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About the Journal

Founded in 2013, the Journal of Teacher Action Research (ISSN: 2332-2233) is a peer-reviewed online journal indexed with EBSCO that seeks practical research that can be implemented in Pre-Kindergarten through Post-Secondary classrooms. The primary function of this journal is to provide classroom teachers and researchers a means for sharing classroom practices.

The journal accepts articles for peer-review that describe classroom practice which positively impacts student learning. We define teacher action research as teachers (at all levels) studying their practice and/or their students' learning in a methodical way in order to inform classroom practice. Articles submitted to the journal should demonstrate an action research focus with intent to improve the author’s practice.

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DOES MINDFULNESS STRENGTHEN SELF-EFFICACY IN FIRST GRADE STUDENTS?

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Abstract External and internal stressors often influence young children’s sense of self-efficacy and resiliency negatively. Practicing mindfulness within the classroom may be one intervention that can help students strengthen the social-emotional skills involved in self-efficacy and resiliency. This study used a mixed methods approach to gather quantitative and qualitative data from six first-grade students who participated in a daily mindfulness practice. The data were analyzed using descriptive statistics to determine if their perceptions of self-efficacy and resiliency improved from week one to week six of the study. Logico-inductive data analyses were used to identify common themes in student interviews. Students favored the mindfulness activities and shared benefits such as feeling calm, happy, and a sense of self-control. The six-week timeframe and small sample size are possible limitations for this research study to show significant differences through the quantitative data analysis.

Keywords: teacher action research, mindfulness, resiliency, self-efficacy, social-emotional learning

Introduction

During Kirsten’s time as a teacher, she had observed that her students’ low sense of self-efficacy appeared to impede their learning. Common behaviors related to low self-efficacy include a low level of perseverance, i.e., situations in which students become easily frustrated by mistakes or unknown answers, self-talk focusing on students’ inability to complete a task, and a lack of establishing, working toward, and reflecting on goals within the classroom. Kirsten noticed that these behaviors were overtaking much of the core instructional time for her students. A great deal of the school day focused on these negative behaviors and providing interventions to address them before effective learning could occur. Kirsten was therefore interested in finding ways to strengthen her students’ self-efficacy by investigating the following question: Does mindfulness strengthen self-efficacy in first grade students?
The purpose of this study was to explore if the implementation of daily mindfulness practices in the classroom have a positive effect on first grade students’ self-efficacy. Over a six-week period, all students in Kirsten’s classroom participated in mindfulness practices during the morning meeting time. Data were collected from six students who participated in one-on-one interviews and completed a questionnaire three times; at the beginning, midpoint, and end of the study.

**Literature Review**

Mindfulness is gaining influence in education and a body of research outlines the benefits of implementing mindfulness practices into classroom settings (e.g., Costello & Lawler, 2014; Harpin, Rossi, Kim, & Swanson, 2016; Moreno, 2017). Students face many challenges that compete for their attention during school hours. Malow and Austin (2016) observed that student stress and anxiety continue to rise. As a result, educators must take on the crucial role to explicitly teach students how to manage strong emotions before they impede their success. Harpin et al. (2016) identified a need for students, specifically within urban settings, to strengthen their abilities to cope with adversity and to improve their focus to be more successful in school.

Mindfulness practice is one strategy to support students in dealing with stress and anxiety. Mindfulness is “the cognitive ability to pay attention to the present moment without judgment or attachment to a desired outcome” (Keller et al., 2017, p. 508). Students can utilize mindfulness by taking a structured, peaceful, reflective time to practice keeping their thoughts in the present. Mindfulness involves three interconnecting components that include intention, attention, and attitude. Greason and Cashwell (2009) described mindfulness as a state of being attentive to experiences with an attitude of openness and acceptance. Kielty, Gilligan, and Staton (2017) emphasized that mindfulness is a practice in which individuals focus on the current experiences rather than being on “auto-pilot.” Increasing academic demands, coupled with the lack of coping skills to deal with external stressors, often leads to a constant state of stress that creates barriers for student success.

The ability to practice mindfulness in an open and accepting way is not an innate skill. Educators must foster an inviting environment for students to practice mindfulness as well as strategically teach students how to manage strong emotions before these strong emotions undermine their academic, social, and behavioral success (Malow & Austin, 2016). The National Scientific Council on the Developing Child (2015) states that adults must build capabilities needed to manage stress within children, including the ability to focus attention, problem solve, plan, adjust to new circumstances, regulate behavior, and control impulses. When students participate in an environment that fosters mindfulness, the barriers that stand between them and their academic, social, and behavioral success often diminish.

**Resiliency and Self-Efficacy.** Students’ ability to control their emotions, thoughts, and behaviors is essential for success in school and in life (Thierry et al., 2016). Prolonged and unresolved internal and external stress inhibits students from developing a strong sense of
self-efficacy and resiliency. However, mindfulness can be utilized to strengthen both areas. Social-emotional learning (SEL) curriculums focus on developing the ability to recognize one’s own emotions, as well as the emotions of others, while providing the necessary skills to communicate emotional understanding (Malow & Austin, 2016). SEL curriculums foster the implementation of mindfulness and the development of resiliency in students. Malow and Austin (2016) defined resiliency as, “the degree to which an individual’s personal resources match or exceed their reactivity to internal or external stress” (p. 83). Self-efficacy, defined as, “one’s beliefs or judgment about his or her capabilities” (Greason & Cashwell, 2009, p. 3), is also nurtured within SEL curriculums.

Self-efficacy development is theorized to occur through four primary sources, including mastery experiences, vicarious learning, verbal persuasion, and changes in emotional arousal (Greason & Cashwell, 2009). Mindfulness is a practice that can be used in the classroom with these four sources of self-efficacy development in mind. The open-ended nature of mindfulness allows students to feel a sense of mastery in their own unique way, while continuously learning new strategies and practices.

Mindfulness allows students to recognize the adverse effects of “mind traps” and offers a period of reflection, stillness, and peace (Costello & Lawler, 2014). Mind traps are mental habits that increase stress, such as negative self-talk in which children are hard on themselves. These habits can include self-criticizing, where students perceive themselves to be worthless or inadequate (Costello & Lawler, 2014). Mindfulness practices can help students overcome the negative influence of mind traps on their perceptions of self-efficacy and resiliency.

In addition to resiliency and self-efficacy, self-regulation and emotional awareness are critical skills for students to master to allow them to learn efficiently, work well with others, and decrease anxiety and depression (Keller et al., 2017). Mindfulness promotes these skills through direct instruction and teaches students strategies they can independently utilize within their daily routines. With daily practice, mindfulness can positively support emotional self-regulation, which consequently improves the likelihood of academic success (Keller et al., 2017).

**Brain Development and Neuroplasticity.** Critical periods in a child’s development are times during which positive experiences can provide optimal brain development. However, if these experiences are absent or replaced by negative experiences, healthy brain development can be disrupted (Lally, 2012). Early childhood is a critical period in which the brain is malleable and easily shaped by the child’s environment. Knowing that brain development is shaped by early experiences, much of what gets in the way of learning in later years is the result of skills that were underdeveloped or neglected in early childhood. If students are expected to be successful in school, teachers must provide experiences that support healthy brain development. Lally (2012) describes experience-created expectations that impact brain development as “brain shaping” experiences. These experiences fluctuate
greatly from student to student and can present a wide collection of variables that interfere with learning, such as stressors or environmental factors.

Mindfulness supports students’ development of skills that are necessary for school success. Stress-reducing practices, such as mindfulness, can contribute to positive brain development and functioning while also reducing the expression of pro-inflammatory genes (National Scientific Council on the Developing Child, 2015). Over time, daily mindfulness practices can lead to healthy brain development in children and fill in the “gaps” that may exist in many students. Mindfulness practices, in conjunction with the brain’s neuroplasticity, allow children to continuously develop and strengthen skills, such as sustained attention, focus, and calmness in the school setting (Kielty et al., 2017). Research has also shown that mindfulness can strengthen neural systems that support emotional, cognitive, and behavioral regulation (Thierry et al., 2016).

Awareness of brain development allows educators to plan activities that strengthen underdeveloped skills and support students for learning and academic success. For example, children benefit from learning how to slow down their thinking to give their brain time to override negative responses to shut down or act out (Moreno, 2017). Mindfulness offers students strategies to slow down their thinking and gives them time to reflect and respond, rather than negatively reacting to stressful events. Moreno (2017) showed that six-year-old children who participated in mindfulness practice strengthened their capacity to slow down their thinking and reflect. Kielty et al. (2017) demonstrated the positive influence of mindfulness for middle school students who were asked to practice mindful breathing to calm the amygdala and “free up” the pre-frontal cortex before engaging in high-stakes testing.

_Growth Mindset and Positive Psychology._ Mindfulness provides opportunities for students to cultivate and practice a growth mindset. A person with a growth mindset can be described as an individual who believes their intelligence and abilities can be continuously developed and enhanced (Kielty et al., 2017). Both mindfulness and a growth mindset foster a positive attitude that is centered on practice rather than perfection. The open nature of mindfulness allows for feedback and opportunities to practice overcoming adversity and setbacks. Mindfulness also enables students with an optimistic attitude and with basic trust during times of uncertainty (Malow & Austin, 2016).

Positive psychology is “employing structured interventions to build resiliency with the goal of buffering symptoms of emotional dysregulation” (Malow & Austin, 2016, p. 84). Mindfulness is one example of a structured intervention to support positive psychological feelings. Mindfulness can also aid in alleviating distress through self-regulatory processes, such as mindful breathing. Cultivating the positivity and optimism alongside mindfulness allows for opportunities for growth. Moreno (2012) described mindfulness being rooted in the beauty of failure, where students work to recognize that rather than an endpoint, mindfulness focuses on repeated engagement with a cycle of focus-loss and focus-refocus. With a growth mindset, failure presents itself as a continued opportunity to start anew,
rather than a fixed stopping point. Routhier-Martin, Roberts, and Blanch (2017) stressed that the purpose of mindfulness is not for students to forget or repress their stressors or weaknesses, but rather to acknowledge these areas for improvement and practice the ability to focus on schoolwork instead.

In summary, social-emotional learning and brain development are foundational building blocks for students to succeed in school and in life. Early experiences, whether positive or negative, impact brain development. The lack of positive experiences in early childhood can impede student success and create a need for interventions later in life. Mindfulness practices in the classroom are one type of intervention strategy that can provide students with skills to develop and cultivate resiliency, a stronger sense of self-efficacy, emotional awareness, and self-regulation. Pairing mindfulness with a growth mindset allows for an optimistic outlook for growth in all students, no matter their background or severity of stressors present in their lives. Educators who establish mindfulness routines and procedures help students understand that their intelligence is malleable rather than fixed and can provide students with tools and strategies to overcome adversity within the classroom environment. In addition, teachers who practice mindfulness themselves can help nurture mindfulness within their students.

Methodology

Design. This study used a mixed-method methodology collecting data from six students on a Likert scale style questionnaire and from interviews. Open-ended questions and follow up prompts were used to explore students’ perceptions of self-efficacy and the impact of the mindfulness intervention. Interviews were recorded, transcribed, and analyzed for common themes. All interviews and questionnaires were completed in a quiet spot in the classroom, away from other students.

Participants and Procedure. All 15 students in Kirsten’s first-grade classroom participated in guided mindfulness practices over a six-week period using audio and video clips from GoNoodle (n.d.) and Calm (n.d.). Six students, three males and three females, were selected to complete a ten-item questionnaire and to be interviewed to explore their perceptions of self-efficacy. The survey included ten questions with three possible responses, yes, sometimes, and no. A composite score was given to each of the questionnaires by converting the smile face to three points, the neutral face to two points, and the frowning face to one point, yielding a possible score for each student between 10 and 30 points. A score of 30 indicate a high level of self-efficacy and a lower score a lesser degree of self-efficacy. Kirsten selected these six students because of their openness to engage in one-on-one conversations with her.

The questionnaire included ten questions asking students to reflect on their perceptions of their self-efficacy and resiliency skills. The students completed the questionnaire at the beginning of the study, at the midpoint (week three), and at the end of the study after six weeks. The three-point Likert scale utilized symbols for the first grade students to easily
answer the questions: a smile face for yes, a neutral face for sometimes, and a frowning face for no (see Table 1).

Table 1: Student Questionnaire

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>Sometimes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I work hard in school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I can name at least one thing I am good at.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I try my best at school every day.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I can solve most problems by myself.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I can finish all my schoolwork.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I can calm myself down when I am angry or frustrated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I pay attention to my teacher in class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I ask for help when I need it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I keep trying, even when things get hard or tough.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I can make a goal for myself to work towards.</td>
<td></td>
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</tbody>
</table>

The qualitative data were collected through four open-ended interview questions and follow-up questions were used to expand on students’ thinking. The interviews were administered at the same three points throughout the research study as the questionnaire. The interviews were recorded, transcribed, and analyzed for common themes in student responses using the logico-inductive process (Mertler, 2019) to make sense of the narrative data. The interview questions included the following:

1. What is your favorite part of doing mindfulness activities?
2. Do mindfulness activities make you feel like you have self-control? If yes, how so?
3. What mindfulness strategies have you used throughout the school day?
4. What feelings do you feel when we do mindfulness activities?
Results

The survey data from the questionnaire was summarized for the six students and the mean and range were used to compare participants’ answers between the three times the questionnaire was administered (Table 2). The results show that two students increased their self-efficacy scores over the six weeks, while four showed a decrease. The mean varied slightly between the three surveys and the range between students decreased from a nine-point range within the first week to a five-point range within the sixth week of the study. The results suggest that the students perceived the mindfulness practices favorably with a mean score consistently above 25, but do not indicate that students increased their perception over the six-week period of the intervention.

Table 2: Student Responses to Questionnaire

<table>
<thead>
<tr>
<th>Student</th>
<th>Week 1</th>
<th>Week 3</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>30</td>
<td>28</td>
<td>26</td>
</tr>
<tr>
<td>E</td>
<td>21</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>H</td>
<td>29</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>K</td>
<td>28</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>A</td>
<td>26</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>L</td>
<td>25</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>Mean</td>
<td>26.5</td>
<td>25.5</td>
<td>26.3</td>
</tr>
<tr>
<td>Range</td>
<td>9</td>
<td>8</td>
<td>5</td>
</tr>
</tbody>
</table>

After the interviews were transcribed, common statements were coded. Using logico-inductive analysis (Mertler, 2019) patterns and trends were identified from the student interviews. Two patterns emerged from the student responses. In 15 of the 18 interviews students identified feeling calm after participating in a mindfulness practice. Five of the six students felt that mindfulness helped them calm down. Student H said, “they [the mindfulness practices] calm my body down,” and Student L felt that “it helps our brains calm.” Feeling happy during the mindfulness practice was another pattern discovered in ten
interviews as illustrated by Student L’s comment: “It feels like a yummy strawberry.” The following trends were noted from across all interviews, students shared that they were interested in trying the mindfulness activities. Four out of six participants said that mindfulness activities made them feel they had self-control at the end of week one. At the end of week three, all students reported feeling calm when practicing mindfulness, and five students reported that the activities made them feel they had self-control. At the end of week six, all students reported that mindfulness activities provided them with a sense of self-control. When asked what specific identify mindfulness strategies students used throughout the school day, students were unable to identify specific strategies. In summary, students were eager to try and were receptive to mindfulness activities and expressed that they felt a strong sense of self-efficacy following the mindfulness practices.

The purpose of this study was to explore if daily mindfulness practices strengthens self-efficacy in first grade students. The results of the surveys show that the six students who participated in the study did not increase their self-efficacy over the six-week period of the study. However, in the interviews, students expressed that mindfulness practices made them happy and helped them calm their bodies and brains leading to a sense of self-control. Research (e.g., Abdel-Khalek et al., 2014, Tahmasbipour, 2017, Zaker et al., 2016), though not done with elementary students, show a strong relationship between happiness and self-efficacy. Additionally, calmness and self-control are essential elements of self-efficacy. In summary, the results of the student interviews show that students experienced happiness, calmness, and self-control after participating in mindfulness practices, all essential elements to developing self-efficacy.

Discussion

Kirsten was eager to implement mindfulness within her first-grade classroom. Although she had received no formal training in mindfulness prior to the implementation of this study, she researched best practices and strategies that would be appropriate for her first grade students. One of the greatest takeaways of having the role as “mindful leader” for her students is the patience her students showed in the classroom. She began the mindfulness activities with an open mindset, which allowed her to guide the students through the practices without expecting that all students would react in the same manner. Some students showed reluctance to participate in the mindfulness activities, but with her growth mindset, Kirsten saw growth in all her students during this six-week period. Working with younger students, the practices were taken more seriously and intentionally by the end of this study by all students. Students were more open and willing to share their reflections during the morning meeting time as well. The overall culture of the students’ reflective nature was one positive benefit that Kirsten observed throughout the study.

Limitations

The present study has several limitations. With a sample size of six students from the same school and receiving mindfulness activities through the same method, the findings cannot be generalized to a greater population. Further, Kirsten’s dual role as a teacher and researcher may have influenced the students’ answers on the questionnaires, despite being
made aware that their answer was in no way going to influence their academic grade. The short timeframe of this study may also limit the study by not allowing students sufficient time to practice and reflect on the impact of mindfulness activities. Finally, asking six- and seven-year old students to reflect on their perceptions through the questionnaire and interview questions may not have been developmentally appropriate for all participants, e.g., “I can make a goal for myself to work towards.”

Implications

This study provided insight to the role mindfulness activities have in the classroom setting. Students were eager and willing to participate in daily mindfulness activities and class discussions. We recommend that teachers introduce mindfulness activities at the beginning of the school year, pairing them with other social-emotional learning concepts such as fostering a growth mindset and character strengths (Via Institute on Character, n.d.). Implementing mindfulness activities is one strategy to help students strengthen self-efficacy and resiliency.

Teachers who wish to implement mindfulness practices within the classroom must foster and create an open and inviting classroom culture for students to practice mindfulness. The classroom schedule must allow for periods of calmness for students to practice meditation and reflection. As practicing mindfulness and self-reflection are not innate skills, especially for young students, we recommend that teachers spend several weeks at the beginning of the school year introducing the topic of being mindful and fostering a growth mindset. Students can be encouraged to progress at their own pace throughout the mindfulness journey. We also recommended that teachers set aside a time of day to practice a mindfulness activity for the class. As students grow more comfortable with the strategies learned in the scheduled mindfulness activities, students should also be given opportunities to apply these strategies throughout the school day. Intentional conversations (Laursen, 2018) and “teachable moments” should be utilized for students to identify periods of the day in which mindfulness practices can be utilized. In elementary grades, the teacher can serve as the model by using a “thinking out loud” model in which the teacher explicitly demonstrates a period of the day in which a mindfulness practice, such as deep breathing or a body scan, can be used in the classroom.

Conclusion

We encourage school leaders to provide teachers who are willing and ready to take on the incorporation of mindfulness practices with professional development on being a “mindful leader.” There are professional development workshops and online classes that can be utilized for teachers to become familiar with different programs and mindfulness activities. Teachers who practice and familiarize themselves with mindfulness first will have a smoother transition implementing it within their own classroom.

Finally, we suggest that teachers reflect on students’ perceptions of mindfulness activities and the impact on students’ self-efficacy and resiliency. Follow-up research on ways to
measure student perceptions of mindfulness practices is suggested to best fit the age group of students who are participating in mindfulness practices.

About the Authors

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References


