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Action Research: Self-Regulation Journaling within Fifth Grade Classroom

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Abstract

Self-Regulation is vital to a student's academic success. This paper discusses how self-regulation has been shown to be integral to the learning process and academic success. This paper details an action research project which externalizes self-regulation in a written manner for students to reflect upon. Specifically, students answered prompts to activate their self-regulatory processes. Students' self-regulation was monitored throughout the semester to evaluate any changes.

Introduction

Research supports the idea that high levels of self-regulation competency and academic success are correlated (McClelland, M. M., John Geldhof, G., Cameron, C. E., & Wanless, S. B., 2015). For example, students who are proficient in self-regulation are more engaged in their educational experience (Blair & Dimond, 2008). Similarly, proficient students are able to motivate themselves and strategize to overcome their limitations to reach their educational goals (Blair & Dimond, 2008). I am interested in exploring how the technique of journaling self-regulation information and reflecting upon it impacts student self-regulation competency and academic success. Self-regulation is not only an important skill for learning but for success after adolescence.

Literature Review

There is little research available on teaching self-regulation at the middle childhood level even though several studies support its significance on an individual's overall success in life. Journaling has been done in the classroom before (Larrotta, 2009); however, no research is available analyzing the impact of externalizing the process of self-regulation through journaling. Academic journaling requires students to dialogue with themselves in a reflective manner in written form (Friston, 2008). The degree to which journaling is structured is dependent on the goal of the assignment. It may be used for students to dialogue with themselves about their academics in general or may have them focus on a topic (Fiston, 2008).

Pintrich (2000) defines self-regulation as the “active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual

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features in the environment.” Students assess the conditions of a task, employ a strategy, monitor progress, adapt the strategy to overcome limitations, and master the task (Vassallo, 2014). Self-regulation strategies can be utilized by an individual to monitor the efficiency and effectivity when completing tasks, working towards a goal, or resisting impulse (Cadima, J., Verschueren, K., Leal, T., & Guedes, C., 2016). Self-regulation is a skill that surveys an individual's skill set to determine which strategies aid them in reaching their goal and which strategies are not working or need modified.

Self-regulation takes place within the brain, although research had only recently begun to analyze which areas of the brain in particular are responsible. Studies suggest that self-regulation is controlled, in main part, by the prefrontal cortex and the amygdala (Heatherton & Wagner, 2011). Patients with anxiety and mood disorders or who struggle with alcohol abuse issues have challenges regulating impulses and emotion due to a structural connectivity issue within the brain (Heatherton & Wagner, 2011). Neuroimaging is just now beginning to examine ties between self-regulation and the brain. Evidence from studies conducted thus far suggest that self-regulation failures occur when there is not adequate top-down control and bottom-up impulses are strong. (Heatherton & Wagner, 2011). Research also supports a strong integration between self-regulation and executive functions (King, K. M., Lengua, L. J., & Monahan, K. C., 2013).

Failure of self-regulation is common when people are upset and negative emotions are present (Heatherton & Wagner, 2011). Individuals who have poor self-regulation are more likely to engage in unprotected sex, smoking, alcohol, drugs, gambling, binge eating and other risk-taking behaviors (King et al., 2013). Avoiding regulation and awareness allows individuals to avoid confronting their negative emotions and disengages meaningful thinking (Heatherton & Wagner, 2011).

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An individual's self-regulation will develop and evolve from birth through adolescence (King et al., 2013). Early intervention is suggested to improve a child's self-regulation if they begin at a lower level. However, students who began at a higher level did not demonstrate these gains (McClelland et al., 2015) This research indicates that self-regulation is most impactful when developed in early elementary before the students develop performance and avoidance goals.

Early childhood is a formative time for cognitive, social, and personal functions (King et al., 2013). Strong self-regulation in childhood leads to social competence such as collaboration, empathy, and prosocial behavior (Howard & Melhuish, 2017). Students who come from disadvantaged homes are more likely to have issues with self-regulation and executive functions (Cadima et al., 2016). These students stand to gain the most from intervention. Studies support a relationship between a child's socioeconomic status and self-regulatory abilities (McClelland et al., 2015). Those with a low socioeconomic status measure to have lower self-regulation (McClelland et al., 2015). Similarly, students who experienced higher levels of stress during childhood also appear to have self-regulation deficits (Hackman, D. A., Gallop, R., Evans, G. W., & Farah, M. J. , 2015).

Learning is founded in student self-regulation of their own thought processes to address their individual learning needs and identify what they need to be successful (Cadima et al., 2016.) Self-regulation in the classroom facilitates proactivity amongst the students and actively engages them in their own educational experience (Lichtinger & Kaplan, 2011). Evidence from many studies have concluded that there is a strong connection between strong self-regulation and student academic achievement and long term social success (McClelland et al., 2015).

Successful self-regulation includes endorsed standards that are monitored, motivation to meet the

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endorsed standards, and a capacity to overcome deficits to meet these standards (Hofmann, W., Schmeichel, B. J., & Baddeley, A. D., 2012).

Previous research in the classroom has been conducted by evaluating caregiver reports, direct observations, and direct assessments to measure self-regulation (McClelland et al., 2015). One study was conducted ranking statements regarding cognitive, behavioral, and social self-regulation on a one to five scale (Howard & Melhuish, 2017). A one on the scale indicated the statement was untrue and a five would indicate that the statement was very true. This format was found to be both valid and reliable (Howard & Melhuish, 2017).

Rubrics and scripts have been used to comparatively to assess self-regulation, learning, and self-efficacy as well as looked at the impact self-assessment has on self-regulation (Panadero et al., 2012). The study hypothesized that students' self-regulation, learning, and self-efficacy would improve if the student used a rubric or script and received process instruction and feedback. The study confirmed that rubrics and scripts promoted more self-regulation than no intervention. The script impacted student self-regulation more than the rubric did. The use of scripts and rubrics impacted student learning positively and provided similarly higher rates of learning. The research did not support a heightened sense of self-efficacy among students based on the increase of self-assessment alone. Feedback provided to the students improved student efficacy more when it focused on the process than the product. Perhaps because it provides insight as to what contributed to their success or failure (Panadero et al., 2012).

Journaling has been used in the classroom with a variety of goals. A 2012 study looked at student well-being and varying interventions (Flinchbaugh et al., 2012). Students engaged in stress management techniques and gratitude journaling. The students journaled recent

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experiences for which they were thankful. Several studies have shown a positive relationship between gratitude journaling and student's satisfaction in school (Flinchbaugh et al., 2012).

Journaling was used in mathematics to deepen their mathematical understanding, reasoning, and engage in mathematical discourse (Yow, 2015). Student were provided feedback on their journals either by their peers or the teacher. The feedback provided the students with constructive criticism and positive comments to reflect on and improve future responses.

Methodology

Quantitative data were collected by having the students take a survey at the beginning of the year regarding the frequency in which each student engages in self-regulatory practices and their confidence to execute these engagements. Within this survey, student interests and feelings toward academics were also collected, though this was not the focus of the study. Students then took the same survey toward the end of the year and the data will be compared.

Along with the quantitative data collected in the survey, other data was collected as well. Student responsibility data was collected by analyzing homework completion, student preparation for class, and student participation. Every day, homework completion and class preparation were calculated as a class average. For example, if 40 of the 43 students completed homework for the day. The percentage would be recorded as 93% completion.

Student behavior was tracked weekly using the card flip behavior system put in place by the district. Each card color was assigned a point value. Students begin the week on green (5 points). After one behavior infraction, the student flips their card to yellow (4 points). Another infraction flips them to orange, (3 points) blue, (2 points), or red (1point). Each student's card

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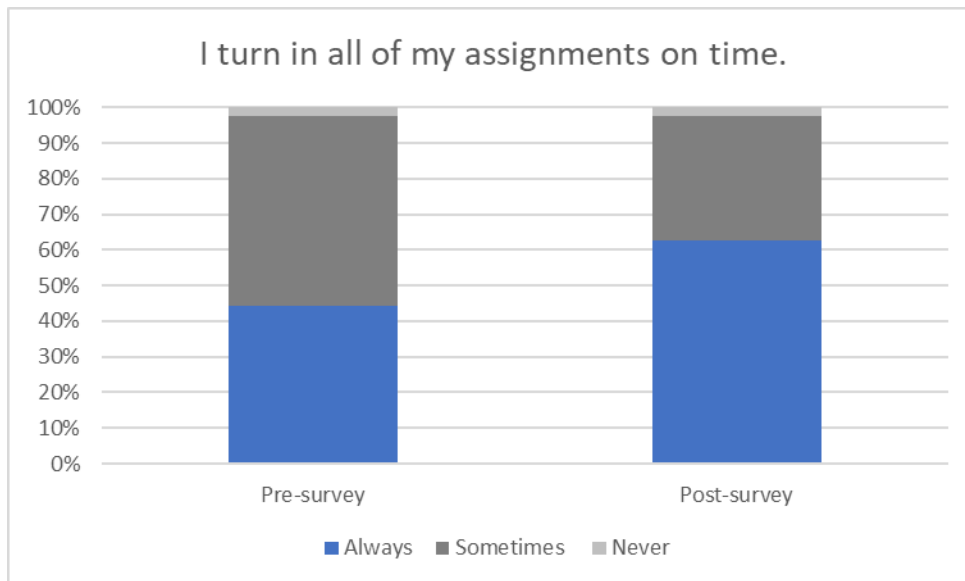
was recorded on Friday of each week and cards reset every Monday. The class points were then averaged each week.

Qualitative data will be collected each week by having students turn in their digital journals utilizing Google Classroom. Students were first provided with an example of a complete journal entry. Each week the students answer prompts and set two goals. One academic goal and one goal for any additional aspect of their life. Once a student chooses a goal, they describe their plan to reach that goal. From week to week students monitor if they have reached their goal. If they have, they set a new goal in the same area (academic or nonacademic). If they have not reached their goal, they assess whether their plan to reach the goal needs to be revised. Teacher guidance is provided once each week utilizing the comments feature in Google Classroom to ensure students are setting clear goals and paths to reach their goals.

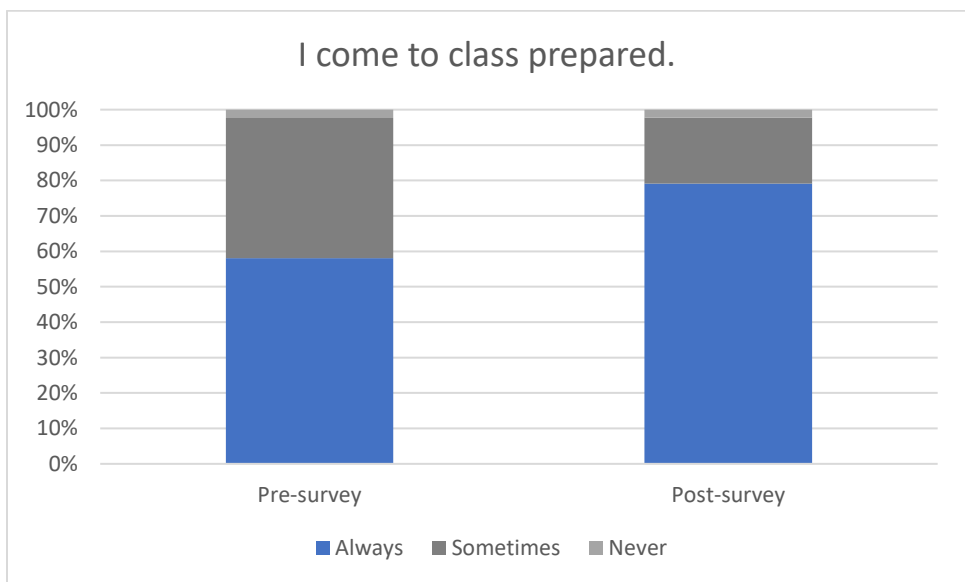
Data and Analysis

Overall, student self-regulation and ownership over their learning increased over the course of my research. There were six questions within the pre/post-survey designed to address student ownership of learning and self-regulation. The results of the pre/post-survey are as follow.

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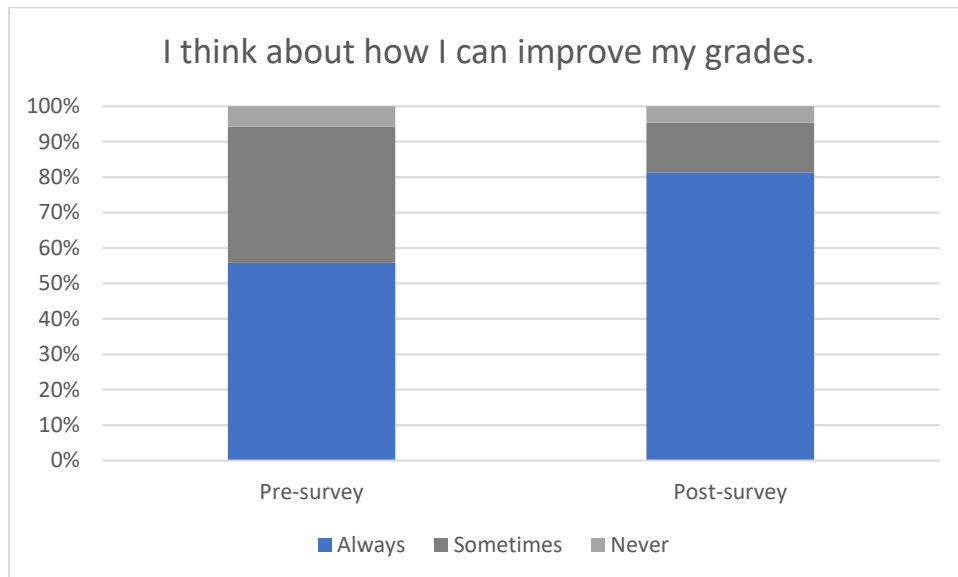


Z-score = 2.11	p-value = 0.035
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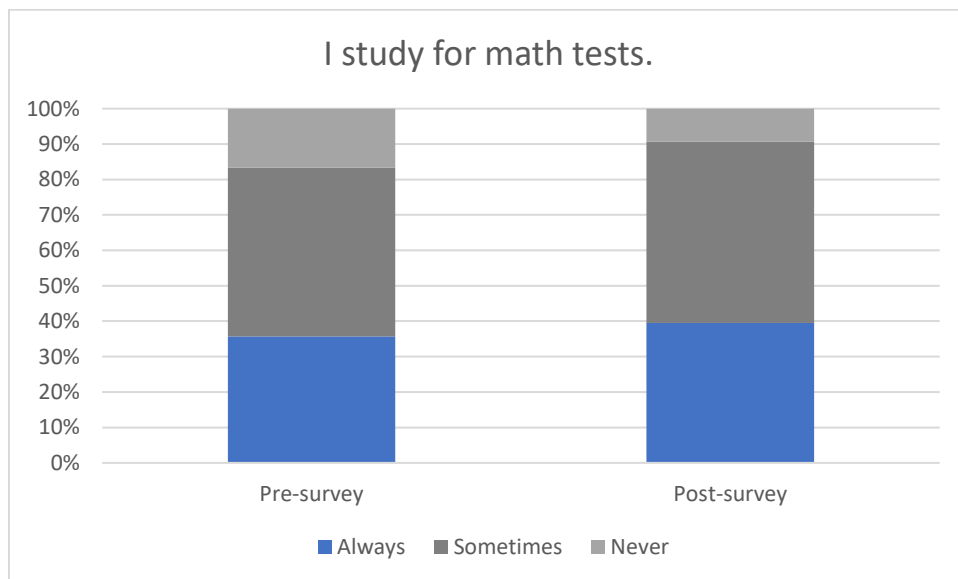
Z-score = 3.00	p-value = 0.003
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Z-score = 2.03

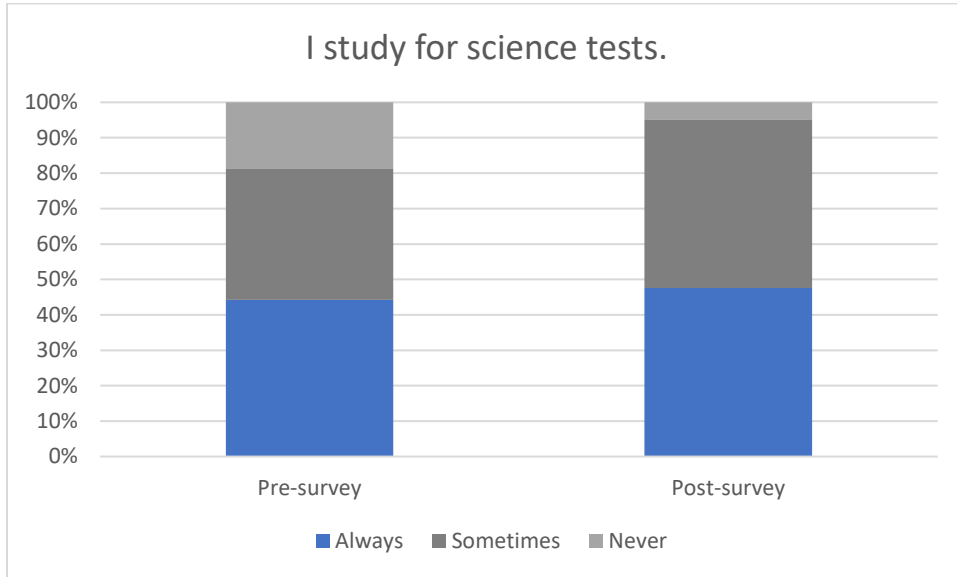
p-value = 0.035



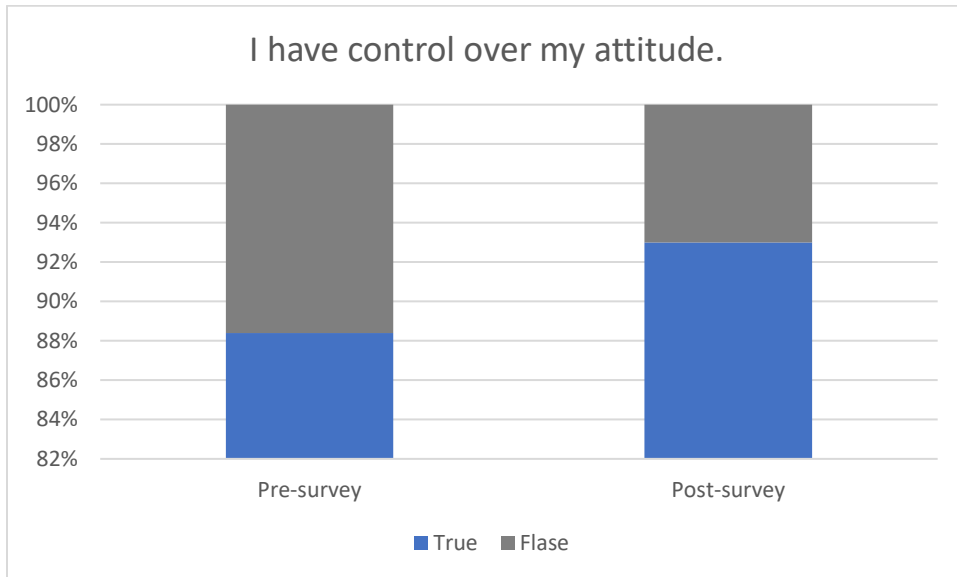
Z-score = 0.894

p-value = 0.371

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Z-score = 1.40	P-value = 0.162
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Three of the six questions yielded statistically significant growth. To be statistically significant, the p-value needed to be less than 0.05. “I turn in my assignments on time,” “I come to class prepared,” and “I think about how I can improve my grades”, were the three questions which showed significant growth. The z-score and p-values were found using the Wilcoxon signed-rank test to compare the pre and post surveys.

The average homework completion before the students began journaling was 73% and rose to an average of 92% during journaling. This improvement was observed both by me and through the student survey. Students came to class prepared an average of 87% of the time before they engaged in the self-regulation journaling and rose to 93% after journaling. The data I collected regarding student preparation for class aligned with the students’ self-assessment of their own preparation. Student behavior was an average of 3.82/5 before the research was conducted and 4.3/5 after the students engaged in goal setting.

Conclusion/Implications/Limitations

In my fifth-grade classroom, my students showed growth in self-regulation skills and an increase in student responsibility. The growth was displayed through homework completion, preparation for class, and overall student behavior. Students’ self-assessment of their own self-regulatory skills also showed an increase. Overall, the journaling proved to be successful with my fifth-graders. The results imply that self-regulation journaling has a positive impact on student responsibility within my classroom. Given the results, I plan to continue and expand this practice within my future classroom with a stronger focus on how to set goals before the students begin journaling.

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Through the study, I was surprised and learned a lot about my students' priorities inside and outside of school based on what goals they chose to set for themselves. This strengthened my instruction as the research was taking place as I was able to better connect my instruction to my students' interests. I was also able to deepen the rapport I had built with my students as they aided me in achieving my own goals, I had shared with them. Some of my students shared their goals with their classmates which allowed the class to work together to help one another achieve individual goals.

My research was consistent with what I would have expected based on the literature review. In the future, further analysis between the self-regulation journaling and changes in student academics would expand on the research conducted within the literature review.

Limitations of the study include various levels of overall student engagement within the journaling portion of the research. Student's effort in setting their own goals varied amongst the class. Some students set unclear goals or had a very general plan to reach their goals. Through teacher feedback, the plans and goals were revised over the course of a few weeks. Some students remained to be unengaged through the entire duration of journaling and did not meet weekly due dates. These students receive less feedback overall as they completed less journal entries.

The study was also limited by various changes within instruction and day to day practices in the classroom changing as a result of a dynamic shift between the Classroom Mentor Teacher and myself. The preresearch data was collected when the Classroom Mentor Teacher was in control of the day to day functions and instruction in the classroom. The research began to take

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place as soon as I took over as the main classroom teacher. A conclusion cannot be made regarding what changes in the data can be attributed to the self-regulation journaling alone.

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