

The Impact of Teaching Students about Growth Mindset on Building Resiliency

By Kacie Osik

Submitted in Partial Fulfillment of the Requirements for the
Degree of Master of Education

May 2019

Graduate Programs in Education

Goucher College

Table of Contents

List of Tables	i
Abstract	ii
I. Introduction	1
Statement of Problem	2
Hypothesis	2
Operational Definitions	2
II. Review of the Literature	4
Types of Childhood Trauma	4
Adverse Childhood Experiences (ACEs)	4
Impacts of Trauma at School	5
Symptoms of Trauma	5
The Brain and Trauma	6
Overview and Definition of Resilience	7
Strategies to Foster Resilience in School	8
Classroom Climate	8
Instructional Strategies	9
Strategies to Foster Resilience	9
Teacher Support: Self Care and Care for Students	10
Building Powerful Relationships	10
Powerful Relationships in Home and Family	10
Powerful Relationships within the Community	11
Conclusion	11

III. Methods	13
Design	13
Participants	13
Instrument	14
Procedure	15
IV. Results	19
Descriptive Statistics	19
Comparison of pre- and post-intervention scores	20
V. Discussion	22
Implications of Results	22
Theoretical Consequences	23
Threats to Validity	24
Connections to Previous Studies and Existing Literature	24
Implications for Future Research	25
Conclusion	26
References	28
Appendix A	31
Appendix B	32

List of Tables

1. Descriptive Statistics Summarizing Area and Total Survey Scores	20
2. Results of <i>t</i> -Test Comparing Pre- and Post-Intervention Survey Total Scores	21

Abstract

The purpose of this action research study was to identify whether teaching growth mindset lessons would aid students in building resiliency and result in increases in student willingness to participate in class. Previous research suggests that students who have lived through adverse childhood experiences are capable of and benefit from building resiliency, and this increased resiliency has a positive effect on their academic achievement. This study used a quasi-experimental one group pretest-posttest design. The null hypothesis tested whether survey responses reflecting growth mindset would be the same before and after students participated in growth mindset lessons. This null hypothesis was retained, as the mean difference between the groups' total pre- and post-intervention survey scores of 8.333 points yielded a t value of 2.094 with a significance value of $p < .090$. Results suggest that students made some gains in terms of the areas assessed, but these gains were not large enough to meet criteria for statistical significance. Further research that is designed to clarify the relationships between teaching growth mindset lessons and resiliency and students' willingness to participate in class, as well as increase student increase their academic achievement, is recommended.

CHAPTER I

INTRODUCTION

Overview

Students who are at-risk or who have lived through adverse childhood experiences often are affected academically in a negative manner. They may have lived or are living through traumatic experiences such as death of a parent, parental divorce, or incarceration of a family member. Johnson (2008) states that “According to several key researchers of ‘resilience,’ it is defined as: ‘the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances’” (p. 386). Opportunities to build resilience may have a positive effect on such students’ willingness to participate in school, thus enhancing their academic and social progress.

The researcher proposed to incorporate an approach emphasizing growth mindset within her classroom to help her students build resiliency. She felt that a focus on growth mindset could encourage students to embrace opportunities to make progress or grow rather than remain stagnant or regress in reaction to challenges they may face at home or school. A growth mindset approach has been considered generally helpful for all students, but particularly beneficial for traumatized children who are "at risk" because their brains become less plastic or less likely to face new experiences in an unguarded and positive way (Brendtro & Longhurst, 2005). The researcher hoped that teaching students about the importance of flexibility and the capacity for growth would help students build their confidence and make positive strides academically and personally.

The researcher is a special education teacher in a second-grade classroom in a public elementary school. She became interested in learning more about assisting her students to

develop a growth mindset as she observed their lack of preparedness, belief in themselves, and willingness to participate in class. She was concerned that if this cycle continued, her students would continue to fall further behind academically which would discourage them from taking risks and participating in school. The researcher advocates for students' independence and self-worth and consequently had a strong desire to learn about and apply interventions to help her students build resilience, become more willing to participate in school, and create a positive future for themselves.

Statement of Problem

The purpose of this study was to determine whether teaching growth mindset lessons would help at-risk students or students who have lived through adverse childhood experiences demonstrate greater resiliency and willingness to participate in class.

Hypothesis

The null hypothesis tested was that survey responses reflecting growth mindset would be the same before and after students participated in growth mindset lessons.

ho: mean pre-intervention growth mindset orientation (CRS total scores) = mean post-intervention growth mindset orientation (CRS total scores)

Operational Definitions

The independent variable in this study was the implementation of growth mindset lessons to help students understand that with hard work and a willingness to persevere, they are more likely to make academic progress. According to Snipes, Tran, L., Regional Educational Laboratory West (ED), National Center for Education Evaluation and Regional Assistance (ED), WestEd, and Clark County School District (2017), growth mindset is defined as “the belief that

academic ability or intelligence is not fixed but can be changed and enhanced over time through one's own effort" (p. 1).

The dependent variable in this study was the students' resilience and willingness to participate in class. According to Brendtro and Longhurst (2005), resilience can be simply and operationally defined as "The ability to thrive in spite of risk or adversity" (p. 52). Willingness to participate can be operationally defined as being observed to put forth effort to complete work in class.

These two variables were assessed using a survey which was created by the researcher. A copy of the survey is found in Appendix B.

CHAPTER II

REVIEW OF THE LITERATURE

This review of literature discusses resilience and its effect on at-risk students. Section one discusses different types of childhood trauma, the symptoms of trauma, and the impacts of trauma at school and on a child's brain. Section two includes an overview and definition of resilience. Section three discusses strategies to foster resilience among students in the school setting. Section four discusses the influence that building powerful relationships within families and the community can have in helping students build resiliency.

Types of Childhood Trauma

Adverse Childhood Experiences (ACEs)

Children currently are coming to school with many different backgrounds and exposure to challenges such as death, divorce, abuse, neglect, substance abuse, and parental incarceration that threaten their ability to learn and grow. Parents, family members, and society as a whole often are exposing children to many traumatic events even at very young ages. These exposures often have lasting effects on children which may affect them in all aspects of their lives.

According to Blodgett and Lanigan (2018), these events, referred to as Adverse Childhood Experiences (ACEs), "may include child maltreatment (e.g., verbal, physical, or sexual abuse), family stress or dysfunction (e.g., a family member that is mentally or physically ill, incarcerated or substance abusing; the absence or loss of a parent because of death, divorce, or separation; domestic violence), community violence, and natural disasters" (p. 137).

According to Bell, Limberg, and Robinson (2013), it is important that teachers recognize and understand these ACEs because educators are in an ideal position to observe any changes in their students and help meet their needs.

Impacts of Trauma at School

When their needs are unmet, students will not be physically or emotionally ready to learn to their fullest potential. According to Bell et al. (2013), research has suggested that children who have been exposed to trauma exhibit weaknesses in their executive functioning. For example, executive functioning characteristics such as processing speed and working memory are affected. If students' executive functioning is challenged, their academic achievement likely will be affected negatively and may result in increased dropout rates. Bell et al. advise that students who lack confidence in their academic abilities due to exposure to trauma may then experience long-term emotional distress. They may have lower self-esteem and potential loss of coping mechanisms. When students experience lowered self-esteem, they may be at greater risk to abuse drugs and alcohol and even become victims of suicide as they get older.

Blodgett and Lanigan (2018) report that students who experience more adverse childhood experiences have a greater risk of repeating a grade, having high rates of absenteeism, and are less likely to participate in class. This study also indicated that all these ACEs negatively affected students' reading ability, thus leading to academic struggles and possible life challenges.

Symptoms of Trauma

It is important for teachers to understand the symptoms of trauma. Symptoms can be categorized as physical, behavioral, emotional, and/or cognitive. According to Bell et al. (2013), physical symptoms may be manifested as headaches, stomachaches, or a child acting exceedingly alert and over-reacting to certain situations. Other physical symptoms that may not be as noticeable at school are nightmares, change in weight, and sleeping disorders. Behavioral symptoms may be most noticeable to teachers due to the extended amount of time the teachers are with their students. Those symptoms may include students isolating themselves from their

peers and avoiding interactions with others, talking more or less than usual, or partaking in risk-taking behaviors. Students experiencing trauma also may demonstrate increased outward aggression towards objects or people. Emotional symptoms may include students' inability to regulate their emotions, becoming angry easily, and/or becoming depressed. Students may not trust other adults and lack confidence within themselves. Expression of these emotions may differ from child to child and children may express more than one of these emotions at a time. The final category of symptoms of trauma includes cognitive symptoms. These symptoms may include a lack of attention in school, negative attitudes about others and their own lives, and flashbacks of the trauma that has occurred. Bell et al. explain that while these symptoms may not be prevalent immediately, they may have more long-lasting effects.

The Brain and Trauma

According to Brendtro and Longhurst (2005), children's brains are affected by trauma, and they state that most behavioral and emotional struggles stem from trauma. These researchers maintain that if a child has been exposed to a traumatic event caused by another human or adult, this experience could lead to lack of trust as a coping mechanism because one of the brain's roles is to protect itself from danger. Brendro and Longhurst describe the brain as going into "defense mode" (p. 57) when exposed to a situation similar to a trauma one has experienced in a previous situation. They explain that children's reactions may include a heightened level of panic or fear because they are unsure if the outcome will be the same during the current traumatic event.

Traumatized children are 'at risk' because their brains become less plastic—less likely to face new experiences in an unguarded and positive way. A child who is chronically maltreated may live in a persistent state of low to high levels of alarm and may respond

to these feelings through aggression (fight), withdrawal (flight), or strategies to numb or block out the pain (freeze). (p. 57)

Children who have experienced trauma may have a happy and healthy future, but trauma affects their ability to live their life to the fullest. Also, they have not had the positive exposures to allow their brain to develop self-control mechanisms. For example, they may not have the ability to verbalize their frustrations rather than shutting down or having a tantrum. If children have an underdeveloped sense of self-control and generally are functioning in a heightened state of consciousness or anxiety, they will not be able to function properly in a classroom setting or perform as well as they might do otherwise.

Overview and Definition of Resilience

In addition to being aware of ACEs and how they affect children, it is important that educators begin to understand how to help students cope and build brighter futures for themselves. One way to accomplish this desirable outcome is through teaching resilience.

Johnson (2008) states that:

According to several key researchers of ‘resilience’, it is defined as: ‘the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances’; ‘the positive pole of the ubiquitous phenomenon of individual difference in people’s responses to stress and adversity’; ‘the inherent and nurtured capacity of individuals to deal with life stressors in ways that enable them to lead healthy and fulfilling lives’; and ‘a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development.’

(p. 386)

Brendtro and Longhurst (2005), state that “Resilience is the ability to thrive in spite of risk or adversity” (p. 52). A student’s ability to become resilient requires two important factors: the individual’s willingness and internal ability to do so and the society’s external supporting factors. According to Johnson (2008), a child will most successfully build resiliency if both factors are present.

Kitano and Lewis (2005) explain that children demonstrate their initial ability to build resiliency at an early age. Although they may not yet have been exposed to trauma, they exhibit initial characteristics that foreshadow their ability to become resilient such as a relatively calm temperament, or the ability to ask for help when needed. Children are not able to control their exposure to the world around them, but given the appropriate tools, they will be able to build resiliency that will enable them to overcome their challenges and help them to lead a successful life.

Strategies to Foster Resilience in School

Classroom Climate

An important way to begin to help students build resiliency is through creation of a safe and welcoming classroom environment. According to Downey (2008), students are most successful within the classroom when the classroom expectations are defined and clear, students are held accountable for their actions and are told that they are responsible for their learning/success, are provided a safe and caring classroom, and are offered the chance to have meaningful participation within the class. When the expectations are defined and clear, the students are able to develop a sense of security because they know what is expected of them and their peers. If students are made aware that they are responsible for their learning, they begin to acquire a sense of pride and interest in their learning because they know that they are given the

opportunity to create their success. As a safe and caring classroom is created, students will be more willing to take risks and feel comfortable doing so. Finally, as students are given the opportunity to participate in class, the curriculum will come more easily because it is meaningful to them.

According to Stoiber and Gettinger (2011), positive behavior support systems are key to helping create a welcoming and supportive environment for students. First, teachers need to understand the function of the behaviors which the students exhibit, or what may trigger the behaviors in order to implement positive behavior supports. If teachers are aware of what triggers their students' reactions, they can work towards rewarding positive behaviors and trying to prevent the unwanted behaviors from occurring.

Instructional Strategies

Because teachers spend a significant amount of time with their students, they have an important opportunity to teach their students different strategies to help build resiliency. According to Downey (2008), there are two instructional strategies which they have found especially effective in helping students build a level of resiliency that leads to academic success. Those strategies are cooperative learning projects and cross-age tutoring. The greatest benefits from both of these strategies are the students' abilities to work with other children and to support one another. Students' participation in hands-on learning, creating solutions in problem-based learning, and sharing their ideas with others can help build resiliency.

Strategies to Foster Resilience

As stated above, adverse childhood experiences affect children negatively, so it is necessary for teachers to implement strategies that will enable students to deal with everyday stressors more successfully. One strategy is for teachers to help students learn how to express

themselves verbally. If children are taught how to express their thoughts and fears through words, they are less likely to act out behaviorally. Another strategy that has had positive results is to teach young children coping skills through play. For example, teachers can show children how to blow bubbles, breathe deeply, color pictures, and use puppets to tell stories about safety and to role play as a means of reaching them without emphasizing the negative behaviors (Berson & Baggerly, 2009).

Teacher Support: Self Care and Care for Students

Berson and Baggerly (2009) advise that although teachers strive to support and encourage their students, teachers themselves need to engage in self-care so they are able to offer effective guidance for their students, especially those students who have lived through trauma. Teacher self-care strategies might include talking with a friend, writing in a journal, seeking advice from a co-worker, or accessing outside help to ensure they are prepared to support their students.

Martinez (2016) recommends three strategies that teachers can implement within the classroom to benefit students' social and emotional growth. Those strategies are direct instruction related to the targeted skill, integrating instruction on the targeted skill with what is being taught academically, and using the targeted skills within their teaching. It is important that teachers not only offer support by teaching skills and strategies directly, but also by applying them throughout the day and in different situations. Students will have a greater chance of building resiliency if they are offered opportunities to apply the skills and strategies that they are learning in everyday practice within a place that they feel comfortable.

Building Powerful Relationships

Powerful Relationships in Home and Family

Although children may not be given the opportunity to build strong relationships with their parents, at-risk children often are most resilient when they are given the opportunity to build a strong bond or relationship with someone to whom they are related. That “someone” may be a sibling, aunt or uncle, or grandparent. When strong relationships are built with an adult, children frequently are held to a high standard and work harder in all aspects in their life. Children with strong relationships seem to have a greater sense of a protection from negative factors in their environment (McMillan & Reed, 1994). According to Patterson and Kirkland (2007), if an adult is involved and participates in the child’s life in a meaningful way, the child subsequently is given the opportunity to engage and become involved in something that they care about and want to do because he or she feels supported. It is meaningful to know that even one adult can help make a difference in a child’s life.

Powerful Relationships within the Community

In addition to strong connections within the home and family, it also is beneficial to build strong relationships within the community. Teachers can act as a liaison between and among students and their families and the community and can connect students and families with culturally appropriate resources and supports (Berson & Baggerly, 2009).

Conclusion

According to Souers and Hall (2016), the adults in students’ lives need to be “safe enough and healthy enough” (p. 96) to help meet the needs of students at home. In order to be safe enough, teachers need to provide consistency, positivity, and integrity. If adults in the students’ lives continue to support students’ development of resiliency, such support contributes to creating a healthy environment. Students are capable of building resiliency after experiencing

adverse childhood experiences, but it is necessary for adults at school and at home to support these students so that they have the opportunity to grow and achieve their greatest potential.

CHAPTER III

METHODS

The purpose of this study was to determine whether teaching growth mindset strategies would improve resilience and willingness to participate in school among grade two students in a public elementary school.

Design

This study was developed using a quasi-experimental one group pretest-posttest design. A single group of six second grade students participated in the intervention. Convenience sampling was used based on the researcher's knowledge that there were at-risk students who did not participate within her classroom and her access to participants who were permitted to, and willing to, participate in the intervention. A pre- and post-intervention survey was given to measure the dependent variables: students' resilience and willing to participate in class before and after the growth mindset lessons. The independent variable was the implementation of four weekly growth mindset lessons for all six students in the study. Lesson objectives were reinforced within the participants' classroom throughout the four weeks of the intervention.

Participants

Six students from a second-grade classroom in a public elementary school in a suburban county in Maryland participated in the study. Convenience and purposive sampling were used because the students were chosen from the second-grade class in which the researcher worked daily. These students were selected because they were considered to be at-risk in terms of possibly experiencing adverse childhood experiences and had been observed by the researcher and the classroom teacher, who were co-teachers of the participants, as refusing to participate in class and complete their assigned work. Some students were observed to demonstrate defiant

behaviors and some were passive during classroom instruction. The students in the group possessed a range of academic abilities, from below to above grade level. Three of the six students received special education services. Five of the six students were Caucasian, and one was of mixed races. Three of the students were female, and three were male.

Instrument

A 16-item survey with Likert scale-type items was created by the researcher to assess and learn about each participant's perspective of his or her ability to be resilient and participate within the classroom. Items were developed to reflect the observed needs of the students and information gleaned from the researcher's review of related literature about growth mindset and resilience. There were four sections on the survey, with four questions regarding each topic addressed in each section. The sections included being prepared, working in the group, getting feedback, and improving my learning. The survey contained items to which students replied with ratings from one to five, with five being the highest rating and responses ranging from never (one) to always (five). Total scores were computed by summing the ratings for items 1-16, and topic scores were computed by summing the ratings for the four items regarding each topic. The researcher added pictures, word descriptors, and numbers associated with each level of rating to ensure that the students fully understood their response options and were able to answer each item accurately. In order to avoid confusion and off-task behaviors during survey completion, the researcher read the survey aloud to the group. The students were asked to wait to go onto the next question until all students were finished replying to each item before the next item was read aloud again. Since this survey was created by the researcher, there were no reliability and validity data reports available. A copy of the survey is located in Appendix B.

Procedure

Before the intervention began, students joined the researcher in the researchers' classroom for administration of the pre-survey. Students were asked to sit around the room and were reassured the survey was not a test and that their responses would be kept confidential. Students did not use full names on the surveys to preserve confidentiality. The researcher then read the survey aloud, one item at a time, and provided time for each student to think about the question and then circle his or her answer. That process was then repeated until the student participants completed the survey. The researcher examined and recorded the survey response data to help her understand how each student felt about their willingness to be resilient and complete work in the classroom. After the pre-survey was given and the information was reviewed, the students joined the researcher once a week to take part in a lesson using direct instruction to teach them about and enhance their growth mindsets. The lessons offered consistency in that the students were learning strategies to help them build resiliency each week, and the lessons also allowed multiple means of participation. The researcher used the concerns noted in the survey as she designed the lessons.

During the first week of the study, a lesson was taught about the importance of being prepared for class physically, i.e., with materials, but also mentally. The researcher read *Bubble Gum Brain* written by Julia Cook (2017), a book that emphasizes “the power of yet,” meaning that although the students may not be able to do something currently, it does not mean that they are not capable of doing so. There were two main characters in the book. One character was a gum brain that was willing to take chances and make mistakes, while the other character was a brick brain who does not like change and is not willing to try things for fear of making mistakes. The researcher then led a discussion with the group about how being willing to use a “bubble

gum brain” would help them be prepared for the school day. Each student then made a visual which included the materials they would need for class. They took their visuals to their desks to help them remember how to prepare each day so that they would not feel overwhelmed and discouraged from the beginning of the day. That visual included the following “preparation steps”: sharpen three pencils, have a list of materials, ask for help if I cannot find materials or a necessary page, and have a “bubble gum brain”.

The second week’s lesson was about the importance of being able to work in a group. The researcher read *Horton Hears a Who* written by Dr. Seuss (1954), which is a book about Horton the Elephant who heard a cry from a speck of dust and tried to defend and protect it. The researcher then discussed how Horton proved that no matter how small or quiet a person can be, the person’s input matters. The group created talking chips to use the next time that they worked in a group to be certain that everyone had the opportunity to talk or participate. The researcher then gave the group a task that all members of the group needed to complete together so that they were able to practice using the talking chips.

The third week’s lesson was about how to accept feedback or constructive criticism. The researcher read the book *Thanks for the Feedback, I Think* written by Julia Cook (2013) which was about a character named RJ who had to learn how to accept positive and negative feedback. The researcher then discussed how it is acceptable to make mistakes and that getting negative feedback does not mean that they are incapable of improving or that they should feel discouraged. The group watched clips from an episode of *Kids Baking Championship* aired by Discovery Inc. in February 2018, and discussed both how the judges offered feedback and how the children received the feedback.

The fourth week's lesson focused on how the students could improve their learning going forward. The researcher read *After the Fall* written by Dan Santat (2017) to the group. This is a story written to encourage children to persist when things are difficult. After reading the book, the researcher discussed how the character did not give up and realized it was important and worthwhile to keep trying and never give up. Each student individually identified something that he or she thought was difficult and set goals to make improvements. The students then talked with one another about what they could do to work towards their goal and encourage one another. Finally, students completed an activity called "Three Stars and a Wish."

To complete the activity described above, students were given three paper stars and were asked to describe an activity about which they were proud or felt successful about completing it. They were then given a paper cut-out eagle to use as a visual reminder to use their bubblegum brain and work hard to accomplish their goal. The eagle was the school mascot and students were told it represented a symbolic wish or goal. Each student concluded the activity by writing their accomplishment on their eagle and hanging it on a bulletin board to be displayed so they could be recognized for their perseverance towards a goal at school. The display was posted for the entire month.

Although the lessons were taught only once each week, the researcher daily reinforced for the entire group the skills and behaviors introduced in the lessons. Positive reinforcement and verbal/visual reminders were used as encouragement.

At the end of the four-week intervention, the six participating students were re-administered the same survey in the same manner that they had taken it before the intervention, a copy of which is located in Appendix B. Once the post-intervention survey was completed, the

results were recorded and compared to those of the pre-survey to determine whether students expressed more willingness to be resilient and participate in school after the intervention.

CHAPTER IV

RESULTS

The purpose of this study was to determine whether teaching growth mindset strategies would improve resilience and willingness to participate in school among Grade 2 students in a public elementary school.

Descriptive Statistics

Descriptive statistics which reflected participants' being prepared, working in the group, getting feedback, and improving their learning and their overall total score were computed for both administrations of the Classroom Resilience Survey (CRS) and follow in Table 1. (As noted previously, a copy of the CRS is found in Appendix B.) These statistics indicated that the mean total scores increased from 60.50 before the intervention (growth mindset lessons) to 68.83 after the lessons were implemented and that the participants' mean ratings on each section increased after the intervention.

Table 1

Descriptive Statistics Summarizing Area and Total Survey Scores

Scale	Survey	Mean	Standard Deviation	Range
Section 1 Being prepared	Pre	16	1.79	14-19
	Post	17.33	1.86	15-20
Section 2 Working in the group	Pre	14	3.29	10-19
	Post	15.50	3.27	11-20
Section 3 Getting feedback	Pre	15	4.29	8-19
	Post	18	2.10	15-20
Section 4 Improving my learning	Pre	15.5	3.78	10-20
	Post	18	2.10	15-20
TOTAL SCORE	Pre	60.50	11.79	46-74
	Post	68.83	8.23	60-80

Comparison of Pre- and Post-intervention Scores

A paired samples *t*-test was computed using SPSS to determine whether the mean differences in the six students' pre- and post-intervention total scores on the Classroom Resilience Survey were statistically significant or different from zero. As is seen in Table 2, the mean difference between the groups' total pre- and post-intervention scores of 8.333 yielded a *t* value of 2.094 with a significance value of $p < .090$. Since this difference was not large enough to meet criteria for statistical significance at the .05 level, the null hypothesis that the pre- and post-intervention CRS scores would not differ significantly was retained.

Table 2

Results of t-Test Comparing Pre- and Post-Intervention Survey Total Scores

Score	Mean Difference	t	df	Sig. (2-tailed) (p)	Std. Error Mean	95% Confidence Interval of the Difference	
						Lower	Upper
CRS TOTAL SCORE	8.3333	2.094	5	.090	3.981	-1.899	18.566

CHAPTER V

DISCUSSION

The purpose of this study was to examine whether teaching growth mindset lessons would improve at-risk elementary school students' ability to build resiliency and willingness to participate in class. A survey assessing skills related to class participation was administered before and after the intervention. The null hypothesis stated that overall survey responses reflecting growth mindset would be the same before and after students participated in a series of growth mindset lessons. While the results of this study did not indicate the null hypothesis could be rejected with confidence, positive changes were noted in the dependent variable throughout the study and observations made by the researcher suggested the intervention might be helpful; therefore, the topic warrants further study.

Implications of Results

Results of the study suggested implementation of growth mindset lessons did have a positive, albeit statistically insignificant impact on second grade students' survey responses reflecting their ability to build resiliency. While the scores on the Classroom Resilience Survey (CRS) did not improve in a statistically significant manner, the results and anecdotal observations did indicate that students felt more confident and more willing to participate in class following the intervention. After making their checklist, five out of six students regularly had referenced it to be more prepared for their day and to be more willing to ask for help, if needed. This response implies that the students found the intervention beneficial, even over a short implementation time. It also was observed that the students in the treatment group were more willing to accept feedback and recognize their mistakes to help make progress going forward. Some students who typically would "shut down" by turning around in their chair or putting their

head down on their desk were asking for help to make changes in areas where they made their mistakes. In addition to these observations, the mean responses on each area of the survey did increase over the study interval. Section one, being prepared, pre-survey had a mean of 16 and the post survey had a mean of 17.33. Section two, working in the group, had a mean of 14 on the pre-survey and a mean score of 15.50 on the post-survey. Section three, getting feedback, had a pre-survey mean score of 15 and a post-survey mean of 18. Section four, improving my learning, had a pre-survey mean of 15.5 and a post survey score of 18. Mean responses on each area of the survey did increase over the study interval. Therefore, the intervention may have made an impact, albeit small, in this short time.

Theoretical Consequences

Although the results of this study did not conclusively indicate that second-grade students benefit from being taught growth mindset lessons in order to build resiliency, there were positive impacts noted. For example, four out of six students felt more prepared for class after the first lesson taught by choosing a higher score on their post-survey. Another example of a positive effect of the lessons is that four out of six students felt more willing to improve their learning. They began to recognize the power of “yet.”

Teaching growth mindset strategies is not always a priority in schools when compared to academic objectives. Findings of Snipes et al. (2017) reflecting a connection between growth mindset and student achievement along with findings from this study provide evidence that teaching students lessons about growth mindset may indeed improve resilience, which in turn, could increase their willingness to participate within the classroom and master academic goals. The results of this study suggest there may be a connection between these constructs that

warrants further study so effective applications to teaching can be developed to help students become resilient learners.

Threats to Validity

There were several threats to validity related to this study that merit consideration. The first threat is that a very small sample size was used. Only six students from a second-grade class in a school in a suburban county in Maryland participated in the study. Another threat to validity was the length of the survey. There were only four questions each in four sections of the 16-item survey used in the study. A third threat to validity was the brevity of the intervention which was implemented for only four weeks. A fourth threat was the students' understanding of the rating scale. There were five response options for each question and some of the students seemed overwhelmed by having so many options. A fifth threat was students' potentially inflated sense of self, meaning their ratings and perceptions of their behaviors may not accurately reflect reality. For example, one student checked all fives on the post survey, but she daily demonstrates her struggle to communicate verbally and participate in class discussions. A sixth threat was the students' willingness to complete the survey and the day or time the survey was administered. Students may have been affected by external factors such as competing demands of more attractive activities, lack of sleep, or not eating a full meal. For example, during the second session, one of the students constantly commented about how hungry she was. She struggled to pay attention to the lesson and participate successfully in the group discussion.

Connections to Previous Studies and Existing Literature

A previously completed study by Blodgett and Lanigan (2018) concluded that students who have lived through adverse childhood experiences are more likely to struggle academically in school. In the same study, the researchers noted that teaching students strategies to build

resiliency offered them the opportunity to become more successful academically, which positively impacted their future academic trajectory. This information encouraged the current researcher to incorporate growth mindset lessons within the students' school day.

The current study relates to multiple previous studies that have sought to understand how growth mindset has enabled students to learn strategies to build resiliency and become more willing to participate academically. As noted previously, Snipes et al.'s (2017) study explained how growth mindset interventions and techniques that were implemented even during a short period of time had the possibility for offering positive long-term effects which this researcher hoped to impart to her students.

A second study completed by Snipes et al. (2017) suggested that meeting with at-risk students at least once a week and teaching them about their flexible brain increased their participation in class as well as their academic progress. This study encouraged the current researcher to implement a similar intervention. She met with study participants once each week and talked with them about growth mindset in terms the students could understand. Her intention was to help the students understand their academic potential and develop habits conducive to learning.

Understanding adverse childhood experiences, resilience, and growth mindset enabled the current researcher to introduce information and practices to her students to meet their needs more effectively and help them understand how their brain works and can grow. As stated above, the intention of the literature review and this study was to develop ways to increase students' resilience and their willingness to participate within the classroom.

Implications for Future Research

Although this study did not indicate that the intervention resulted in a statistically significant impact on students' willingness to participate in class or demonstrate resiliency, there was evidence that the lessons offered within the intervention did affect survey responses in a positive manner. Additionally, there was evidence that the lessons may have affected the students' beliefs related to resilience and growth mindset as all survey means did increase. These results suggest that future research regarding the effect of continued implementation of this and similar interventions and growth mindset lessons likely would be beneficial. Also, a larger sample size should be considered for future research so that findings might be applied to more diverse populations and increase the probability of finding meaningful changes. It is also possible that a longer intervention period would be helpful to more fully instill concepts about growth mindset and help students learn and practice the identified strategies to build resiliency so the strategies become habits. Finally, further research should be conducted to expand these practices to other grade levels to determine the most effective ways to improve resilience and school participation for students of varied ages and developmental levels.

Conclusion

This study was created to determine whether the implementation of growth mindset lessons would have a positive impact on students' ability to build resiliency and willingness to participate in class. Although the null hypothesis could not confidently be rejected, there was positive growth shown on the CRS over the course of the four-week long intervention despite its brevity. The results suggest that even a short intervention regarding growth mindset yielded some positive results. At the conclusion of the intervention, all students were requesting more time to work within the intervention because they felt as though they were making positive gains and were benefiting from the lessons taught and the support provided.

The results of this action research study suggest that teaching growth mindset to at-risk students who have lived through adverse childhood experiences has potential to benefit students' attitudes and habits about being prepared, working within a group, getting feedback, and improving their learning. These more positive attitudes and habits likely will help build students' resiliency and improve their willingness to participate in class. Increased class participation may result in improved academic achievement. With ever-increasing curricular and academic demands, the high prevalence of children being 'at risk,' and the possibility that these skills, attitudes, and habits potentially can benefit students throughout their academic careers, the types of interventions discussed in this paper warrant further and controlled investigation.

References

- Bell, H., Limberg, D., & Robinson, Edward, III (2013). Recognizing trauma in the classroom: A practical guide for educators. *Childhood Education*, 89(3), 139-145.
doi:10.1080/00094056.2013.792629
- Berson, I. R., & Baggerly, J. (2009). Building resilience to trauma: Creating a safe and supportive early childhood classroom. *Childhood Education*, 85(6).
doi:10.1080/00094056.2009.10521404
- Blodgett, C., & Lanigan, J. D. (2018). The association between adverse childhood experience (ACE) and school success in elementary school children. *School Psychology Quarterly*, 33(1), 137-146. doi:10.1037/spq0000256
- Brendtro, L. K., & Longhurst, J. E. (2005). The resilient brain. *Reclaiming Children and Youth: The Journal of Strength-Based Interventions*, 14(1), 52-60. Retrieved from <http://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=17099201&S=R&D=a9h&EbscoContent=dGJyMNxb4kSeqLI4v%2BbwOLCmr1GeqK5SsKi4TK6WxWXS&ContentCustomer=dGJyMPGut1GxrbdMuePfgeyx44Dt6fIA>
- Cook, J. (2017). *Bubble Gum Brain: Ready, get mindset ... grow!* Chattanooga, TN: National Center for Youth Issues.
- Cook, J. (2013). *Thanks for the feedback ... (I think!)*. Boys Town, NE: Boys Town Press.
- Downey, J. A. (2008). Recommendations for fostering educational resilience in the classroom. *Preventing School Failure*, 53(1), 56-64. doi:10.3200/PSFL.53.1.56-64
- Discovery Inc. (Producer). (2018, February 26). Sand Castle Sweets [Television series episode]. In *Kids Baking Championship*. New York, NY. Retrieved from

<https://watch.foodnetwork.com/tv-shows/kids-baking-championship/full-episodes/sand-castle-sweets>

Johnson, B. (2008). Teacher-student relationships which promote resilience at school: A micro-level analysis of students' views. *British Journal of Guidance & Counselling*, 36(4), 385–398. doi:10.1080/03069880802364528

Kitano, M. K., & Lewis, R. B. (2005). Resilience and coping: Implications for gifted children and youth at risk. *Roeper Review*, 27(4). doi:10.1080/02783190509554319

Martinez, L. (2016). Teachers' voices on social emotional learning: Identifying the conditions that make implementation possible. *International Journal of Emotional Education*, 8(2), 6–24. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1121275.pdf>

McMillan, J. H., & Reed, D. F. (1994). At-risk students and resiliency: Factors contributing to academic success. *Clearing House*, 67(3), 137–40. doi:10.1080/00098655.1994.9956043

Patterson, J., & Kirkland, L. (2007). Sustaining resilient families for children in primary grades. *Childhood Education*, 84(1), 2-7. doi:10.1080/00094056.2007.10522960

Seuss, Dr. (1954). *Horton hears a who!* New York, NY: Random House.

Santat, D. (2017). *After the fall: How Humpty Dumpty got back up again*. New York, NY:

Roaring

Brook Press.

Snipes, J., Tran, L., Regional Educational Laboratory West (ED), National Center for Education Evaluation and Regional Assistance (ED), WestEd, & Clark County School District. (2017). *Growth Mindset, Performance Avoidance, and Academic Behaviors in Clark County School District. REL 2017-226*. 1-17. *Regional Educational Laboratory West*.

Regional Educational Laboratory West. Retrieved from

<https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4529>

Souers, K., & Hall, P. (2016). *Fostering resilient learners: Strategies for creating a trauma-sensitive classroom*. Alexandria, VA: ACSD.

Stoiber, K. C., & Gettinger, M. (2011). Functional assessment and positive support strategies for promoting resilience: Effects on teachers and high-risk children. *Psychology in the Schools*, 48(7), 686-706. doi:10.1002/pits.20587

Appendix A

2/13/2019

Dear Parents and Guardians,

My name is Kacie Osik and I am the special education teacher who works within your child’s 2nd grade classroom. I am currently working towards completing my masters degree and I am completing a study to understand ways to improve student’s willingness to participate in class and growing from academic tasks and feedback that may be challenging. I believe this would benefit your student.

I would like to ask your children to join me with a small group of peers on Tuesdays during the SSR time slot (approximately 30 minutes), for four weeks, to be taught strategies to encourage their willingness to grow academically and participate throughout the day.

The students will complete a pre-survey. After the pre-survey was given and the information was reviewed, the students will join me once a week to take part in a lesson to teach them about and enhance their growth mindset through direct instruction. The first week, a lesson would be taught about the importance of being prepared for class physically with materials, but also mentally. The second weeks lesson would be about the importance of being able to work in a group. The third weeks lesson would be about how to accept feedback or constructive criticism. The fourth weeks lesson would be about how the students can improve their learning going forward. Each lesson would be interactive and provide multiple means of participation. At the end of the four weeks, students would be asked to complete a post-survey.

Students’ names would not be shared anywhere, and participation is voluntary but would be very much appreciated! I am hopeful that participation in these lessons will be enjoyable and help your student feel comfortable and willing to participate within the classroom.

Sincerely,

Kacie Osik

Please return the bottom portion of this form by _____ and feel free to contact me with any questions at: _____

_____ My child, _____, has my permission to participate in an additional lesson one time a week with Mrs. Osik.

_____ I would prefer that my student not participate or I have questions that I would like to discuss with Mrs. Osik. Please contact me at: _____

Appendix B
Classroom Resilience Survey

Being Prepared	 Never 1	 Not Every Time 2	 Sometimes 3	 Most of the Time 4	 Always 5
1. I have all the supplies I need for class.					
2. I remember to bring all my supplies to the table.					
3. I am willing to try something new.					
4. I feel comfortable asking my teacher to help me if I don't have all my supplies.					
Working in the Group					
5. I feel comfortable saying what I think.					
6. I feel comfortable helping the people in my group.					
7. I feel like the people in my group want me to help.					
8. I feel comfortable asking for help if I don't understand.					

	 Never 1	 Not Every Time 2	 Sometimes 3	 Most of the Time 4	 Always 5
Getting Feedback					
9. I like hearing my grades from the teacher.					
10. I like to hear when I do a good job in school.					
11. I feel okay if I get an answer wrong.					
12. I don't feel embarrassed if I don't do well.					
Improving My Learning					
13. I try not to repeat mistakes.					
14. I am willing to practice to become better.					
15. I am likely to try again if I get a bad grade.					
16. I stay focused in class.					