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Methods of Goal Selection

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An Action Research Project Presented
in Partial Fulfillment of the Requirements
For the Degree of Master of Education

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Abstract

This action research project was created to determine the best method of goal selection. The two methods of goal selection being studied were teacher-selected and student-chosen goals.

Students were split into the two groups, randomly, and monitored their own progress over a four-week span. This project was carried out in a second-grade classroom between March and April of 2022. This project was carried out within my own classroom of 20 students, between the ages of seven and nine years old. Findings revealed that more students attained their goals within the teacher-assigned group. However, data analysis, through the Chi-Square Test of Association, showed there was not a significant difference between the two groups to show one method preferred over the other.

Keywords: goal setting, teacher-selected, student-chosen, SMART goals

Methods of Goal Selection

There seems to be a disconnect between student ability and their actual performance in the classroom. This is leaving teachers to ponder why students are not showing their full potential and ability, and what can be done to increase motivation and engagement in the classroom (Fitch, 2013). When students lack motivation or engagement, this can lead to behavioral distractions, lack of effort on assignments, and can result in loss of academic growth. Fitch (2013) tells us that motivation is a result of numerous components of students' lives and can have a varied, mixed outcome in the classroom (p. 5). Motivation can come from modeling, through parents or peers, as well as personal experiences of success or failure, or even positive or negative reinforcements.

In the classroom, teachers strive for students to become self-determined and self-motivated. Self-Determination Theory (SDT) has been widely studied; this theory supports the idea that students make specific choices within their lives and the theory looks at the motivation behind these choices (Gerani et al., 2020). Motivation and self-regulation can be a challenge for general education students as well as students with disabilities and special needs. This can lead to struggles academically, socially, behaviorally, and mentally. Therefore, motivation and engagement are important factors for successful academic and behavioral outcomes in the classroom (Stevenson, 2016). Goal setting is one intervention type that is being used across grade levels to assist students with their motivation and engagement. Students with disabilities have set and met goals toward self-regulation, time on task, and problem solving. Problem solving skills have been shown to help students learn self-determination skills (Cote et al., 2014). Goal setting has also been shown to assist general education students with academic gains across

content areas. There is an array of studies in which students select their own goals or the researcher/teacher selects the goals for the students. However, there is a lack in research determining which goal selection method is best.

The purpose of this action research is to determine the best method of goal selection with elementary-age students. This study will determine if student-selected goals or teacher-assigned goals has a higher rate of goal achievement. Based on the outcomes of this study, I will be able to determine the best course of action moving forward. This study will assist in determining which goal selection method is best for student outcomes. This study is not to measure motivation or engagement, specifically; this study is meant to identify which goal selection type can best lead to goal achievement. If students are meeting their goals more often, research has already stated how this leads to increased motivation and engagement. Goal setting is an important factor in student's academic success because it leads to increased motivation (Martin et al., 2014). Therefore, when we can understand which goal selection type assists students to achieve their goals more often, we can lead students toward a path of motivation in the classroom.

Previous research, pertaining to the topic of goal setting, was mostly found through the use of the DeWitt Library, through Northwestern College. All research articles were peer-reviewed and published within the last ten years. In order to align my research with my objective, research articles had to specifically deal with goal setting and outcomes based on goals set. There is much research on Goal-Setting Theory; these articles also cover various goal topics, locations, students involved, and purpose of the research itself. My literature review articles cover how academics can grow through goal setting, such as math fluency, writing, and science. The articles also studied how students with autism can gain problem solving skills, how

students in physical education classes can increase their motivation toward aerobics, and how students with behavioral needs can strengthen their latency with classroom tasks. Throughout the many articles on goal setting, goal setting strategies were not consistent. Some researchers told students what goal they would be working on. Some studies asked students to create their own goals; some based on a subject, others quite open-ended. One article had students select a goal from a 'goal menu'. Yet, through their differences, these studies showed an increase in motivation, learning, engagement, academic growth, and more. My goal for article selection was to get a wide variety of goal types, goal selection types, goal purposes, and to see how these changes can affect student success and goal achievement.

I found, through my research article analysis, that goal setting is an important skill and use within the classroom for motivation, engagement, and learning. There were consistent factors throughout many articles, such as the importance of goal types. When students set goals, we want them to be setting SMART goals. SMART goals are Specific, Measurable, Achievable, Relevant, and Time-Restricted. Carroll (2013) tells us that the more specific students or teachers make the goal, the higher chance there is of the student achieving said goal (p. 433). Carroll (2013) also goes on to state that students are more likely to achieve their goal when they have high commitment toward their goal (p. 433). Commitment can be gained when students understand their goal and how it will affect their success in the content area of the goal.

Thinking back to how goal setting has been shown to increase student motivation and academic success, Hattie (2009), as cited by Martin et al., (2014), explains that goal attainment has an effect size of .50. This tells us that not only goal setting, but goal attainment is an important aspect. Achieving goals is an important factor in student success with goal setting interventions. Therefore, my research will determine the better goal selection method in order to

set students up to achieve their goals; whether that be teacher-assigned or student-selected.

Studies have explained that student-selected goals can be a challenge for students who do not have background knowledge or an understanding of the ‘what’ and ‘why’ for goal setting.

Student-selected goals, with no input or teaching, can be shown to have a non-motivational effect on student’s desire to attain their goal (DeMink-Carthew et al., 2017). Students need instruction on goal setting, the ability to understand its purpose, how it can affect their success, and how to best implement these goals into their lives. My classroom has been learning about goal setting and the purpose behind it.

Our school is in its second year as a Leader in Me (LIM) school. LIM is based on the research writing of Steven Covey, author of *The 7 Habits of Highly Effective People*. One of these habits pertains directly to goal setting. My students have not gotten to the goal setting process, yet, but they do have the background knowledge of goal setting and goal achievement when it comes to the ‘what’ and ‘why’. I believe this will make a difference in the outcomes of my student’s goal achievement. My hypothesis is that, since my students have goal setting background knowledge, student-selected goals will have a higher percentage of achievement compared to teacher-selected goals. Students will create goals that are relevant to them and create a meaningful experience throughout. The more motivation and understanding, the more likely they may be to achieve their goals.

Throughout the literature review to follow, research on goal setting will be divided into four main categories. Each category will focus on a different, yet cohesive, portion of goal setting. The literature review will dive into Goal Setting Theory and the components of goal setting; within these components, SMART goals will be discussed and analyzed as well as the components for proper goal setting, as told to us by McDonald & Trost (2015). Following the

overview of goal setting, research will be shared about the effects of goal setting on motivation and engagement in the classroom. These components will be joined with the process of adding graphing and other reinforcements to the goal setting process. Once goal setting is better understood, the literature review will discuss the process of selecting goals. This includes performance vs. mastery vs. personal best, skill-driven vs. interest-driven, and finally teacher assigned vs. student selected goals. Among the research for goal setting, Self-Determination Theory (SDT) has been widely discussed; the literature review will go in depth about SDT and the impact goal setting has on the self-determination of students.

Review of the Literature

Goal-Setting Theory

Goal-Setting Theory (GST) has been widely studied, over the years, through many different fields. GST was first developed and studied to create more motivation and effect productivity within the workplace (McDonald & Trost, 2015). This theory has made its way into classroom and the lives of students and educators. Research completed by Locke and Latham (1990), as cited by Gerani et al., (2020), lets us know that to effectively set goals, the goals must be SMART. SMART is an acronym for Specific, Measurable, Attainable, Realistic and Time-Bound (p. 337). SMART goals allow for students to set goals that they understand, goals they can keep track of, and goals they know are difficult but within their reach of attaining. This means that in order for students to set SMART goals productively and accurately, they must have the background knowledge of goal setting. Student in my class have the background knowledge and experience with identifying and working with goals; therefore, my hypothesis is that students in my classroom will be able to set and achieve their own SMART goals; they will also have more commitment to these goals, based on their own choosing.

Specific goals that are difficult, yet attainable, lead to higher performance (Ginns et al., 2018). Specific goals, compared to more general 'do your best' goals, has shown to have more positive learning outcomes and students who outperform the more general-made goals (Cheng et al., 2019). Attainable goals allow for students to be challenged, yet the goal is not out of reach. In a study of Individual Learning Plans (ILPs) and their connection to goal setting, Brown & Byrnes (2014), state that making sure goals are relevant and time-restricted allows for students to make connections between their learning and how they will grow as well as assists students in focusing on the tasks at hand (p. 205).

The commitment that students have with their goals is an important factor toward goal attainment. When students are committed to their goals, this leads to an increase in persistence and goal attainment (McDonald & Trost, 2015). Some may believe that student-chosen goals lead to an increase in commitment. However, research has shown that unless students have an understanding and background knowledge on goal setting, they may not always choose SMART goals; leading to lessened motivation and commitment (Gross et al., 2014). GST has been based on the idea, through studies by Locke & Latham (2002), as cited by McDonald & Trost (2015), that people have free will and that goal setting can help drive their choices and positively effect performance.

Motivation and Engagement

Goal setting increases motivation in the classroom (Gross et al., 2014). Both Gerani et al., (2020) and Alesch & Niblack-Rickard (2018) discuss the importance and differences in understanding intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation refers to a persons' motivation toward attainment of satisfaction and pleasure, while extrinsic motivation focuses on the search for rewards and/or an avoidance of punishment. Amotivation is

a lack or absence of motivation. As educators, we want to increase students' intrinsic motivation. According to Pink (2009), as cited by Alesch & Niblack-Rickard (2018), a lack of intrinsic motivation can lead to a life of no true independence and a dependence on "external gratification" (p.9). Rewards in schools, such as grading systems and sticker charts, have shown to have negative effects on motivation in the classroom. Goal setting has been found to support and increase motivation in individuals and is a skill seen in students who are intrinsically motivated (Alesch & Niblack-Rickard, 2018).

When setting goals, goals need to be challenging yet attainable. Goal setting is a way for students and teachers to establish objectives for learning tasks and behaviors (Kleinert et al., 2017). It is also a way to set a plan and activate motivation toward learning (Alesch & Niblack-Rickard, 2018). When students set goals that are above their current level of ability, yet are within reach, students are engaged and find more joy in their tasks. (Martin et al., 2014). This engagement leads to increased focus on the tasks, as well. Alesch & Niblack-Rickard (2018) explain that the more difficult, yet attainable, the goal, the higher the outcome in performance (p. 5) as opposed to setting a 'do your best' goal, that has shown lower performance outcomes. A study done by Stevenson (2016) to decrease latency toward tasks by the use of goal setting has shown that goal setting increases student self-reflection, motivation, and self-regulation skills (p. 208). If a student sets their goal too high or too low for their own ability, research has shown this decreases performance and outcomes of goal attainment (Gross et al., 2014). If a student sets a goal that is unattainable, they are also, then, not creating goals that are SMART. SMART goals allow for more goal attainment, effort by the student, and create an increase in persistence (Gerani et al., 2020). This relates back to goal attainment producing higher motivation which is the purpose of my study. Goal attainment leads to higher motivation, therefore which method of

goal selection will lead to higher attainment? Gerani et al., (2020) also tells us that goal selection promotes achievement and sustained motivation throughout the completion of tasks (p. 338).

Goal Selection

Studies have shown mixed results when it comes to student-selected goals vs. teacher/researcher assigned goals. Many studies that focus on goal setting, for multi-purposes in the classroom, have varied goal selection process, which leads to my curiosity as to which selection process leads to higher goal attainment. A study by Stevenson (2016) focused on reducing student latency on tasks. The study had students independently select their own goals with no parameters given. Cleary et al. (2008) and Schunk (1985), as cited by Stevenson (2016), states that students who are able to select their own goals increase their self-regulation skills, learning, and confidence in their ability to attain their goal (p. 208). Within this study, students reduced their transition time due to the implementation of the intervention (p. 216). Another study that allowed for student-set goals, researched the effects of setting personal best goals and its effects on mathematical fluency. This study explained the differences found between mastery goals and personal best goals. Mastery goals were shown to have a higher increase in student motivation, while personal best goals had a higher increase in student engagement (Ginns et al., 2018). A study by Martin et al., (2014) also looked at personal best goals and agrees with the determination that personal best goals have a positive effect on motivation (p. 92). Reed & Lynn (2016) describe the difference in mastery and performance goals; a mastery goal focuses on the learning and outcomes of developed skills. Mastery goals are self-referenced, while performance goals focus on showing competence on a task that is “normative in nature” (p. 152).

A study by Fitch (2013) focused on effects of goal setting on student motivation. The process for goal selection, within this study, added a small element of teacher assistance to the student-selected goal method. Outcomes showed a positive effect on intrinsic motivation and provided students with a purpose for their work. Of the seven students in this study, four of the students attained their set goals, while three did not attain their goal. Therefore, not all student-chosen goals lead to goal attainment.

On the other side of goal selection methods, Koenig et al., (2016) studied the effects of teacher-provided goals on writing fluency. In this study, students were assigned their goal, yet were in charge of self-scoring and graphing their progress. Therefore, goals were not student-selected, but the processes that followed were student-driven. This study also integrated the use of feedback with the goal setting process; this showed an increase in growth with both goal setting and feedback, yet there was no discrepancy between the ‘feedback only’ group and the feedback + goal setting group. Therefore, this identifies the importance of feedback within the process. Providing students feedback allows them information about their performance so they can make decisions on adjustments and steps moving forward (Reed & Lynn, 2016). Hansen & Wills (2014) also use the process of teacher-assigned goals within their study of goal setting and contingent rewards. This study found that performance increased with goal setting, while skills increased with instruction, and continued to increase when goals were added.

DeMink-Carthew et al., (2017) focused on personalized learning environments, for middle grade students, and the effects of different goal selection methods on student performance. This study focused on five different goal-selection methods. Of the five varieties of goal setting, the goal setting processes that included both students and teachers as co-

designers, as well as included interests and skills, led to the most engagement and motivation; while goals assigned by the teacher led to little engagement.

Student-selected goals and ‘authority-selected’ goals have mixed results, according to Gross et al., (2014). They tell us that only 46% of students were able to set realistic goals (p. 557); setting realistic goals is one aspect of setting SMART goals. Therefore, having background knowledge on setting SMART goals can have an impact on students-set goals and their attainability. My students have had experience with SMART goals, which is why I believe they will set goals that are realistic, leading to attainment. Through the diversity of goal selection methods, there has been a wide variety of outcomes; which is best practice? Studies have shown that both teacher-assigned and student-selected goals can lead to goal attainment, engagement, and motivation. However, there is still a gap in research as to which method leads to more goal attainment, which will be the purpose of my study.

Self-Determination Theory

Goal setting is a component of the bigger idea, Self-Determination Theory (SDT). SDT focuses on the motivation behind choices people make and how one’s choices and actions are self-determined (Gerani et al., 2020). Motivation types consist of intrinsic, extrinsic, and amotivation; using the SDT, we want students to increase their intrinsic motivation. Gerani et al., (2020) tells us that when students are intrinsically motivated, they are autonomous in their decision-making, which leads to positive outcomes versus extrinsic motivation creating controlled motivation (p. 334). When students are autonomous in their decision-making and they are within an “autonomy-supported climate”, this can lead to increases in participation, effort, and self-esteem (p. 335). On the other hand, Gerani et al., (2020) tells us that when

students are in a more controlled classroom climate, there is more pressure for students to make certain choices and act certain ways; this leads to a lack in self-determination (p. 334).

It is important for young students, in their adolescent years, to learn self-determination skills. Self-determination skills are shown to increase one's quality of life by allowing them to have more control over their choices and outcomes in life (Kleinert et al., 2014). Cote et al., (2014) and Carroll et al., (2013) also tell us that adolescence is the best developmental time to teach students self-determination skills. Erturan-Ilker (2014) states that adolescence is an important stage for this type of learning and not having self-regulation skills in childhood can have a negative effect later on in life (p. 134). Carroll et al., (2013) tells us that this is a critical stage in life for the learning and practicing of goal setting (p. 432). Learning these skills at a young age increases the chance for the skills to maintain throughout life. Since goal setting is one of the components in SDT, teaching students how to set goals and the differences between goal types helps to shape the trajectory of their life. Using self-determination skills, students set their goals around their social or personal identities, using their efficacies in different aspects of life to set their goals. (Cote et al., 2014).

Self-determination skills are a future predictor of success in the areas of proactivity, perseverance on tasks, one's emotional stability, and ability to set and achieve goals (Bierle, 2019). Goal setting, an aspect of self-regulation skills, was found to predict long-term success (Erturan-Ilker, 2014). SDT focuses on life skills that affect a person's self-esteem, perception of their abilities, and their beliefs of future success in their lives (Bierle, 2019). People are in charge of their own life choices and understanding how their choices affect their quality of life and awareness of needs is an important skill for future success. Self-monitoring is another aspect of SDT that Bierle (2019) tells us is important for organizational skills, leads to less stress, an

increase in confidence, and more (p. 6). Using self-monitoring with goal setting increases motivation and performance on tasks. Therefore, when goal setting, students are practicing and using their self-determination skills to choose their goals, monitor growth, and increase their engagement.

Methodology

My students have been learning about goal setting for the past two years. With the background knowledge of goal setting, I have wondered which type of goal selection is best. This project's research question is, which goal selection method, teacher-assigned or student-selected, leads to higher goal attainment? This study took place in my second grade, general education, classroom. The 20 students in the class were randomly divided into two equal groups (variables), either teacher-assigned or student-selected goal setting. The dependent variable, in this study, is the amount of goal attainment within each method of selection, while the independent variable is the goal-selection method. Throughout the first week of research, I met with each student to set goals. I met with four students each day for about two minutes.

Once the goals were set and their lead measures chosen, students took their goal folder to their desks for safe keeping. Lead measures are actions or steps that students will take in order to attain their goal. Their goal folder contained their goal setting sheet with lead measures as well as their recording sheet for progress monitoring. Throughout the study, I met with each student once a week to monitor their progress toward their goal. I monitored their progress, through discussion and view of their goal folder, with a 0, 1, or 2 if they had not yet started, if they were progressing, or if they had attained their goal. (See Figure 1)

Participants

The 20 participants within this study range in age from seven to nine years old; they are all in the same second grade class. Within this classroom, there are four children with IEPs for academics, behavior, and speech needs. Student demographics range significantly in socio-economic status; however, there is little difference in ethnic and racial backgrounds. These participants attend one of seven elementary schools in a medium-sized school district in eastern Iowa. Students were randomly assigned to one of the two treatment groups for this project: either teacher-assigned goal setting or student-selected goal setting. Each student was assigned or set a goal along with one or two lead measures to help them attain their goal.

Data Collection

My research project, Methods of Goal Selection, will take place over a four-week span with a week off for spring break. Each week I will meet with each student to monitor their growth toward goal attainment. I will meet with four students each day for about two minutes. During these meetings, the students and I will look at their lead measure sheet and discuss how they think their goal is going. I will ask students if they need anything from me to attain their goal; this could be more handwriting papers, chances to go to the library for more books, allowing them more time on their literacy technology, etc. These meetings also allow for students to refocus on their goal and continue toward attainment.

During each meeting I will be looking to see if students have started working toward their goal, if they are progressing toward their goal, or if they have already met their goal. I have assigned a number to each situation to monitor their growth. If students have not started their goal work, I will mark a zero in my excel document for the week; if they have started and are

progressing toward their goal, I will mark a one, and if they have reached their goal, they will be marked with a two. These numbers are a way for me to see how students are progressing.

This project will be completed within my own classroom and within normal educational practices; my school is a Leader in Me school where the goal setting process is an expectation to begin working toward. Therefore, this project was approved for IRB educational exemption. In order to keep confidentiality among the students, I will use numbers in place of their names during data collection and analyzation.

I will use the Chi-Square Test on Association to determine the difference between the two intervention groups and their amount of goal attainment. This will allow for determination of any significant difference between the groups, which is the goal of this study. If students reach their goal, they will be marked as 'met'; if they do not attain their goal they will be listed as 'did not meet'. The Chi-Square Test on Association is a reliable data analysis tool due to the randomized group assignments. This tool allows for an understanding of data that is nominal; this study using 'met' and 'did not meet'.

Findings

Data Analysis

For this study, students were randomly assigned to a group. One group was student-selected goals, and the other group was teacher-assigned goals. Of the 20 students, 10 of them were assigned a goal and 10 of them selected their own goal (see Appendix A). Of the 10 students who were assigned a goal, eight of them met their goal within the four-week span. Out of the 10 students who chose their own goal, four students attained their goal within the same time frame (see figure 1). Therefore, 80% of the students in the teacher-assigned group attained

their goal, while 40% of the students in the student-chosen group attained their goal. Figure 1 shows the raw data that was collected. Each week monitors their progression toward their goal. The final data to analyze states whether they met or did not meet their goal.

Figure 1

Groups and Weekly Data Collection

	A	B	C	D	E	F	G	H	I	J
1	Student	Week 1	Week 2	Week 3	Week 4-Final--analyze					
2	1	1	1	1	No					
3	2	0	1	1	No			Scale:	No evidence of progress	0
4	3	1	1	1	No				Progressing toward goal	1
5	4	1	1	2	MET				Met goal	2
6	5	1	1	2	MET					
7	6	1	1	1	No				Student Chosen Goal	
8	7	2 x	x		MET				Teacher Chosen Goal	
9	8	1	1	2	MET					
10	9	0	1	1	No					
11	10	1	1	1	No					
12	11	1	1	2	MET					
13	12	1 absent		2	MET					
14	13	1	1	1	MET					
15	14	1	1	2	MET					
16	15	1	1	1	No					
17	16	0	0	1	No					
18	17	1	1	2	MET					
19	18	1	2 x		MET					
20	19	1	1	2	MET					
21	20	1	2 x		MET					
22										

As you can see, there was one instance of a student being gone the day of their weekly meeting; we also had a break in between weeks one and two for spring break. Within the four-week span, one student met their goal within the first week. This goal was student-selected and could be accomplished in the classroom throughout the school day. This student wanted to reach the next level on our literacy technology-based program (Lexia). This program is an online reading intervention for all students. They work through skills and level up once they complete different skill-work. It seems that this student was not only motivated, but it was helpful that his

goal was an activity that is required each day and fits into his daily schedule; therefore, he did not need to find his own time to work on his goal. Two students met their goal the second week, eight students met their goal in week three, and one student met their goal the final week.

Most of these goals could be accomplished within the classroom, such as keeping a tidy desk, doing their classroom job 10 times, practicing their handwriting, and increasing their words per minute on their weekly progress monitoring. Others needed to be done at home or on their own time, such as goals to read 20 minutes each night at home, practice their spelling lists each night, and to spend more time outdoors for 10 days.

Looking at each week and when student met their goal, the mean and average timeframe for students to meet their goals was three weeks. This should be taken into consideration for future goal setting, students may need more time to attain their goal or assistance in setting a goal with a reasonable timeframe. Students who chose goals that were completed outside of the classroom, also had a lower rate of attainment, which should also be taken into consideration. Students seemed to attain their goal when they were at school and thinking of their goal, instead of being home and forgetting to practice their goal for the night. This can also be related to the age of the students and how they may need assistance at home or in school to remember to practice. Of the 12 students who met their goal, four of them chose their own goal and eight of them had a teacher-assigned goal.

The teacher-assigned goals had a higher instance of goal attainment than the students who selected their own goal. Therefore, relating back to my research question, does teacher-assigned goals or student-selected goals lead to higher instances of goal attainment, we can see that more students attained their goal in the teacher-assigned group. So, in a class of 20 students, it seems that students are more likely to attain their goal if the goals are assigned. However, with

a bigger or different sample size, and depending on the goal-setting background of the students, different classes could have different outcomes. For my own classroom, students will need more lessons on SMART goal setting and have teacher-assigned goals to work on in order to practice the skills and strategies for setting goals independently.

I hypothesized that students who selected their own goals would have a higher instance of goal attainment. This is because students would be more self-motivated along with their prior knowledge of how to set SMART goals. Our classroom and school have been working on goal setting for two years, now. I hypothesized that because of this background knowledge and practice, students would be able to set and meet their own goals, creating more motivation, rather than when being assigned a goal. However, this did not turn out to be the case. More students accomplished their goals within the teacher-assigned group. Research has shown that goal setting and goal reaching is motivating. Research has also shown us that if students cannot set a clear SMART goal, they are less likely to attain their goal, decreasing motivation.

Even though the teacher-assigned group had a higher instance of goal attainment, the data must be analyzed to measure if the difference between the two groups is significant and truly makes a difference when goal setting. In order to determine if the teacher-selected goals had a significant effect on goal attainment, I completed the Chi-Square Test on Association with the data collected. This test shows if there is a statistically significant difference between the two goal-setting groups between meeting and not meeting goals. Figure 2 shows the Chi-Square Test on Association.

Figure 2*Chi-Square Test on Association*

	Met	Did Not Meet	<i>Marginal Row Totals</i>
Student Selected	4 (6) [0.67]	6 (4) [1]	10
Teacher Selected	8 (6) [0.67]	2 (4) [1]	10
<i>Marginal Column Totals</i>	12	8	20 (Grand Total)

The chi-square statistic is 3.3333. The p -value is .067889. Not significant at $p < .05$.

The chi-square statistic with Yates correction is 1.875. The p -value is .170904. Not significant at $p < .05$.

Even though more students reached their goals within the teacher-assigned group, the Chi-Square Test on Association showed that there is not a significant difference between the groups, $X^2(1, N = 20) = 3.33, p = .068$. The p value within this data is greater than .05, which determines that there is not a statistically significant difference between the two goal-setting groups. Therefore, even though more students reached their goal in the teacher-assigned group, it does not make a significant difference in the attainment of goals.

Discussion**Summary of Major Findings**

This research project found that, between the two groups--teacher-assigned and student-selected--the group that was assigned a goal had a higher rate of goal attainment than the group of students who chose their own goal. This is the opposite of what was originally hypothesized. Since my students have a background in goal setting knowledge, through the Leader in Me program, it was thought that they would be able to set their own SMART goals, have higher

motivation, and reach their goals. However, many students who chose their own goal either chose a goal that needed to be completed outside of the classroom or a goal that was not motivating to them. Some students did not know what they wanted to work on or set a goal toward. Since we are in the early years of goal setting, students may need more practice and experience with this skill.

One student wanted to be able to jump higher than the gymnastics bar at recess, while another student wanted to read 20 minutes each night at home. Both were specific goals and had lead measures to help attain their goals. However, the student who wanted to jump higher would forget to practice when it came time for recess, showing that this was not a relevant goal for their life. The other student would also forget to read when they got home. On the other hand, one student chose a goal of tidying their desk each morning when they got to school, and one student chose a goal to complete their classroom job 10 times within the four-week span. These student-selected goals were attained because they were able to be completed in the classroom and would be in the routine of completing the tasks within our daily schedules. Therefore, it seems that if a goal being set could be within their everyday routine and lives, students may have a higher chance of meeting their goal.

This project and goal setting experience was wide-open for students. The goals did not need to be academic-based, school-based, performance-based, etc. Students could choose to set any goal they would like. Since this was their first time setting a goal, this gave them a chance to select something that was meaningful to them. This proved to be quite the challenge and almost too open-ended for the students. Therefore, for my future work with goal setting in the classroom, I will be deciding the topic for the goals so that all students are focused on the same skills. For example, next time they could all set goals within reading fluency, spelling test

scores, math automaticity assessments, etc. This way, students would all be working on the same type of skill, they would just have their own goal to reach. We would also be able to have a set time in the day to work toward the goals since they will all be on the same topic or area of study. Goal setting is a skill that needs to build on itself. We need to start out with a smaller scope and work our way to bigger, independent goals.

Impact on Teaching

Based on what I found through this research, with my small sample size, I will be moving forward with a combined goal setting process of student and teacher decided goals. This can create a conversation about what they would like to accomplish along with that I believe is attainable for them to reach. We will set goals that are collaborated together so that students have a good sense of the direction they are headed with a specific, measurable, attainable, relevant, and time-based (SMART) goal.

Limitations of the Study

A few limitations exist within this research project. First, the sample size was only 20 students. Using bigger groups would allow for the data to better represent if there is significance between the two goal setting groups. Another limitation to this study is that this was the first time students had set and worked toward a goal. This was their first experience with this skill; if students had already been setting goals each year in school, there may have been a different outcome to the data. Perhaps if students had set goals before, the student-selected goal group may have had a higher instance of attainment. This goal setting project was also open-ended with the subject and topic for their goals. Data and outcomes could have been different if there were a specific goal setting topic or subject that all students focused on. This could have helped with students who were unsure of what they wanted to work on as their goal. Finally, this

project was set up to last four weeks. Students did not get to choose the duration. Perhaps if the students who did not meet their goals within the timeframe had longer, they may have achieved their goals.

Further Study

When deciding whether to assign students their goals or allow them to select their own, future research should focus on one topic within the classroom for students who are starting out and setting their first goals. Choose a topic, such as fluency, and have students set their goal around that topic. This can assist students to better understand what realistic and attainable goals are and how to set them. With one topic, this can also assist the researcher in determining the best goal-selection method based on one variable.

Timeframes for set goals should also be considered in future research. Perhaps researchers evaluate the difference between short and long-term goals within the classroom. Do short-term goals create more motivation since they are attained more quickly? Do long-term goals create more attainment since students have more time to practice and work toward their goals? Researchers could find if there is a difference in goal attainment when the teacher is assigning a deadline versus when a student is assigning their own timeframe. This can all help to measure how well students can create SMART goals by assessing each piece of S.M.A.R.T.

Finally, future researchers could focus on the differences between goals that take place at home and goals that will be worked on at school. Depending on the age of the students, these could have quite different outcomes and findings. Younger students may need to keep goal work in the classroom in order to have reminders, routines, and structure; while students who are older may be able to work outside of the classroom by taking initiative toward their goal.

Conclusion

This study analyzed the difference in goal attainment between two groups of students. The study found that students in the teacher-assigned goal group had a higher instance of goal attainment when compared to the student-selected goal group; however, data analysis showed that there is not a significant difference between the two groups to determine one better method over the other. Future research is needed with a larger group of students, and perhaps a more focused topic/subject for the goals, to continue the determination of which method leads to higher goal attainment. This study will assist my classroom goal-setting practice. More goal setting knowledge and lessons are needed to increase student awareness of how to set and identify SMART goals. Goal setting is a skill that takes time and practice.

References

- Alesch, K. & Niblack-Rickard, F. (2018). The effect of goal setting and student self-reflection on motivation and on task behavior in the upper elementary public montessori environment. *Sophia, the St. Catherine University repository website*:
<https://sophia.stkate.edu/maed/285>
- Bierle, E. (2019). Does goal setting make a better reader? [dissertation]. *Northwestern College*.
https://nwcommons.nwciowa.edu/education_masters/135/
- Brown, P., & Byrnes, L. (2014). The development and use of individual learning plans for deaf and hard of hearing students in victoria, australia. *Deafness and Education International*, 16(4), 204–217. <https://doi-org.ezproxy.nwciowa.edu/10.1179/1557069X13Y.0000000034>
- Carroll, A., Gordon, K., Haynes, M., & Houghton, S. (2013). Goal setting and self-efficacy among delinquent, at-risk and not at-risk adolescents. *Journal of Youth and Adolescence*, 42(3), 431-43. <http://dx.doi.org/10.1007/s10964-012-9799-y>
- Cheng, Z., Richardson, J., & Newby, T. (2020). Using digital badges as goal-setting facilitators: a multiple case study. *Journal of Computing in Higher Education*, 32(2), 406-428.
<http://dx.doi.org/10.1007/s12528-019-09240-z>
- Cote, D., Jones, V., Barnett, C., Pavelek, K., Nguyen, H., & Sparks, S. (2014). Teaching problem solving skills to elementary age students with autism. *Education and Training in Autism and Developmental Disabilities*, 49(2), 189–199.
<http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly->

journals/teaching-problem-solving-skills-elementary-age/docview/1526125211/se-2?accountid=28306

DeMink-Carthew, J., Olofson, M., LeGeros, L., Netcoh, S., & Hennessey, S. (2017). An analysis of approaches to goal setting in middle grades personalized learning environments.

Research in Middle Level Education, 40(10), 1–11.

<https://doi.org/10.1080/19404476.2017.1392689>

Erturan-Ilker, G. (2014). Effects of feedback on achievement goals and perceived motivational climate in physical education. *Issues in Educational Research, 24*(2), 152-161.

[http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-](http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/effects-feedback-on-achievement-goals-perceived/docview/2393125956/se-2)

[journals/effects-feedback-on-achievement-goals-perceived/docview/2393125956/se-2](http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/effects-feedback-on-achievement-goals-perceived/docview/2393125956/se-2)

Fitch, V. A. (2013). Further fostering intrinsic motivation in the montessori elementary classroom. *Distributed by ERIC Clearinghouse*. Retrieved January 30, 2022, from

<https://eric.ed.gov/?id=ED540068>

Gerani, C., Theodosiou, A., Barkoukis, V., Papacharisis, V., Tsorbatzoudis, H., & Gioupsani, A.

(2020). The effect of a goal-setting program in physical education on cognitive and affective outcomes of the lesson. *Physical Educator, 77*(2), 332-356.

<http://dx.doi.org/10.18666/TPE-2020-V77-I2-9489>

Ginns, P., Martin, A. J., Durksen, T. L., Burns, E. C., & Pope, A. (2018). Personal Best (PB)

goal-setting enhances arithmetical problem-solving. *Australian Educational Researcher, 1-19*.

<https://doi-org.ezproxy.nwciowa.edu/10.1002/jaba.92>

- Gross, T., Duhon, G., Hansen, B., Rowland, J., Schutte, G., & Williams, J. (2014). The effect of goal-line presentation and goal selection on first-grader subtraction fluency. *Journal of Experimental Education, 82*(4), 555–571. <https://www.jstor.org/stable/26594431>
- Hansen, B. & Wills, H. (2014). The effects of goal setting, contingent reward, and instruction on writing skills. *Journal of Applied Behavior Analysis, 47*(1), 171–175. <https://doi-org.ezproxy.nwciowa.edu/10.1002/jaba.92>
- Kleinert, J., Harrison, E., Mills, K., Dueppen, B., & Traylor, A. (2014). Self-determined goal selection and planning by students with disabilities across grade bands and disability categories. *Education and Training in Autism and Developmental Disabilities, 49*(3), 464–477. <http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/self-determined-goal-selection-planning-students/docview/1554980067/se-2?accountid=28306>
- Kleinert, W., Silva, M., Coddling, R., Feinberg, A., & St. James, P. (2017). Enhancing classroom management using the classroom check-up consultation model with in-vivo coaching and goal setting components. *School Psychology Forum, 11*(1), 5–19. <http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly-journals/enhancing-classroom-management-using-check-up/docview/1930877921/se-2?accountid=28306>
- Koenig, E., Eckert, T., & Hier, B. (2016). Using performance feedback and goal setting to improve elementary students' writing fluency: a randomized controlled trial. *School Psychology Review, 45*(3), 275–295. <http://ezproxy.nwciowa.edu/login?url=https://www.proquest.com/scholarly->

journals/using-performance-feedback-goal-setting-improve/docview/2087745314/se-2?accountid=28306

Martin, A., Durksen, T., Williamson, D., Kiss, J., & Ginns, P. (2014). Personal best (pb) goal setting and students' motivation in science: A study of science valuing and aspirations. *The Australian Educational and Developmental Psychologist, 31*(2), 85-96.
<http://dx.doi.org/10.1017/edp.2014.19>

McDonald, S., & Trost, S. (2015). The effects of a goal setting intervention on aerobic fitness in middle school students. *Journal of Teaching in Physical Education, 34*(4), 576-587.
<https://doi-org.ezproxy.nwciowa.edu/10.1123/jtpe.2014-0138>

Reed, D., & Lynn, D. (2016). The effects of an inference-making strategy taught with and without goal setting. *Learning Disability Quarterly, 39*(3), 133–145.
<https://www.jstor.org/stable/44280652>

Stevenson, N. A. (2016). Effects of planning and goal setting on reducing latency to task engagement for struggling readers in middle school. *Journal of Behavioral Education, 25*(2), 206-222. <http://dx.doi.org/10.1007/s10864-015-9238-8>

Appendix

Random Assignments for Goal Setting Groups

Each student has their own popsicle stick with their name on it. These popsicle sticks are kept in a jar and are used to draw names for various activities. In order to randomly assign each group, the first 10 sticks to be drawn were for the student-selected goal group. The second set of 10 sticks was assigned to the teacher-assigned goal group. The student-selected goal group included six boys and four girls. The teacher-assigned group included 7 boys and three girls.