

“What can I (you) add to make it better?”

“This is going to take a lot of practice and effort.”

“With practice and positivity I’ll (you’ll) get better at this.”

“This is going to take some time and I (you) will have to keep trying.”

“It may take several different plans and attempts to solve this.”

“I am happy for my friends, I can practice and use effort to learn it too.”

“I can try my best and practice.”

“Look at the effort you put into your studies.”

“Not knowing is not failure, it’s the 1st step to understanding.” — Dan Finkel
# 9.2 15 Ways to Foster Growth Mindset at Home

The following is a list of strategies and activities you can do at home to foster and support the development of your child’s growth mindset.

> “Students need time to struggle.” – Dan Finkel

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<td><strong>1.</strong></td>
<td>Talk to your child about what they are learning in school. This shows you are interested in their learning process!</td>
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<td><strong>2.</strong></td>
<td>Review your child’s work with them. Take time to focus on the improvements you notice. For example, maybe your child’s spelling has improved and instead of focusing on the words they need to spell correctly, praise the effort they used to make the improvements.</td>
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<td><strong>3.</strong></td>
<td>Be careful to not compare your child’s work to someone else’s work. This may send the message that your child will not be good enough.</td>
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<td><strong>4.</strong></td>
<td>Talk to your child about your learning and how you face challenges when you learn something new too. Understanding they are not alone in facing difficult challenges when learning, will help build resiliency and self-confidence throughout their learning.</td>
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<tr>
<td><strong>5.</strong></td>
<td>Talk to your child about how you feel when you overcome challenges and the effort it took for you to do it.</td>
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<td><strong>6.</strong></td>
<td>Be careful asserting a negative stance about subjects in school. For example, if Math is perceived to be disliked, the likelihood of the child adopting such views increases. If a parent says they hate Math and is not good at it, the chances that the child believes this about them increases.</td>
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<td><strong>7.</strong></td>
<td>Think about the mindset you use most often. What mindset do you use around your child? Do you value the learning process or the desired outcome?</td>
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<td><strong>8.</strong></td>
<td>When assisting with homework, do you provide answers? Providing answers does not help the child’s motivation. Try asking your child guiding questions to help your child solve the problem instead of providing answers. This reinforces the importance of the learning process.</td>
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<tr>
<td><strong>9.</strong></td>
<td>Reward children based on their effort and determination, rather than their “smarts”.</td>
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<tr>
<td><strong>10.</strong></td>
<td>When grades come home, focus on the comments and the feedback. For example, focus on the comments on your child’s report card rather than the mark because the comments are meant to further support student learning.</td>
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<tr>
<td><strong>11.</strong></td>
<td>Provide feedback to your child about what you have noticed in their learning. For example, talk to them about how you have noticed the effort they have put forth.</td>
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<tr>
<td><strong>12.</strong></td>
<td>Learn something new with your child! Learning something new together will allow you and your child to go through the learning process together. This will show your child that you can always learn something new and that you value learning.</td>
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<tr>
<td><strong>13.</strong></td>
<td>Watch documentaries on your favourite athletes. The amount of perseverance, motivation, and hard work will be inspiring.</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td>Read books with your child that reinforce the importance and benefits of having a growth mindset. For example, try reading <em>Rosie, Revere Engineer</em> by Andrea Beaty, <em>Nadia: The Girl Who Couldn’t Sit Still</em> by Karlin Gray, <em>Fantastic Elastic Brain: Stretch it, Shape it</em> by JoAnn Deak, and <em>Thanks for the Feedback, I Think</em> by Julia Cook.</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>Listen to songs about not giving up when facing challenges and talk to your child about the messages of the songs. For example, trying listening to <em>Play On</em> by Carrie Underwood. Think about the songs you listen to – what messages are applicable?</td>
</tr>
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Growth Mindset: Mental Health & Well-Being

- Students with a growth mindset use setbacks as motivation in the learning process to learn from their mistakes.
- Students with a growth mindset understand learning can be a challenging process and people can develop at different paces.
- Believing knowledge and emotions are developed, learned, and can change is linked with students having a greater well-being and fewer depressive symptoms.

Stress With a Growth Mindset:
- Develops mental toughness
- Students are able to set priorities
- Enhances productivity
- Uses stress to enhance learning (succeeds under pressure)
- Students have a strong desire for constructive feedback

Additional Resources

- “5 Principles of Extraordinary Math Teaching” - Dan Finkel: https://www.youtube.com/watch?v=ytVneQUA5-c
- Queen’s University Community Outreach Centre
- “The Power of Believing That You Can Improve” Dr. Carol Dweck: https://www.youtube.com/watch?v=_X0mgOOSpLU
- Council of Ontario Directors of Education

Ontario Ministry of Education

Fostering and Supporting Growth Mindset in Students

Parent Engagement
Mindsets are important aspects of one’s personality as it guides the actions and responses of individuals while influencing a person’s judgements and behaviour to develop positive well-being, or cause negative feelings such as the beginning of depression and anxiety. Mindsets can be interchanged as people have the ability to adopt different mindsets (i.e. a person with a fixed mindset can adopt a growth mindset and vice versa.)

**Fixed Mindset**
- Believes born with fixed intelligence and abilities
- Easily gives up on challenging tasks
- Ignores feedback
- Achieves less than their full potential

**Growth Mindset**
- Intelligence is developed and learned through effort
- Embraces challenges to motivate learning
- Uses feedback as a chance to improve their learning
- Achieves higher levels of success

Human brains grow during the process of learning when synapses fire off inside our brains. When students know this process, they are more likely to adopt a growth mindset. Students who adopt growth mindsets tend to achieve higher test scores on assessments, and embrace learning.

Teaching for improvement helps to eliminate “success” and “fail” categories by replacing them with “growth” and “improvement” categories. Focusing on the improvement assists students in adopting a growth mindset.

Mathematics
- Growth Mindset will help students alleviate math anxiety
- Focusing on real world math will allow students to appreciate the learning process instead of being focused on worksheets with either “right” or “wrong” answers
- Tasks need to be open-ended to allow for possible solutions. These challenging tasks require learners to use effort without fear of mistakes

### Why Your Mindset Matters
- Social Environments, interactions, and home life influence a growth mindset
- When parents/guardians model growth mindsets, a child is more likely to develop the growth mindset too
- Children will be more positive about their own learning

### Adopting a Growth Mindset
- Parent believes their child’s abilities are continually developing
- Highly value and emphasize constructive feedback and the learning process above the product or results of the tasks the child completed

### Process Praise
- Fosters a growth mindset
- Praise for effort and actions (i.e. “look at the effort you put into your studies”)
- Focuses on the learning process and not the outcome
Parent Engagement: A Resource to Foster and Support Growth Mindset in Students
Overview of the Implementation Guide

The purpose of this guide is to provide resources to assist individuals, schools, and/or school boards in holding a Growth Mindset workshop to introduce parents/guardians to “Parent Engagement: A Resource to Foster and Support Growth Mindset in Students”.

This document includes (in order):

- A Sample Agenda for the workshop
- Pictures of PowerPoint slides to be used, and a link to download the slides for your presentation
- A Sample Invitation Letter
- A Handout with the Website Information so parents/guardians can download the parent resource
- A Sample Sign-Up Sheet for a hardcopy (which you as the facilitator can provide if you have not printed any off before the workshop)
- A Sample Workshop Poster
Parent/Guardian Workshop:
Fostering and Supporting Growth Mindsets in Students

This implementation workshop compliments the parent resource Parent Engagement: A Resource to Foster and Support Growth Mindset in Students. This workshop is designed to support a facilitator who has an interest in growth mindset, but does not necessarily have prior knowledge about growth mindset. Even though this workshop is designed for parents and guardians, educators are welcome to attend because the information presented is applicable to classrooms for students in grades K-12.

This workshop has been designed to provide the facilitator with materials and tools required to plan and host a successful event for parents and guardians. This is a sample workshop and it may be adapted to suit the individual needs of the community hosting the event. All essential materials are included in this implementation guide. The PowerPoint slides can be found at https://sites.google.com/site/fostergrowthmindset/ under the Facilitator page.

When hosting this workshop, you may print off hard copies of the Parent Engagement: A Resource to Foster and Support Growth Mindset in Students resource for parents/guardians; however, the resource is available to download for free on the above website. If there are no printed off documents available at the workshop, it is recommended to ask parents/guardians if they require a hard copy as there are parents and guardians who do not have internet access.

Helpful Hint
It is also recommended to make this workshop a family event where parents/guardians can bring their child. It would be a good idea to have some simple activities planned for students to participate in while parents are a part of this workshop (not included in this implementation guide). Attendance numbers increase when parents/guardians can bring their child, do not have to worry about childcare, and if supper is provided. You may want to have a separate room for eating, student activities, and the parent/guardian workshop.
5:30-6:00 p.m. **Supper:**

Welcome parents/guardians to the event as they enter the building/area. It is recommended to provide food to make it easier on the families wanting to attend. Family events increase attendance. Invite guests to enjoy a bite to eat and enjoy refreshments.

6:00-6:15 p.m. **Introduction:**

Welcome everyone together. Thank all parents/guardians and students for coming to this event and recognize that you realize it’s a busy time of year and how you appreciate everyone making time to be here. Thank all the individuals who have helped to organize this event for the community. Explain that the event is about to get started at 6:15 p.m. and that there are some activities planned for students while parents and guardians are taking part in the workshop. Ask individuals to proceed to the proper locations (i.e. students to the activities, parents to the workshop).

6:15-7:15 p.m. **The Workshop**

**Slide 1 (Welcome) & Slide 2 (Introducing the Document)**

Once everyone is settled, begin by introducing the new parent/guardian resource *Parent Engagement: A Resource Foster and Support Growth Mindset in Students* that will be highlighted throughout the evening. Explain that the evening will be focused on introducing this document and highlight important aspects, and parents will have access to/receive their own copy at the end of the evening.

**Slide 3 (Goals of the Evening)**

This slide will highlight the goals of the evening. The purpose of the workshop is to explain:

- what a growth mindset is
- the affects of having a growth mindset has on learning
- what parents/guardians can do for children at home to help develop an environment that encourages growth mindset
- the positive impact growth mindset can have on students
- the characteristics a person displays when they embrace the growth mindset
Slide 4 (What is a Mindset?)

This slide will briefly discuss that mindsets are, and the characteristics of a fixed mindset and growth mindset.

Mindsets

- are important aspects of one’s personality as it guides the actions and responses of individuals while influencing a person’s judgements and behaviour to develop positive well-being, or cause negative feelings such as the beginning of depression and anxiety.
- can be interchanged as people have the ability to adopt different mindsets (i.e. a person with a fixed mindset can adopt a growth mindset and vice versa.)

Slide 5 (What is a Growth Mindset?)

Fixed Mindset

- Believes born with fixed intelligence and abilities
- Easily gives up on challenging tasks
- Ignores feedback
- Achieves less than their full potential

Growth Mindset

- Intelligence is developed and learned through effort
- Embraces challenges to motivate learning
- Uses feedback as a chance to improve their learning
- Achieves higher levels of success

Slide 6 (Growth Mindset and Learning)

- Human brains grow during the process of learning when synapses fire off inside our brains to make new connections.
- In order for synapses to fire off, mistakes and repetition need to be made for the creation of new pathways. When students know this process, they are more likely to adopt a growth mindset.
- Students who adopt growth mindsets tend to achieve higher test scores on assessments, and embrace learning.
Teaching for improvement helps to eliminate “success” and “fail” categories by replacing them with “growth” and “improvement” categories. Focusing on the improvement assists students in adopting a growth mindset.

**Slide 7 (Growth Mindset and Mathematics)**

- Growth Mindset will help students alleviate math anxiety
- Focusing on real world math will allow students to appreciate the learning process instead of being focused on worksheets with either “right” or “wrong” answers
- Tasks need to be open-ended to allow for possible solutions. These challenging tasks require learners to use effort without fear of mistakes

**Click on the rubrics cube picture to show “Five Principles of Extraordinary Math Teaching – Dan Finkel”**. *This video is long, so only preview the video. The objective here is to show parents what is in the document, and to get them thinking about growth mindset and math. Only show the video to 5:06 – just until he states “this is principle 2”.*

**Slide 8 (Adopting a Growth Mindset at Home)**

- Why your Mindset Matters
  - Social Environments, interactions, and home life influence a growth mindset
  - When parents/guardians model growth mindsets, a child is more likely to develop the growth mindset too
  - Children will be more positive about their own learning
- Parents who Adopt a Growth Mindset
  - Parent believes their child’s abilities are continually developing
  - Highly value and emphasize constructive feedback and the learning process above the product or results of the tasks the child completed
- Process Praise fosters a growth mindset
  - Praise for effort and actions (i.e. “look at the effort you put into your studies”)
  - Focuses on the learning process and not the outcome
Click on the plant picture to show “Carol Dweck: The Effect of Praise on Mindsets”. This video explains the importance of using process praise.

Slide 9 (Mental Health and Well-Being)

- Students with a growth mindset use setbacks as motivation in the learning process to learn from their mistakes.
- Students with a growth mindset understand learning can be a challenging process and people can develop at different paces.
- Believing knowledge and emotions are developed, learned, and can change is linked with students having a greater well-being and fewer depressive symptoms.

With a Growth Mindset Stress Can:
- Develops mental toughness
- Students are able to set priorities
- Enhances productivity
- Uses stress to enhance learning (succeeds under pressure)
- Students have a strong desire for constructive feedback

Slide 10 (Quick Activity)

For this slide, there are a few fixed mindset quotes being presented. Ask parents/guardians to discuss in groups how to turn the quotes into growth mindset phrases. Give parents 5 minutes to process, plan, and discuss ideas. Take about 5 minutes to share as a group the variety of responses before showing some of the suggested solutions.

Slide 11 (Quick Activity Continued)

For this slide, there are a few suggested solutions to the activity. These growth mindset quotes are only suggested, because parents/guardians in your workshop will probably think of many others.

Slide 12 (Additional Resources)

This slide includes a variety of additional resources available for parents/guardians.
Slide 13 (Document and Website)

This slide explains where to get the resource – let parents write down the website. If you do not have hard copies of the resource for the parents/guardians, please ensure you have printed off the piece of paper with the website to go to so parents/guardians can download the document.

Slide 14 (Thank you for coming)

Take this time to ask if there are any questions you can answer. Return parents/guardians to meet up their child, and thank them for coming to the workshop. This would be a perfect time to handout hard copies of the new resource Parent Engagement: A Resource to Foster and Support Growth Mindset in Students.
Fostering and Supporting Growth Mindset in Students

Facilitator Name

Goals of the Evening

By the end of the workshop we will understand:

• What is a growth mindset.
• The affects growth mindset has on learning.
• What parents/guardians can do for children at home to help develop an environment that encourages growth mindset.
• The positive impact growth mindset can have on students.
• The characteristics a person displays when they embrace the growth mindset.

What is a Mindset?

• Guides the actions and responses of individuals while influencing a person’s judgements and behaviour
• Can be interchanged as people have the ability to adopt different mindsets

What is a Growth Mindset

Fixed Mindset:

• Born with fixed intelligence and abilities
• Easily given up when faced with challenges and on tasks too difficult
• Ignores feedback
• Achieves less than their full potential

Growth Mindset

• Intelligence is developed and learned through effort
• Embraces challenges and is motivated to overcome
• Sees feedback as a chance to improve their learning
• Achieves higher level of success

Growth Mindset and Learning

Learn when synapses fire off inside our brains to make new connections

Mistakes and repetition need to be made for the creation of new pathways and connections

Students who adopt a growth mindset tend to achieve higher test scores and embrace learning

Focusing on improvement assists students in adopting a growth mindset
Growth Mindset and Mathematics

- Growth mindset will help students alleviate math anxiety.
- Focusing on real math will allow students to appreciate the learning process instead of "right" or "wrong" answers.
- Tasks need to be open-ended to allow for possible solutions. Learners must use effort without fear of mistakes.

Click the image to listen to Dan Finkel discuss Math learning.

Adopting a Growth Mindset at Home

- When parents/guardians model growth mindsets, a child is more likely to develop the growth mindset, too.
- Parents with a growth mindset believe their child's abilities are continuously developing and highly values constructive feedback and the learning process above the product or results of the tasks the child completed.
- Uses process praise

Click the image to watch the effects of Process Praise.

Mental Health and Well-Being

Students with a growth mindset:
- use setbacks as motivation in the learning process to learn from their mistakes.
- understand learning can be a challenging process and people can develop at different paces.
- develop mental toughness.
- have a strong desire for constructive feedback.

Therefore:
- Believing knowledge and emotions are developed, learned, and can change is linked with students having a greater well-being and fewer depressive symptoms as their self-confidence and self-esteem increases.

Group Activity

- "I can't make this any better."
- "I can't believe I made a mistake."
- "This is good enough."
- "This is too hard."
- "I will never be as good as ______ at this."
- "I give up."
- "That is not working."
- "My friends can do that and I can't."
- "I just can't do."
- "You are smart."

Additional Resources

- Click the image to learn more about Queens University Community Outreach Centre.
- Click the image to learn more about Council of Directors of Education.
- Click the image to learn more about YouCubed.org.

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If you need a hard copy of the document please let me know after the presentation.

https://sites.google.com/site/fostergrowthmindset/

Thank you!
Dear Parents/Guardians,

We would like to extend an invitation for you to join us on _________________ at __________ for a workshop for parents and guardians on growth mindset. The purpose of this workshop is to provide you with important information, effective strategies that can be used at home, and valuable resources to help foster and support growth mindset in your child.

In this workshop you will learn about:

- what growth mindset is
- the affects having a growth mindset has on learning
- the positive impact growth mindset can have on students
- the characteristics a person displays when they embrace the growth mindset
- what parents/guardians can do for children at home to help develop an environment that encourages growth mindset

We are excited to host this opportunity and look forward to having you join us in great conversation, as we will learn together. At the end of the workshop, parents/guardians will go home with their own copy of the new resource *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students*.

Yours in Education,

Workshop Facilitator
Dear Parents/Guardians,

If you require a hard copy of the resource document *Parent Engagement: A Resource to Foster and Support Growth Mindset in Students*, please list your name and contact information to ensure you receive a hard copy.

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Fostering and Supporting Growth Mindset in Students: A Workshop for Parents and Guardians

What is Growth Mindset?

How does Growth Mindset affect student learning?

“"It may take several different plans and attempts to solve this.”

Please join us on: _____________________________

Location: __________________________________