

The Effect of Mindfulness Based Instruction on First Grade Student Engagement

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Table of Contents

List of Figures	i
Abstract	ii
I. Introduction	1
Statement of Problem	2
Hypothesis	3
Operational Definitions	3
II. Review of the Literature	4
Student Engagement Defined	4
Student Disengagement Defined	5
Benefits of Student Engagement for Teachers	5
Benefits of Student Engagement for Students	7
Movement	9
Adapting Task Characteristics	10
Positive Teacher-Student Relationships	11
Encouraging Growth Mindset	12
Mindfulness	13
Conclusion	14
III. Methods	16
Design	16
Participants	16
Instrumentation	16
Procedure	17

IV. Results	20
Figure 1	22
Figure 2	23
Figure 3	24
V. Discussion	25
Implications of Results	25
Theoretical Consequences	25
Threats to Validity	26
Connections to Previous Studies	27
Implications for Future Research	28
Conclusions	28
References	29

List of Figures

1. Figure 1: Percent Distribution on the Emotional Engagement Questions	22
2. Figure 2: Percent Distribution on the Cognitive Engagement Questions	23
3. Figure 3: Percent Distribution on the Behavioral Engagement Questions	24

Abstract

The purpose of this study was to determine the effects of mindfulness- based instruction on student engagement. This study examines the emotional, cognitive, and behavioral engagement of first graders. The study was a quasi-experimental study that utilized a pre-post survey methodology. Data partially supported the null hypothesis that the implementation of MBI (mindfulness-based instruction) would have no effect on student engagement. The surveys determined that there was no significant change in student cognitive and behavioral engagement after implementing the MBI. However, there *was* a significant change in student's emotional engagement after the implementation of the MBI. Research should continue as the sample set of data collected was impacted due to COVID-19 and the shift from at-home learning to in-school learning during the course of the research significantly impacting the validity of this research.

CHAPTER I

INTRODUCTION

Overview

Fredricks, Blumenfeld and Paris (2004), identify three dimensions to student engagement: behavioral engagement, emotional engagement, and cognitive engagement.

Students who are behaviorally engaged would typically comply with behavioral norms, such as involvement, paying attention, and attendance, and would demonstrate the absence of negative or disruptive behavior. Students who engage emotionally experience reactions such as enjoyment, interest, or a sense of belonging. Cognitively engaged students are invested in their learning, look to go beyond the requirements, and seek to produce quality work.

Student engagement is a strong predictor of school success (Marks, 2000). Engaged students are inquisitive and interested. Engaged students are more likely to perform well on standardized tests and are less likely to drop out of school. Furthermore, the conditions that lead to student engagement contribute to a safe, positive, and creative school climate and culture. Student engagement is a strong predictor of both academic achievement and student well-being and is key to student outcomes in high school and college (Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum, 2012).

Conversely, learning tends to suffer when students are bored or “disengaged.” Educators, acknowledging the relationship between student engagement and learning, have found student engagement to be an essential instructional objective for their students to thrive. It is increasingly viewed as a one of the critical factors to addressing problems such as boredom, low achievement, and high dropout rates (Frederick, et al., 2004). Disengagement is often displayed as depression, anxiety, anger, withdrawing from class or learning, cheating, not trying, or giving

up easily (Fletcher & Robinson, 2014). Knowing that student engagement is key to school success, it is important to intervene early for those who show signs of disengagement (Yazzie-Mintz & McCormick, 2012). Research shows that student engagement declines as students move from upper elementary to middle school and is at its lowest in high school. Some studies estimate up to 40 to 60 percent of youth are disengaged by the time they enter high school (Marks, 2000). Given the serious consequences of disengaged students, educators and school systems are becoming interested in gathering data on student engagement and disengagement to obtain insight into preventative measures.

Most teachers have caught the looks of wonder and excitement that exudes from a particularly intriguing lesson, project, or discussion. They have witnessed students behaviorally, emotionally, and cognitively engaged during these times. The overwhelming question for educators becomes: How do I sustain this enthusiasm and perseverance every day? One possible answer is mindfulness-based instruction. Prior mindfulness research shows promise for increasing indicators related to student engagement (Beauchemin, Hutchines, & Patterson, 2008). Not only could mindfulness-based interventions strengthen student engagement, but it may also reduce negative emotions that lead to disengagement (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

Statement of Problem

Based on the current research on the impact of student engagement, along with renewed interest around the positive impact of teaching mindful awareness in schools, this study aims to assess teaching mindful awareness skills to first grade students and its relationship to student

engagement. Specifically, the primary research question under investigation in this study was: To what extent does teaching mindful awareness skills to first grade students predict a positive change in student engagement?

Hypothesis

The null hypothesis for the study is that the implementation of Mindfulness Based Instruction (MBI) will have no effect on increasing student behavioral engagement.

Operational Definitions

The independent variable is *Mindfulness Based Instruction* (MBI). This is operationally defined as the deliberate instruction of mindfulness. Mindfulness is described as attention characterized by intentionality, focus on the present moment, and non-judgmental observance of the experience (Kabat-Zinn, Wheeler & Light, 1998). Mindfulness Based Instruction is aimed at focusing the participant on awareness of the connection between body and mind. In particular, the understanding of how the parts of our brains work (the prefrontal cortex, the amygdala, and the hippocampus), mindful seeing, listening, and calming techniques (Tang, Fan, Yang, & Foster (2012).

The dependent variable is *student engagement*. This was operationally defined as the values students exhibit in the areas of behavioral, emotional, and cognitive engagement. This will be measured using a survey that was adapted to be used with first grade students from the Quantifying School Engagement: Research Report conducted by the National Center for School Engagement (Finlay, 2006). The survey was divided into three main sections: behavioral, emotional, and cognitive engagement.

CHAPTER II

REVIEW OF THE LITERATURE

Teachers often struggle with getting students to be responsible for their own learning and engaged in lessons. Keeping students interested in school and motivating them to succeed are challenges that present themselves to even the most seasoned teachers. If students are not engaged, there is little chance that they will learn and retain what is being addressed in class. At a time when high-stakes testing is driving funding and evaluating teacher effectiveness, the interest in student engagement has become a focal point of educators.

This literature review will evaluate the importance of student engagement in first grade students and examine possible strategies to help increase student engagement. In the following review, student engagement and student disengagement will be defined, and the benefits of student engagement for teachers will be explored. The benefits of student engagement for students are discussed as well as the consequences faced by many students who are not engaged in learning. The final sections describe interventions which may increase student engagement: Movement, Task characteristics, Positive Teacher-Student Relationships, Growth Mindset Activities, and Mindfulness breaks such as meditation and yoga.

Student Engagement Defined

In recent years, much research has been conducted around student engagement and the impact it has on student learning. Conclusions are difficult as student engagement is not easily defined, as it is not an isolated process. Fredericks et al., (2004) presents the hypothesis that there are three distinct components that work together when considering student engagement: (1)

Behavioral engagement refers to on-task behavior or participation and is considered crucial for academic achievement. (2) *Emotional engagement* is related to student interests and student attitudes and values. This involves positive and negative reactions to teachers, academics, classmates, and school. (3) *Cognitive engagement* is related to a student's motivational goals and their intrinsic motivation to learn. Cognitive engagement is the willingness to exert the effort needed to master difficult skills and ideas. These components, when working together, define an engaged student.

Student Disengagement Defined

While it is important to identify the characteristics of an engaged learner, it is also critical to define the behaviors of a disengaged learner. Balfanz, Herzog, & Mac Iver (2007). define school disengagement as a combination of several factors: detachment from school, disconnecting from expectations, reducing effort and involvement in school, misbehavior, and withdrawing from a commitment to completing school. One finding correlates disengaged students to a higher dropout rate and found that two paths emerged when analyzing disengagement: one rooted in academic failure and another grounded more in behavioral reactions to the school environments such as misbehavior in school or aversion to attending school. Noting the dire consequences associated with disengaged students, it is critical that student engagement is a priority within educational settings.

Benefits of Student Engagement for Teachers

Schools and teachers need to support students' passions and strengths. It has become a part of the responsibility of teachers to not only teach academic content, but to teach it in a way that is enjoyable to students. To do this, educators need to use both creativity and knowledge of their students to create lessons that foster engagement. This will not only benefit students but

will also benefit teachers since engaged students are less likely to be disruptive. (Manciev, Court, and Jain, 2019) One important benefit to student engagement is more instructional time for teachers to teach content. Every educator can think of times when lessons must be taught repeatedly. This might be necessary because of difficult subject material or because the students are simply not engaged. Loss of instructional time due to disengaged students, is recognized as a challenge in educational settings by both practitioners and researchers (Baker, 2008). Engaged students make teaching more efficient and effective and teachers can capitalize on instructional time.

Instructional time can also be lost to teachers due to negative student behavior. Behavior issues that interfere with teaching and learning have notably worsened throughout the years. One survey found that more than 70 percent of elementary school teachers say they have seen an increase in disruptive behavior in their classrooms (Manaciev et al., 2019).

The concept of student engagement has attracted growing interest to curtail undesired student behavior. Studies on urban minorities have shown a relationship between low behavioral engagement and skipping school, cutting class, suspension, and retention (Conell, Halpern-Felsher, Clifford, Crichlow & Usinger, 1995). Inattentive students are much more likely to display disruptive behavior (Entwisle & Alexander, 1989). In contrast, engaged students typically show desirable behaviors such as participation, work completion, questioning, and persistence. Students are more receptive to lessons when they feel interested and engaged in the subject. Teachers who engage students in learning and care for their students tend to have students who exhibit higher participation, on-task behavior, and lower levels of disruptive behavior (Croninger & Lee, 2001).

Most importantly, the goal of a teacher is to promote learning. Fredricks et al. (2004) believe that the increasing focus on student engagement is attributable to it being a possible antidote to declining academic achievement and motivation. Maintaining focused attention in the classroom is considered an important factor for student success. Newmann (1992) asserts that, “Engaged students make a psychological investment in learning. They try hard to learn what school offers. They take pride not simply in earning the formal indicators of success (grades), but in understanding the material and incorporating or internalizing it in their lives” (p.3). Teachers who engage their students produce students who intrinsically want to learn and strive to understand concepts at deeper levels. Consequently, those students who are engaged in learning tend to perform higher academically (Fredricks et al., 2004).

Benefits of Student Engagement for Students

Engaged students reap many benefits. One of these benefits is a positive impact on their mental health. Conor and Pope (2013) discuss how student engagement has been found to be a protective factor buffering youth from unhealthy consequences. Students who are fully engaged in their schoolwork find the work valuable. These students in turn, experience less stress, cheat less, and demonstrate less internalizing, externalizing, and physical symptoms of stress. Furthermore, studies have found that engaged students are less likely to experience depression. The researchers further assert that, “Engagement also has been linked to well-being and life satisfaction. Because it has been associated so strongly with valued academic and non-academic outcomes, engagement has attracted growing attention from educators, policymakers, and philanthropists seeking to invest in reform strategies” (pgs. 1427-1428).

Engaged students are also more likely to have positive relationships with their teachers. Cognitive, emotional, and behavioral engagement in the class has been found to be associated

with positive relationships with teachers (Connell & Wellborn, 1991). Close student-teacher relationships are characterized by teachers showing open communication, warmth, and affection, and have been associated with students showing a greater interest in school activities and increased participation in class (Archambault, Vandenbossche-Maiombo & Fraser, 2017). Teven and McCroskey (1997) found that students who believe their teacher is caring also believe they learn more. Teachers also report that the quality of teacher-student relationships in the early school years are associated with teachers' ratings of engagement, such as cooperation and participation (Battistich, Solomon, Watson, & Schaps, 1997). Furthermore, positive relationships with teachers are associated with enhanced social, cognitive, and language development in younger children (Kontos & Wilcox-Herzog, 1997).

Perhaps most importantly for students, engagement is a decisive factor in the extent in which a student will learn. Student engagement is an important driver of school achievement as well as a critical antecedent to acquiring new skills and understanding material (Conor & Pope, 2013). Although everyone is capable of learning, a student's desire to learn is vital to mastering new concepts, principles, and skills. Early problems with engagement have long-lasting effects on effort or motivation and achievement. Entwisle & Alexander (1989) argue that research has shown that teachers' ratings of engagement in the first grade were correlated to achievement gains and grades over the next four years. Students who are engaged at an early age, are more likely to continue this pattern in subsequent grades.

First grade is a foundational year for students and sets the tone for their academic career. Studies have shown that students who drop out of school reference disengagement in their early years as a catalyst for their decision (Entwisle & Alexander, 1989). It is imperative that educators address the issue of student engagement so that problems can be corrected early to

avoid such outcomes. A basic premise is that student engagement happens because of the execution of specific strategies implemented by teachers and within schools. If this is true, then student engagement is not serendipitous and can be improved. Several interventions that have been studied are described in the following sections.

Movement

One possible solution to increasing student engagement is to get students moving more during the day. The push for high stakes testing for our youngest learners has resulted in primary students receiving less time for movement and play. According to the National Center for Education Statistics, the average minutes of recess per day was 30.2 minutes for Grade 1 (Snyder Tan,& Hoffman, 2005). This increased time sitting still leads to students becoming fidgety and progressively more off-task and less engaged. Wiebelhaus & Hanson (2016) assert that more movement, not less, is the answer. “Recess allows children the opportunity to play, move, rest and socialize. Following recess, students are more attentive and perform cognitive tasks with better efficiency. Recess is a tool that school systems can use to provide children with the opportunity for brain breaks, as well as movement and physical activity” (p.1380).

Staying awake and alert is key to attentiveness. Physical activity increases blood flow to the brain. Neurons in the brain are responsible for transmitting information to the brain and body. The creation of new neurons, or neurogenesis, can happen through exercise. The hippocampus can create new neurons because of the increased oxygen levels during exercise. The creation of new neurons will continue even after exercise has stopped (Baunerfeind, 2016). The current amount of physical education and recess is not enough activity to stimulate the brains of students. Besides recess, activities as simple as sitting on an exercise ball instead of

chairs has shown increased attentiveness and engagement in children (Ford, 2016). Physical activity during cooperative learning is also correlated with increased academic achievement.

Another way to incorporate movement into a student's day is by using kinesthetic techniques in instructional activities. Learning activities that require movement are effective in helping the learning process. Kinesthetic learning often includes physical repetition of tasks, which builds muscle movement and retention and utilizes as many senses as possible to help reinforce skills and information. Incorporating movement with the delivery of instruction helps students engage with the content in a meaningful way and can lead to educational gains and improve information recall capabilities.

Adapting Task Characteristics

Another possible intervention to increase student engagement is to change the delivery of the tasks that students are given. The most common task deliveries currently in education are ones that require repetition of procedures or require recall of information. Task completion in these kinds of delivery models can be done by using superficial learning strategies to memorize rather than acquiring a deeper understanding of the material (Fredricks et al., 2004.) Student engagement increases when teachers move away from the traditional "chalk and talk" delivery of information? (Connor & Pope, 2013). If the intention is for students to learn content in a more meaningful way, delivery methods must change. Students can sustain attention for relatively long periods of time when a task is engaging (Zentall, 2005).

Engagement in learning will increase in classrooms where the assignments (a) are authentic; (b) allow opportunities for students to show ownership of the material; (c) are collaborative; (d) allow varying ways for students to complete assignments; and (e) are fun (Fredricks et al., 2004). Students also benefit from being given authentic tasks that they perceive

as valuable to themselves. Students need to feel that schoolwork is significant to their lives and worthy of their efforts (Brewster & Fager, 2000). If students feel that the curriculum is relevant to their lives, student engagement increases (Conor & Pope, 2013). Studies have shown that elementary, middle, and high school students' perceptions of the opportunities to be involved in authentic instruction were a strong predictor of their engagement (Fredricks et al., 2004). Furthermore, breaking large tasks down into smaller, more manageable tasks can improve a student's attentiveness. If a student feels a task is too overwhelming or too difficult, he or she will be less likely to be engaged (Brewster & Fager, 2000). By shortening or scaffolding tasks, students feel that the assignments are more achievable which benefits engagement (Zentall, 2005). Smaller, more manageable tasks can also make students feel more accomplished and the completion of each task may serve as a reinforcing event for the student (Logan & Skinner, 1998).

Positive Teacher-Student Relationships

Another possible way to increase student engagement is the development of strong teacher-student relationships. It has been found that student-teacher relationships are a significant factor in many aspects of children's development (Hamre & Pianta, 2005) and play a crucial role in student engagement and motivation (Martin, 2006). According to Battistich et al., (1997) teacher support has been shown to increase emotional, behavioral, and cognitive engagement.

Aspects of the student-teacher relationship impact several student outcomes, including behavior and cognitive skills, and motivation to learn (Allen, Witt, Wheelless, 2006). Positive relationships between students and teachers have also been linked to better engagement in classroom activities (Cavell, Hughes & Meehan, 2003). It has been found that the quality of student-teacher relationships in the early years of school is a predictor of long-term academic

success, even after considering child characteristics (Hamre & Pianta, 2005). Positive student-teacher relationships in which positive feelings are communicated by the teacher leads to an increase in interest in school and the promotion of student engagement (Archambault et. al., 2017).

Baker (2007) solidifies the importance of strong teacher-student relationships when he states, “In contrast, student-teacher relationships characterized by conflict and disharmonious exchanges have been associated with a decrease in student engagement, and linked to unfavorable attitudes toward school, such as avoidance and disinterest in the classroom” (p. 1877). Higher conflict between teachers and students has also been correlated with lower child engagement and less task involvement and cooperation (Hamre & Pianta, 2005). Although at times it may seem that teachers have little control over student engagement and attitudes about learning, research indicates that they do. Teachers who have high expectations for their students yield higher results from their students simply by believing that their students can and will learn can increase students’ willingness to learn (Brewster & Fager, 2000).

Encouraging Growth Mindset

Students who are not motivated to engage in learning are unlikely to succeed. One way to possibly combat this problem is by teaching students to establish a growth mindset. Mindset is a set of beliefs about attitudes and abilities, such as intelligence. Dweck, a psychologist, and author, coined the terms “fixed” and “growth” mindsets to describe the beliefs and attitudes people have regarding intelligence and learning (Zeeb, Ostertag, & Renkl, 2020). Students with a fixed mindset believe that their abilities are unchangeable or fixed. Students with a growth mindset believe that the brain can be improved and developed with practice; in essence that the brain can grow, and abilities can change (Robinson, 2017). This author further explains how

teachers can affect their students' levels of engagement by helping students understand the science behind learning.

Teachers can help students develop growth mindsets by explicitly teaching about the brain and how it changes during learning. Neuroplasticity is the brain's ability to form and re-form new neural connections in response to experiences and changes in the environment. Students become more interested in learning when they find out they can get smarter by rewiring their brains through study and practice (p.18)

Students with a growth mindset view challenges and effort as effective ways to improve their ability and intelligence. Research has shown that students who identify as having a growth mindset are more resilient and are more engaged in their learning (Zeng, Hou, & Peng, 2016). Additional studies have found that growth mindset can be a predictor of a student's level of school engagement and academic performance. Teaching students the ideas behind having a growth mindset could be a beneficial way to get students to buy into their learning and become more engaged in school.

Mindfulness

Another possible intervention to increase student engagement is by incorporating mindfulness practices into the classroom. Mindfulness is typically practiced using simple yoga movements, body scan, which is a calling of attention to different areas of the body, and by sitting meditation. Mindfulness programs also address certain attitudes that can impact learning such as not judging, trust, acceptance, letting go, and patience. If disengagement involves mind wandering, it makes sense that a practice of mind stillness could be a useful intervention (Zenner, Kurz,& Walach, 2014). By teaching students to focus on the present and to be resilient to distractions, students can learn how to pay attention purposefully (Petsche, 2016).

Mindfulness meditation has as the primary goal understanding one's own thoughts and actions through a focused calm mind. Meditation has been found to have a positive effect on the neural systems involved in attentional processes. Studies have shown that a mere 10 minutes of meditation per day can significantly change brain processes related to processing stimulus (Moore, Gruber, Deroose, Milinowski, 2012). A growing body of literature suggests that meditation is a beneficial tool for children and adolescents in school settings. Meditation can help identify thought patterns, improve self-regulation and self-monitoring, encourage self-awareness, and contribute to a student's overall wellbeing. This in turn, improves self-control and increases concentration (Wisner, Jones & Gwin, 2010).

Yoga offers another mindfulness technique that can be implemented to increase student engagement. Yoga engages the mind and body and has been found to increase attention. Yoga can result in improved abilities to attend to relevant information and improved ability to concentrate, which in turn has shown promising results in academic settings (Hagen & Nayar, 2014). Yoga centers around the development of self-control. The relaxation components of yoga can help increase focusing abilities and decrease impulsive behaviors (Petsche, 2016).

Conclusion

Discussions around school reform and improvement should consider the repercussions of disengaged students. To ensure that all students are learning, schools must address those students who are unmotivated to learn and are therefore, unlikely to succeed. Engagement benefits both the students themselves and the teachers who instruct them through academic gains, better behavior, more time on task instruction, better teacher-student relationships, and better well-being overall.

Incorporating strategies such as movement breaks, more recess, creating more meaningful tasks, implementing growth mindset curricula, taking time for mindfulness activities such as yoga and meditation, and fostering positive teacher-student relationships are powerful steps in creating engaged students. Brewster & Fager (2000) are convinced of the importance that teachers hold in fostering student engagement. They explain how, “Educators can and do affect students' level of engagement in learning. Simply recognizing this power is a critical step in motivating students. By further recognizing how a healthy self-esteem is the foundation for success, which in turn fosters motivation and engagement in school, teachers can see the connections between their practice and student outcomes” (p.25). Any conversations around helping students achieve high standards should have the focus of student engagement at its core and interventions to foster engagement warrant further study.

CHAPTER III

METHODS

This study examines whether the implementation of mindfulness-based instruction increases student engagement in first grade learners.

Design

The study uses a quasi-experimental pre-test/post-test design. Participants indicated their perceptions by responding to statements on the student engagement survey. After the initial survey, participants were then exposed to the MindUP curriculum for a two-week duration of eight lessons. This curriculum uses the teaching of brain-based research to help young learners explore mindfulness.

Participants

All 20 students in the class participated in the study. The classroom consisted of 8 girls and 12 boys ranging in ages from 6 to 7 years old. Beginning March 1st, students in this classroom began learning through hybrid instruction. Before March 1st, all students were being taught virtually, through live instruction using Teams due to the Coronavirus pandemic. All the first-grade students participating attend an elementary school in Harford County Public Schools in Maryland.

Instrumentation

The survey was adapted to be used with first grade students from the Quantifying School Engagement: Research Report conducted by the National Center for School Engagement (Finlay, 2006). Due to this adaptation, the survey tool was not tested for reliability or validity by the researcher. The survey was divided into three main sections: behavioral, emotional, and cognitive engagement. Under each section, participants were asked to evaluate their feelings

regarding each statement. Participants colored in a happy face, straight face, or sad face depending on how they felt about each statement. There were a total of six statements – two under each of the main sections. The survey is reproduced in its original form in Appendix A.

Procedure

Since the researcher has taught primary students for over twenty years, the researcher chose the statements from the National Center for School Engagement Survey that would be the most meaningful to first grade learners. Furthermore, since most of the student learning this school year has been received through distance learning due to COVID-19, many of the statements did not apply.

Afterwards, Classkick, a remote learning platform that allows assignments to be sent to students through a simple link, was used. Each statement was accompanied by a play button that allowed students to hear the statements read to them. The platform allows teachers to view student work and give feedback in real time. All twenty students were able to complete the pre-test survey in this way.

After the pre-test surveys were completed, the implementation of the MindUP Curriculum began during our morning meeting time from 9:00-9:15, Monday – Thursday. Friday was not included as a day of instruction as all Harford County Public School elementary students learn asynchronously on Fridays. In all, eight days of lessons were conducted, focusing on each lesson for two days. The MindUP curriculum has a total of fifteen lessons published by Scholastic that focuses on four pillars: neuroscience, social-emotional learning, positive

psychology, and mindful awareness (2011). From those fifteen lessons, the teacher chose the four lessons the researcher felt were most pertinent to student engagement. The focus of the lessons were:

- What is mindful awareness? Mindful awareness is a skill that will help students make good decisions as they attend to the here and now. When students learn about mindful-behavior, they can find places of stillness in their mind so that they can better attend to and engage in instruction.
- How do the parts of the brain work together to make decisions? Mindfulness happens when our brain has time to think about what we hear or see before we respond to it. Students who can understand their emotions can better move past circumstances that may hinder them from engaging in lessons.
- What is mindful listening? Students learn to listen in a focused way and train their brain to concentrate on specific sounds. They begin to learn how to filter out unnecessary sounds that may cause a distraction. This not only helps students with focus and attention but also supports phonemic awareness development and lays the groundwork for social awareness and effective communication.
- What is mindful seeing? As with mindful listening, mindful seeing helps students focus by calling on their vision to purposefully observe an object. As children practice mindful seeing exercises, children begin to slow down and focus their attention on observing details while learning.

After implementing the MindUP curriculum, students were given the same survey that was distributed electronically prior, in a paper/pencil format since students had returned to the school building. The researcher was able to collect the surveys and compare the pre-and

post- surveys to help determine if implementing an MBI could increase student engagement.

The results are discussed in Chapter IV.

CHAPTER IV

RESULTS

This study examines the emotional, cognitive, and behavioral engagement of first graders. The study utilized a survey methodology. In Figure 1 on the following page the survey questions and responses are presented. A sample size of twenty first-graders responded to both the pre- and post-test surveys. Figures 1-3 show the results of the survey using a stacked graph to compare results of pre- and post-test data.

The results of the first statement, (My classroom is a fun place to be), shows the mean score for the pre-test was a 2.65 which significantly increased to 2.95, $t(19) = -2.35$, $p < .05$. Findings indicate students sometimes had fun in the classroom prior to the intervention that increased after the intervention.

The results of the second statement, (I am happy to be at school), shows the mean score for the pre-test was a 2.80, which increased to 2.95, $t(19) = -1.83$, $p = .08$. Findings indicate that students were mostly happy at school prior to intervention and continued to be mostly happy at school after the intervention, showing there was not a significant change in student perception in this area.

The results for the third statement, (I learn a lot at school), shows the mean score for the pre-test was a 2.80, which increased to a 2.90, $t(19) = -1.45$, $p = .16$. Findings indicate that students felt they mostly learned a lot in school both before and after the intervention, showing there was not a significant change in perception in this area.

The results of the fourth statement, (I try my best at school), shows the mean score for the pre-test was 2.80, which increased slightly to 2.85, $t(19) = -.57$, $p = .57$. Findings indicate that students mostly tried their best at school prior to and after the intervention showing there was not

a significant change in student perception in this area. Both statements 3 and 4 of the survey addressed student's cognitive engagement.

The results of the fifth statement, (I follow the rules when I am in school), shows the mean score for the pre-test was 2.90, and increased slightly to a 3.0 for the post-test $t(19) = -1.45, p=.16$. Findings indicate students mostly followed the rules in school prior to the intervention and increased to always following the rules after the intervention.

The final statement on the survey, (I work hard when I am at school), shows the mean score for the pre-test was a 2.80, and increased slightly to a 2.95 on the post-test, $t(19) = -1.83, p=.08$. Findings show there was not a significant change in student perception as students mostly worked hard at school prior to and after the intervention. The last two statements on the survey addressed student's behavioral engagement.

Figure 1:
Percent Distribution on the Emotional Engagement Questions

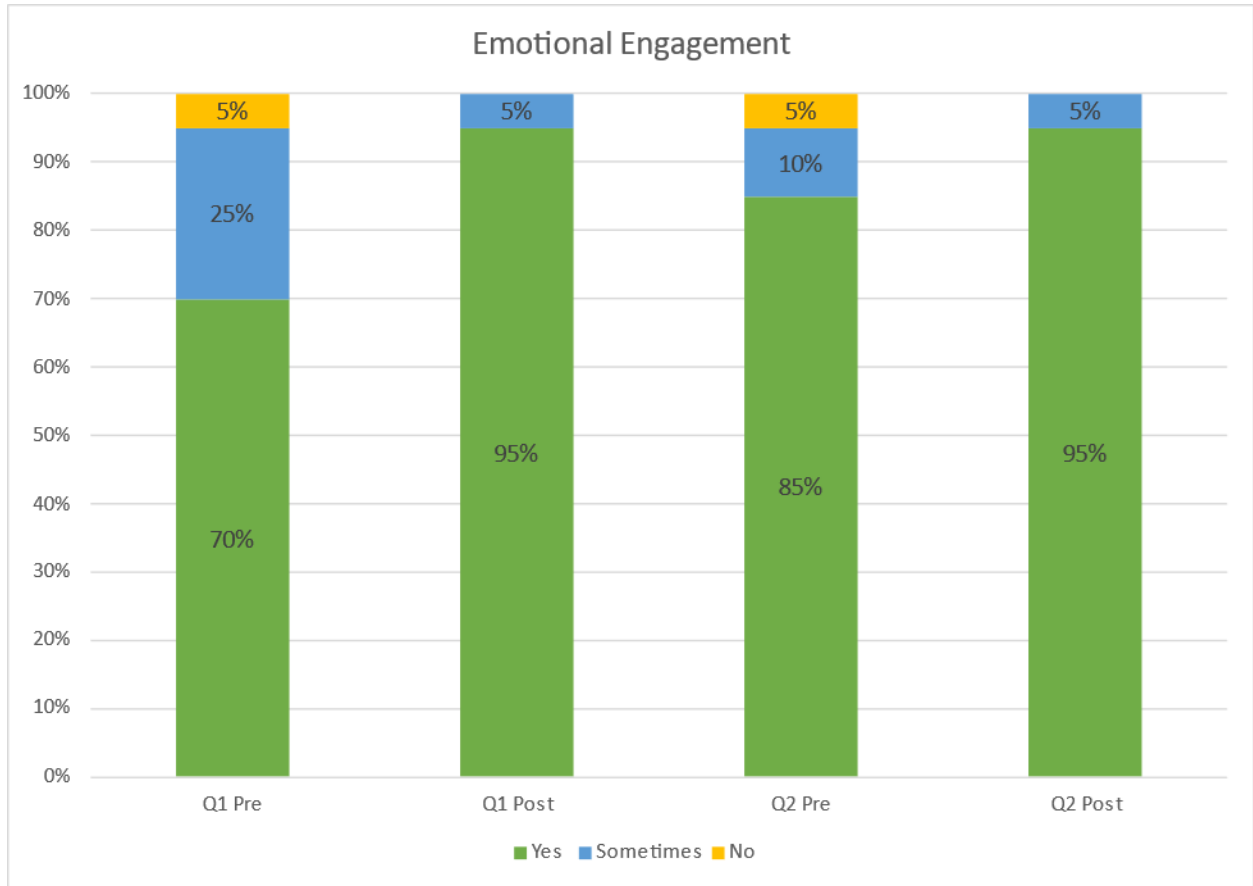


Figure 2:

Percent Distribution on the Cognitive Engagement Questions

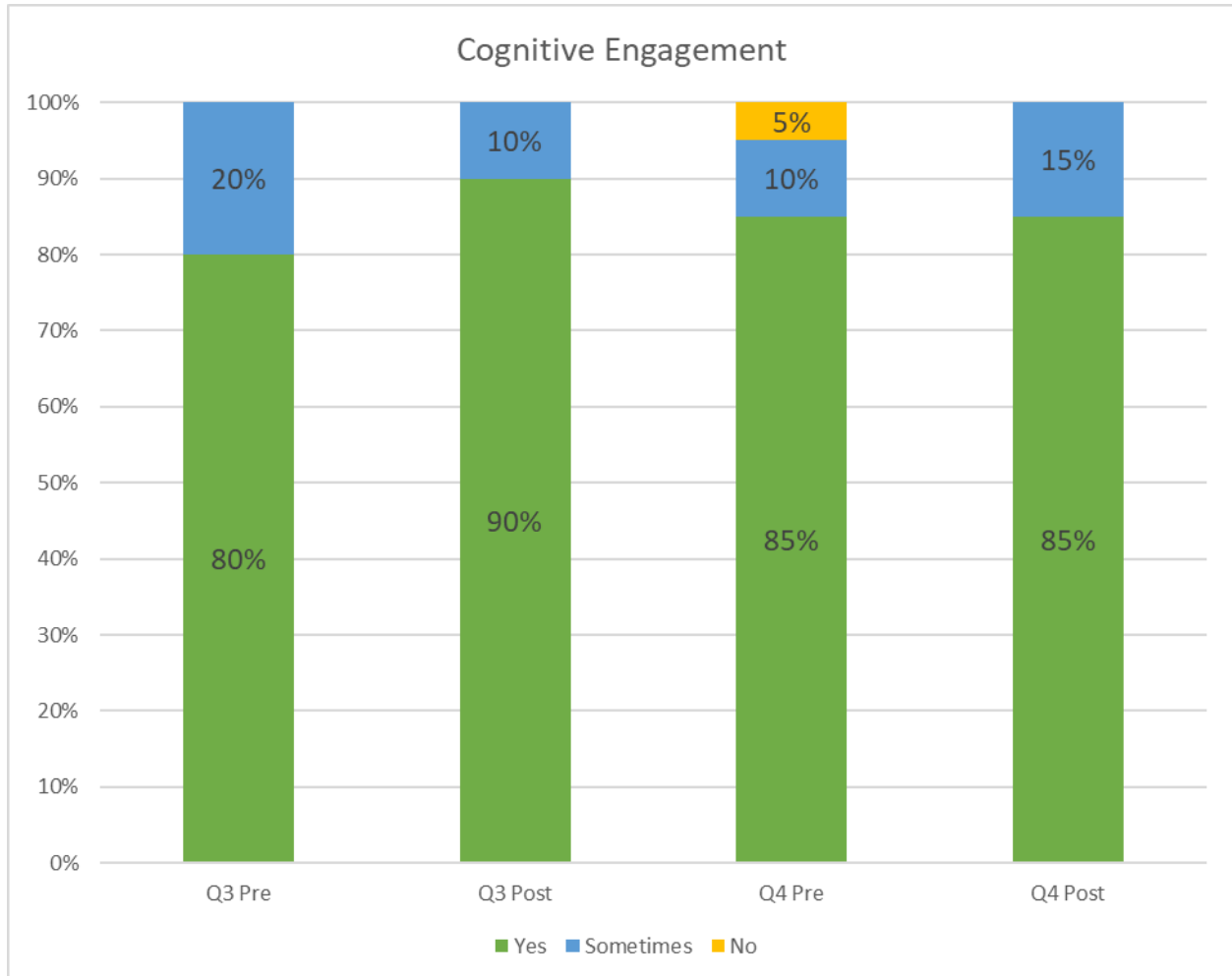
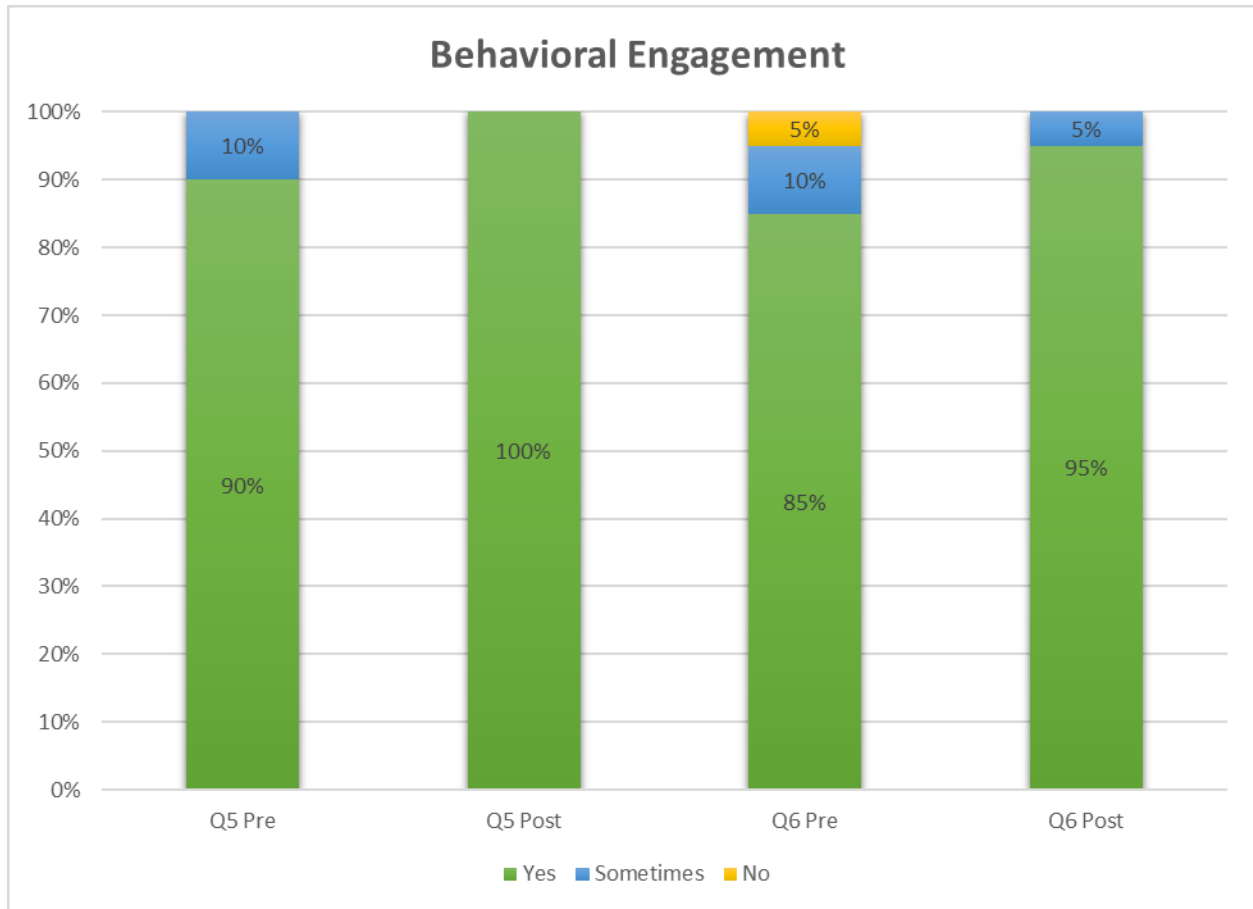


Figure 3

Percent Distribution on the Behavioral Engagement Questions



CHAPTER V

DISCUSSION

This study examines whether the incorporation of mindfulness-based interventions has a positive impact on student engagement. The survey data is analyzed and presented in Chapter IV.

Implications of Results

The original hypothesis was partially supported and partially not supported. Data indicates that for the pair 1 statement, *my classroom is a fun place to be*, the difference between their perception on their pre/posttest showed a significant increase from a 2.65 mean to a 2.95 mean. Using this one data point we could reject the null hypothesis and conclude that the implementation of the mindfulness-based instruction did make an impact on student engagement. However, looking at the remaining paired statements, *I am happy to be at school*, *I learn a lot at school*, *I try my best at school*, and *I work hard when I am at school*, there are no significant difference between the implementation of the mindfulness-based intervention and student engagement according to the mean results of the pre- and post-test analysis. The implementation of mindfulness-based instruction on first graders made no significant difference in their perceptions of their emotional, cognitive, and behavioral engagement. Therefore, the null hypothesis was partially supported and partially not supported according to the data.

Theoretical Consequences

The number of studies of MBIs has been growing steadily. In the last three years, the field has developed enough to allow for systematic reviews and meta-analyses of young learners.

There is growing evidence for the ability of mindfulness to impact aspects of cognition and learning in young students according to a recent meta-analysis by Klingbeil, Renshaw,

Willenbrink, Copek, Chan, Haddock, & Clifton (2017) which reported impacts on academic achievement, attention, metacognition and cognitive flexibility. Mindfulness appears to have the ability to influence self-regulation and improve the ability to sustain the attention of students in a finding summarized in a recent review by Dunning, Griffiths, Kuyken, Crane, Foulkes, Parker, & Dalgleish T (2018). However, according to Weare (2019), the impacts on well-being and psycho-social health have been the most reliably supported. In contrast, impacts on behavior, cognition, and learning showed less support by research, and at present, the evidence in these areas is promising rather than conclusive.

The findings of this researcher found some support that aligns with the findings of Dunning et al., (2018) and Klingbeil et al. (2017). Students did show an increase in perceptions of their emotional engagement toward school and learning, although change was minimal. The research did not support that students showed an increase in either behavioral or cognitive engagement with the implementation of an MBI. This is consistent with Weare's (2019) assertions that the impact of MBI's on behavior or cognition were not definitive and further studies need to be conducted in these areas.

Threats to the Validity

This study had multiple threats to external validity. This study used a small sample of only 20 participants that threatens the external validity of the research. Twenty participants from one school in Harford County may not be representative of first graders across the nation. Another threat to internal validity is that this study used differential selection. Participants were not randomly selected. Furthermore, the pre-survey was given virtually, while students were learning remotely due to the coronavirus pandemic. In many cases, parents were nearby, supporting the student. It is impossible to judge how honest the participants were in rating

themselves or if the presence of their parents contributed to their answers. In contrast, the post-survey was given while students were back in the building. In question 1, *my classroom is a fun place to be*, students were physically back in the classroom with their peers and teacher. For most first graders, this change was welcomed and there was a lot of excitement that came along with being back in the building. Also, during the post-survey, parents of the students were not present. The potential link between mindfulness-based instruction and student engagement is questionable seeing how their perception may have simply changed due to the change in environment from home to school, or the absence of a parental figure while completing the survey.

Connections to Previous Studies

The results of this study connect to previous literature that looks at mindfulness-based instruction as a possible solution to student engagement. There were numerous similarities between the findings of this study and those discussed in Chapter II. While the results of this study were inconclusive, the researcher noticed, after instruction of deep breathing exercises, that students seemed calmer and more attentive. This observation is consistent with studies that have shown that as little as 10 minutes of meditation a day can significantly make a difference in how the brain processes stimulus (Moore et.al, 2012). The researcher further noted that after mindfulness-based instruction, students seemed to be more resilient to distractions. This is consistent with Petsche's (2016) findings that mindfulness programs can help students learn how to pay attention purposefully.

Implications for Future Research

Future research should include a larger population that has been randomly selected. Future research should also avoid conducting the research during a global pandemic. The pandemic invited a multitude of variables that were unexpected. Furthermore, more time needs to be spent between the pre-survey and the post-survey so that the mindfulness-based instruction could be delivered with more fidelity.

Conclusions

Mindfulness intervention can lead to a variety of positives, such as better attention, less stress and anxiety, less disruptive behaviors, and possibly improved student engagement. This study looks to see if mindfulness-based interventions could be a helpful intervention to increase student engagement. While no significant relationship was found, this could be promising data that suggest that mindfulness-based interventions could be helpful in increasing student's emotional engagement. All students will struggle with staying engaged at some point in their school careers. Learning mindfulness strategies such as practicing mindful seeing, listening, and breathing techniques may help students when becoming disengaged and ultimately lead to better student success.

REFERENCES

- Allen, M., Witt, P.L., & Wheelless, L.R. (2006). The role of teacher immediacy as a motivational factor in student learning: Using meta-analysis to test a causal model. *Communication Education, 55*, p. 21-31.
- Archambault, I., Vandenbossche-Maiombo, J., & Fraser, S. (2017). Students' oppositional behaviors an engagement in school: The differential role of the student-teacher relationship. *Journal of Child and Family Studies, 26*, p. 1702-1712.
- Baker, J. A. (2008). The differential influence of instructional context on the academic engagement of students with behavior problems. *Teaching and Teacher Education, 24*, p.1876–1883.
- Baker, R. S. (2007). Modeling and understanding students' off-task behavior in intelligent tutoring systems. *Conference on Human Factors in Computer Systems-Proceedings*, p. 1059-1068.
- Balfanz, R., Herzog, L., & Mac Iver, D., (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early identification and effective interventions. *Educational Psychologist, 42*(4), 1-13
- Battistich, V., Solomon, D., Watson, M., & Schaps, E. (1997). Caring school communities. *Educational Psychologist, 32*, p. 137-151.
- Bauernfeind, N., (2016) The Impact of Movement on Student Learning and Engagement. Hamline University, nbauernfeind01@hamline.edu
- Beauchemin, J., Hutchins, T. L., & Patterson, F. (2008). Mindfulness meditation may lessen anxiety, promote social skills, and improve academic performance among adolescents with learning difficulties. *Complementary Health Practice Review, 13*, p. 34–45.

- Brewster, C., & Fager, J., (2000). Increasing student engagement and motivation: From time-on-task to homework. *National Regional Educational Laboratory*. Retrieved from: <https://educationnorthwest.org/sites/default/files/byrequest.pdf>
- Cavell, T.A., Hughes, J.N., & Meehan, B.T.(2003). Teacher-student relationships as compensatory resources for aggressive children. *Child Development*, 74, p.1145-1157. Retrieved from: <http://dx.doi.org/10.1111/1467-8624.00598>
- Connell, J. P., Halpern-Felsher, B.L., Clifford, E., Crichlow, W., & Usinger, P. (1995). Hanging in there: Behavioral psychological, and contextual factors affecting whether African American adolescents stay in school. *Journal of Adolescent Research*, 10, p. 41-63.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self-processes in development: Minnesota Symposium on Child Psychology* (Vol. 23, pp. 43-77).
- Connor, J.O., & Pope, D.C., (2013). Not just robo-students: Why full engagement matters and how schools can promote it. *Youth Adolescence*, 42, p. 1426-1442.
- Croninger, R.G., & Lee, V.E. (2001). Social capital and dropping out of school: Benefits of at-risk students of teachers' support and guidance. *Teachers College Record*, 103, p. 548-581.
- Dunning D.L., Griffiths K., Kuyken W., Crane C., Foulkes L., Parker J., Dalgleish T., (2018). The effects of mindfulness-based interventions on cognition and mental health in children and adolescents – a meta-analysis of randomized controlled universal interventions. *Raising Healthy Children*, 82(1). p. 405-432. Retrieved from: <https://doi.org/10.1111/j.1467-8624.2010.01564.x>

- Durlak, J., Weissberg, R., Dymnicki, A., Taylor, R., & Schellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Raising Healthy Children*, 82(1). p. 405-432. Retrieved from: <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Entwisle, D. R., & Alexander, K. (1989). Early schooling as a 'critical period' phenomenon. *Research in Sociology of Education and Socialization*, p. 27-55.
- Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). Teaching adolescents to become learners: The role of non-cognitive factors in shaping school performance—A critical literature review. *Chicago, IL: Consortium on Chicago School Research*. Retrieved from: <http://eric.ed.gov/?id=ED542543>
- Finlay, K., (2006). Quantifying school engagement: Research report. *National Center for School Engagement*. p. 26-62.
- Fletcher, L. and Robinson, D. (2014), “Measuring and understanding engagement”, in Truss, C. et al. (Eds), *Employee Engagement in Theory and Practice*, Routledge, London, pp. 273-290
- Ford, K., (2016). The impact of physical movement on academic learning. *Culminating Projects in Teacher Development*. 13. Retrieved from: https://repository.stcloudstate.edu/ed_etds/1
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, (1), p. 59-109.

- Hagen, I., & Nayar, U.S. (2014). Yoga for children and young people's mental health and well being: Research review and reflections on the mental health potentials of yoga. *Frontiers in Psychiatry*, 5, p. 1-6.
- Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development*, 76, p. 949-967.
- Kabat-Zinn, J., Wheeler, E., & Light, T. (1998). Influence of MBSR intervention on rate of skin clearing in patients with moderate to severe psoriasis undergoing phototherapy (UVB) and photochemotherapy (PUVA). *Psychosomatic Medicine*, 60, 625-632.
- Klingbeil DA., Renshaw TL., Willenbrink JB., Copek RA., Chan K., Haddock A., Clifton J.,(2017). Mindfulness-based interventions with youth: A comprehensive meta-analysis of group design studies. *School Psychology*, 63:77-103
- Kontos, S., & Wilcox-Herzog, A. (1997). Influences on children's competence in early childhood classrooms. *Early Childhood Research Quarterly*, 12(3), p. 247-262.
- Logan, P., & Skinner, C.H. (1998). Improving students' perceptions of a mathematics assignment by increasing problem completion rates: Is problem completion a reinforcing event. *School Psychology Quarterly*, 13, p. 322-331.
- Marks, H. (2000). Student engagement in instructional activity: Patterns in the elementary, middle and high school years. *American Educational Research Journal*, 37, p. 153-184.
<https://doi.org/10.3102/00028312037001153>
- Manasiev, L., Court, B., & Jain, V., (2019). Breaking bad behavior: The rise of classroom disruptions in early grades and how districts are responding. *District Leadership Forum*.

- Martin, A. (2006). The relationship between teachers' perceptions of student motivation and engagement and teachers' enjoyment of and confidence in teaching. *Asia-Pacific Journal of Teacher Education*, 34(1), p. 73-93.
- Moore, A., Gruber, T., Deroose, J., & Milinowski, P., (2012). Regular, brief mindfulness meditation practice improves electrophysiological markers of attentional control. *Frontiers in Human Neuroscience*, 6, p. 1-15.
- Newmann, F. (1992). Student Engagement and Achievement in American Secondary Schools. New York: Teachers College Press.
- Petsche, A., (2016), The effect of yoga on attention in students diagnosed with ADHD. *Doctoral Dissertations*, 1141. Retrieved from: <http://opencommons.uconn.edu/dissertations/1141>
- Robinson, C. (2017). Growth mindset in the classroom. *Science Scope*, 41, p. 8-21.
- Snyder, T., Tan, A., & Hoffman, C., (2005). Digest of education statistics, *U.S. Dept. of Education*, NCES 2006-030
- Tang, Y., Fan, M., Yang, Y., & Posner, M., (2012). Induced mechanisms of white matter changes. *Proceedings of the National Academy of Sciences*, DOI: 10.1073/pnas.1207817109
- Teven, J. J., & McCroskey, J. C. (1997). The relationship of perceived teacher caring with student learning and teacher evaluation. *Communication Education*, 46(1), p.1-9. Retrieved from: <https://doi.org/10.1080/03634529709379069>
- Weare, K.(2019). Mindfulness and contemplative approaches in education. *Current Opinion in Psychology*, 20:321-326 Retrieved from: <https://doi.org/10.1016/j.copsyc.2019.06.001>.

- Wiebelhaus, S.E. & Hanson, M.F. (2016) Effects of classroom-based physical activities on off-task behaviors and attention: Kindergarten case study. *The Qualitative Report*, 21, p. 1380-1393.
- Yazzie-Mintz, E., & McCormick, K. (2012). *Finding the humanity in the data: Understanding, measuring, and strengthening student engagement*. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* , p. 743-761. https://doi.org/10.1007/978-1-4614-2018-7_36
- Zeeb, H., Ostertag, J., & Renkl, A. (2020). Towards a growth mindset culture in the classroom: Implementation of a lesson-integrated mindset training. *Education Research International*, 2020, 13.
- Zeng, G., Hou, H., & Peng, K., (2016). Effect of growth mindset on school engagement and psychological well-being of Chinese primary and middle school students: The mediating role of resilience. *Frontiers in Psychology*, 29, p. 1-8.
- Zennner, C., Kurz,S.H., & Walach, H., (2014). Mindfulness-based interventions in schools – a systemic review and meta-analysis. *Frontiers in Psychology*, 5, p. 1-20.
- Zentall, S. S. (2005). Theory-and evidence-based strategies for children with attentional problems. *Psychology in the Schools*, 42, p. 821-836.