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Goal Setting and Student Conferencing Action Research Study

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Abstract

This paper aims to answer the question: “How does student choice, goal setting and student conferencing impact student motivation to continue learning in a Montessori classroom?” The previous research has shown that choice is more motivational for students than no choices. Researchers have different opinions on what the options should look like to be most effective. This research compares these and sees what is most effective with the data. New and older research was used in conjunction with the foundations of the Montessori method to see what fits seamlessly to implement without much effort. The findings are the right combination of research methods and the Montessori method.

Keywords: student motivation, student choice, intrinsic motivation, enthusiasm

Introduction

I wanted to change the way my students viewed the world when I created this study. I have watched my students go through a pandemic no longer given the time to explore and gain the knowledge that they want, only what was required. As the pandemic progressed, I saw less and less motivation to continue and grow their love of learning. During the pandemic I wanted to figure out how to motivate them again to increase their knowledge of their interests. I wanted to teach them how to get that motivation back through goal setting, choice, and conferencing.

My lower elementary students are a part of a public Montessori school, where I am required to mix Montessori with the curriculum that is taught by the rest of the district. I am required to make sure that I cover the common core standards. We are the only Montessori school within a 90-mile radius. I am a white, woman, teaching mostly white children.

I noticed that what seemed to be the problem with my students was the lack of motivation. I think with the pandemic, teachers, myself included were trying to get in as much learning as we could in the short amount of time, we had with our students in person. The guidelines of the CDC to keep us safe ended a lot of the Montessori learning that we did. The Montessori learning with groups, we could barely use our materials unless we had time to thoroughly sanitize in between students or let it sit and wait for three days. When the true Montessori learning left the students', motivation left as well.

In my self-movement to fix my student's motivation to learn more and above and beyond. I looked for research and methods that would best help my students. The research was limited when it came to lower elementary. I read about how beneficial choice, goal setting and student conferencing was in older students and adults. One of these things I didn't have to do much work with because we already had built in choice in my Montessori classroom. I decided that I really

wanted this research to work and give my students their motivation back, so I went full force and decided to incorporate goal setting and conferencing! I knew it would be a lot of work, but my students are worth it, I want them to have their motivation and love of learning back. I feel with the pandemic many things changed and will never go back to what we knew as normal. Giving my students purpose and motivation to continue to learn and learn about what interests them can go back to what it was before the pandemic.

Theoretical Framework

In Montessori classrooms, children are given choice. Montessori's philosophy emphasizes the importance of giving students choice of work; the philosophy encourages student responsibility and gives students more control of the environment. "The environment must be rich in motives which lend interest to activity and invite the child to conduct his own experiences." (Montessori, 1995, p. 84). Goal setting is a tool that my students learned about and were able to execute their own goals.

Locke and Latham researched for years to come up with their goal setting theory. According to Locke and Latham conscious goals affect action.

"Goal-setting theory is summarized regarding the effectiveness of specific, difficult goals; the relationship of goals to affect; the mediators of goal effects; the relation of goals to self-efficacy; the moderators of goal effects; and the generality of goal effects across people, tasks, countries, time spans, experimental designs, goal sources, and dependent variables" (Locke & Latham, 2006, p. 4).

The goal-setting theory is what this action research is based upon. Goal setting is a skill that children can benefit from learning about. This skill will continue to keep them thriving in future endeavors.

When setting a goal for oneself, a challenging goal more likely to be achieved than an easy or difficult one (Locke & Latham, 2006). The goal setter must know their threshold and understand what will be challenging but achievable. According to the researchers, setting a challenging goal for oneself and achieving it is rewarding and energizing. "High, or hard, goals are motivating because they require one to attain more to be satisfied than do low, or easy, goals" (Locke & Latham, 2006, p. 2). Challenging goals encourage a person to use more significant effort. "Performance is a function of both ability and motivation" (Locke & Latham, 2006 p. 3). Goal setting theory talks about how important feedback throughout the goal-setting process is imminent. A goal setter needs to know how they are doing with their goal and can improve based on appropriate feedback. Feedback gives the goal setter more commitment to the goal, "which is enhanced by self-efficacy and viewing the goal as important" (Locke & Latham, 2006).

Four-goal mechanisms aid Locke and Latham's goal-setting theory. First: goals have a directive function. Second: goals have an energizing function. Third: goals affect persistence. Lastly, "goals affect action indirectly by leading to the arousal, discovery, and/or use of task relevant knowledge and strategies" (Wood & Locke, 1990, p.123).

In 2006, Locke and Latham published new findings of their goal-setting theory. Recent discoveries include ideas of goal choice, learning goals, framing, affect, group goals, goals and traits, macro-level goals and goals, and subconscious priming. The success of goal setting depends upon considering the mediators and moderators that determine its efficacy and applicability (Locke & Latham, 2006).

Goal-setting theory is not limited to but focuses primarily on motivation in work settings (Locke & Latham, 2002). The benefits of goal setting are reliable; if a failure occurs, it is due to errors. Errors could include not matching the goal to the performance measure, not receiving feedback, not being fully committed to the goal, and not having a challenging enough goal within a reasonable timeline. Goal setting is a worthwhile skill to invest time in. Goal setting is a skill that adults and especially children can learn. The earlier this skill is discovered, the sooner the goal setter can begin to reap its benefits and successes.

Literature Review

Montessori educators often wonder if they are doing enough to motivate their students to explore their learning during their free choice work time. Educators may wonder how to give the best resources to their students as well. This paper reviews the scholarly works on this topic; how do student goal setting and weekly conferences impact student motivation to continue learning in a Montessori classroom during free choice work time? The research was compiled on intrinsic motivation, goal setting, student conferencing, and self-evaluation.

Intrinsic Motivation

Intrinsic motivation is a person's will to want to learn a particular skill or complete a task. Some things make skills and tasks more motivating to a person. If a person has autonomy and purpose and can achieve mastery, they are more intrinsically motivated to continue with their desire to learn.

Ryan and Deci reported that the critical feature of intrinsic motivation is interest. They contend that “People will be intrinsically motivated by activities that hold interest for them, activities that have the appeal of novelty, challenge, and aesthetic value” (Ryan and Deci, 2000

p.70). Dr. Montessori believed that interest is a critical partner to self-determination in engaging intrinsic student motivation. This concept is not a new one. Dr. Montessori created a prepared environment that caters to a child's interests and academic needs. Interaction with the environment is most productive in terms of the individual's development when it is self-chosen and founded upon individual interest. (Lillard,1996). Providing children freedom within limits was the best for their education.

The Montessori-prepared environment is designed to give the students the chance to continue to practice skills and work towards skill mastery. Students are motivated to learn when they choose; they can do it at their own pace and will continue until they determine that they know or show mastery. "Students who believe they are able and that they can and will do well are much more likely to be motivated in terms of effort, persistence, and behavior than students who believe they are less able and do not expect to succeed" (Pintrich, 2003, p. 669). As an educator we give our students the skills that they need to be successful, this should include goal setting skills to internally motivate them to learn as much as they can.

Students need to feel or know the purpose, and it must mean something to them to be intrinsically motivating. The prepared environment of a Montessori classroom aims to engage students' interest and connect it to new knowledge of the larger universe. It creates the connections that will make the work more meaningful. The children become deeply interested, focus their attention, and develop executive function.

Student Choice

Dr. Montessori believed that student choice was essential to a classroom. Through challenging choices and intrinsic motivation, students will become lifelong learners. Katz and Assor (2006) agreed that this idea of matching choices with developmental level is closely

related to Vygotsky's 1978 concept that teaching is most effective when directed toward the student's zone of proximal development. The zone of proximal development is the distance between what a learner can do and what they cannot do.

The exciting choice is motivating when it is not too difficult and complex; it is vital for teachers who provide options to match the task's complexity and difficulty to their student's development level (Katz & Assor, 2006). The work will be completed when it is at the student's level. If it is not adjusted to match the learner's zone of proximal development, the student will become frustrated and easily unmotivated to continue. When the work is at the correct level, the student will work diligently until it is completed and, upon completion, will feel invigorated and motivated to continue learning. "The application of these principles is where the art of teaching takes over from the science of motivation and cognition" (Pintrich, 2003, p. 671). "The secret to maintaining their interest is to keep them challenged" (Lillard, 1996, p. 946). Students having choice and interest in their work not only keeps them engaged, but interested and challenged. Patrick, et al. (2000) researched the impact on students by surveying them and how they felt about the teacher's enthusiasm. The survey revealed, "Among the teacher variables, enthusiasm was the most powerful unique predictor of students' intrinsic motivation and vitality" (Patrick, et al., 2000, p.217). Teacher enthusiasm is a powerful and crucial addition to a classroom. (Mahler, Grobschedl, and Harms 2018) agree that enthusiasm is crucial for effective teachers.

In Patrick, Hisley, and Kempler's research, two studies were conducted to understand how enthusiasm impacted student motivation. In the first study, 93 undergraduate students were part of the study. A questionnaire was designed to assess the students' perceptions of their motivations and the teachers' classroom behaviors and strategies. The questionnaire was given at the end of the semester, along with the course evaluation. The questionnaire utilized a Likert

scale anchored by strongly disagree and strongly agree. It measured the perceptions of the teacher's enthusiasm and other behaviors (2000). The results showed that teacher enthusiasm correlated highly with intrinsic motivation and vitality. "A teacher who is perceived to have a dynamic, enthusiastic style, then, tends to have students who report being highly intrinsically motivated regarding the subject matter as well as feeling energized in class" (Patrick, Hisley, and Kempler, 2000, p. 229). "A controlled experiment in which teacher enthusiasm was manipulated to ascertain its subsequent causal influence on student intrinsic motivation" (Patrick, Hisley, and Kempler, 2000, p. 226). Again, the results found that the students felt more intrinsically motivated, energized, and alert after having an enthusiastic teacher. Patrick, Hisley, and Kempler (2000) caution teachers that constantly adding extra enthusiasm is not the answer to their students' motivation problems. Patrick, Hisley, and Kempler (2000) believe it is exceedingly implausible that a student's innate motivation to study could be sustained by a teacher's excitement in the absence of a learning environment that actively supports the student's evolving interests and demands. Teacher enthusiasm needs to be a companion to interesting choices in the classroom. These two components work together to keep the students motivated.

Goal Setting

A child's intrinsic motivation can be deeply impacted by setting attainable goals. Pintrich (2003) noted that competence beliefs, control beliefs, higher levels of interest, stronger perceptions of value, and appropriate goals motivate students. Goal setting in a Montessori classroom should be considered essential in enhancing intrinsic motivation through supporting student autonomy (Murray, 2011). When using goal setting, it is crucial to remember the key elements that make it successful; goals need to be attainable, there needs to be a reasonable timeline, and a plan needs to be devised for what will come next.

I have always wanted my students to feel control over their learning. After all this is their educational experience, let them get out of it what they want. Lillard (1996) stated that student control of their educational process and appropriate goal setting are key elements of Montessori education and are crucial to creating an atmosphere of student autonomy. A student's goal must be challenging enough but not overly challenging. If the goal is at a developmentally appropriate level for the child, the child will be more successful than if it was too hard. As educators know, students will rise to the expectations if they are appropriate for the student. When a goal is set for a student, there needs to be a reasonable timeline set for the goal to be completed. Having an appropriate timeline helps to motivate the child as well. Giving a timeline lets the student know how much time they must achieve this goal. They can plan accordingly and work on it each day to not overwhelm them and make the goal more manageable.

At the end of the time, the student needs to assess what needs to happen next. They may get feedback from a teacher, which the student needs to track their progress and commitment to the goal (Locke & Latham, 2006). The student must decide what they did well and what needs improvement.

Student Conferencing

Students having positive interactions with their teachers has fostered intrinsic motivation. Positive interactions are recommended for an educator to find time every day to connect with a child. There is a lot of anecdotal and research-based evidence on this topic. In 2005, Lillard wrote about conferencing and goal setting in Montessori, noting that most children meet weekly with teachers while others meet more frequently. The student gets feedback, discusses things that went well and needed improvement, and what the student's next steps will be to be successful in their goals.

A Montessori teacher is not to judge the work but rather to help the student to judge it for themselves, to find inspiration and success (Lillard, 2005). This should be a positive interaction between the child and the teacher. The Montessori teacher should help the student discuss what things have gone well and what needs to be improved. The guide should not necessarily point these out but ask questions to guide the child to their conclusions. They can continue their ownership of their learning and begin to think about what the next steps will become.

Self-Evaluation

In a Montessori classroom, ideally, we follow the child, watching through observation and supporting the development of normalization. Self-evaluation gives the students ownership of their learning. The student will become normalized if they can take ownership of their education. That is the ultimate goal in a Montessori classroom is normalization.

According to Nicol & Macfarlane-Dick (2006), providing feedback helps students take control of their learning and become more self-regulated by empowering them in the process. It is vital to help students see the value of reflective practices at a young age because many older students and adults seem under-equipped to manage the challenge. Evaluating is measuring progress toward goal achievement. Students must be able to reflect on what is working and what is not, then adjust accordingly.

I have always wanted my students to know that they can put their mind and skills together and they can accomplish anything with hard work. "When students understand that their abilities can be developed, they will explore tougher challenges, make a greater effort, and endure longer with tasks and achieve higher levels" (Headden and McKay, 2015, p.13). Pintrich (2003, p. 670) stated, "Students who believe they are able and that they can and will do well are much more likely to be motivated in terms of effort, persistence, and behavior than students who believe they

are less able and do not expect to succeed.” Students will want to continue to acquire more knowledge. Pintrich researched the role of student motivation in learning and teaching contexts.

Conclusion

There is not a lack of research on choices and motivation for students. The gap that I see in the study is that it is hard to assess elementary students for intrinsic motivation. Most of the research is questionnaires about how students are feeling. The questionnaires can be hard to accomplish with elementary students and may not be accurate. This leads me to think that more research needs to be conducted and to investigate the appropriate choice of research I have completed and maybe add in student/teacher conferences or goal setting if appropriate. Finding the right combination of choices and teacher interaction with conferences and goal setting will be the most beneficial to students is crucial. Great educators are constantly investigating and implementing ways to better their students. A Montessori classroom is a great place to start because of students' built-in choices. When options are given to students in a classroom, the choices cannot stand alone. Teachers need to have enthusiasm about the content they are presenting. The choices that they give to students need to be interesting. The selections must also be limited at the child's development level or above and not too complex. If these components are done simultaneously with the choices, students will have more intrinsic motivation to continue learning independently.

Methodology

As an educator, my goal for this study was to give my students the skills to intrinsically motivate themselves to learn above and beyond what was expected in the classroom. My students desperately needed this motivation after a few years of unregular education from the Covid

pandemic. This study was conducted over a six-week period starting in September and ending mid-October. Four different data tools were used to collect information on the progress of the individuals, weekly conferences on goals and student motivation. Methods used to gather information included small group lessons, student conferences, student verbal reflections and teacher observation. Observations of the week prior to research were done to get a baseline for how each child usually spent their free choice time. Then weekly meetings were used to assess progress. A final interview/ reflection was conducted to assess how they portrayed their intrinsic motivation.

The population of this action research were six third year students in a public Montessori school. There were three female and three male students. These students were chosen because I felt they would help continue this method with my younger students after my research was completed. These students needed this intervention to have more meaningful free choice and take charge of their own learning.

I first researched the best ways to increase their intrinsic motivation. This research led me to student choice, goal setting, student conferences, and self-evaluation. Luckily because my classroom is a Montessori classroom student choice was already in place. I researched how to teach goal setting with younger elementary students as I was not successful in finding a lot of information with this age group. I then had to combine my knowledge of child development and the research I found about goal setting. The first week was designated for mini lessons on what goal setting was, how to set attainable goals and reading books about goal setting. We had great discussions with my whole class during this first week.

Student conferences help students to see how goal setting can help them to be successful and increase motivation. During the week I met with my students every Monday and used

Weekly Post it Goals (Appendix A) to discuss as a group and get them excited about their combined learning. I then met with my students individually on Wednesdays and Fridays using Goal Check In (Appendix C) to their progress on their goal and if they achieved it.

I observed my students throughout the week to see what they were using their free choice time for, was it for brain breaks or were they motivated enough to work on their goals and learn about something of their choosing. I did this using Appendix B. These observations were to give me data to see if their intrinsic motivation was greater than before the research began. This also gave some evidence to talk about their motivation in the end of the week meeting.

Needed a prompt Observations (Appendix D), were used when I felt that they needed a prompt to get started or continue their work for their goal. This then was used in the end of the week conference to begin dialogue about where they felt their motivation was at.

To conclude the study, I did exit interviews (Table 2). During this interview, dialogue about their beliefs of what they accomplished and how they perceived their motivation from the beginning to the end of the action research.

Analysis of Data

The purpose of this action research study was to determine the effects of goal setting, student conferencing and self-reflection on intrinsic motivation in the third-year students in a lower elementary Montessori classroom. The research design was experimental with multiple data resources used including mini-lessons, observations, and student conferences. Student self-assessments were used to gather data about students' perceptions of their goal setting and how it benefited them in their academic learning and the effect it had on their work. The participants in the study were six third year students from a lower elementary in a public Montessori Charter school.

Mini-Lessons

Mini-Lessons were presented every day for the first week of the study. The purpose of this was to inform the students about goal setting. Lessons were included of how and why to make goals, how to execute them, self-reflection, and what to do if they get off track. Discussions were had about how to make a challenging but not too challenging goal. Goal setting books were read each day as well. The students took a lot of information in the first week to prepare them for the next five weeks.

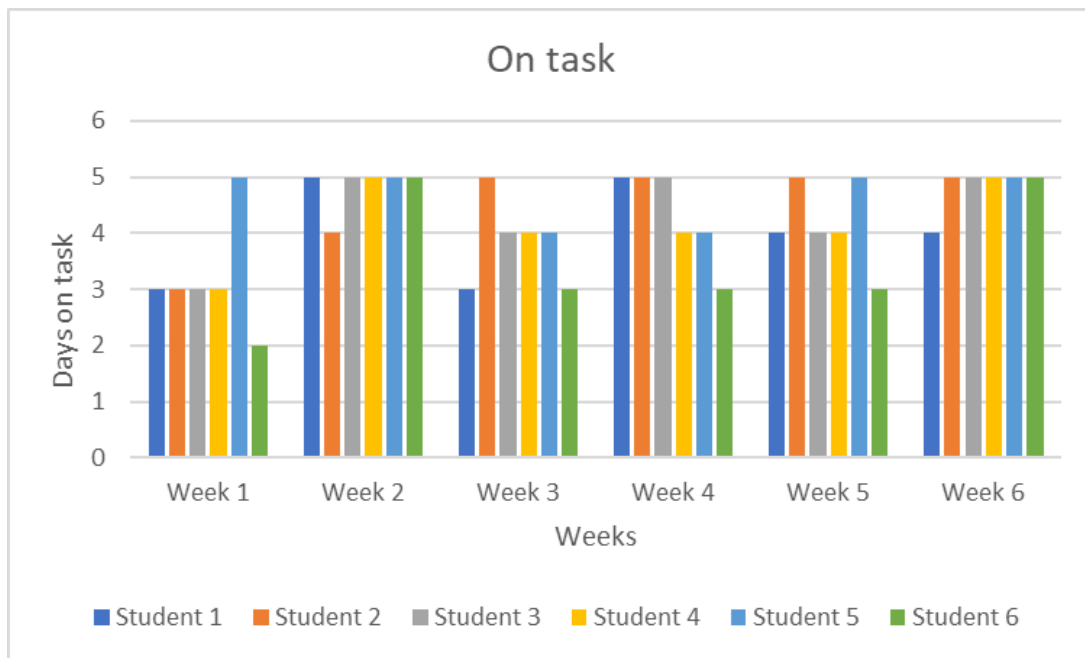
The first lesson that was given was how and why to make goals. The students were taught about the importance of goal setting and the benefits that they would receive from setting a goal. The second lesson was how to execute a goal. What did they need to do to be able to plan and to execute and be successful in their goal each week. The third lesson was about self-reflection. This lesson was to teach the students how to honestly evaluate their time management and dedication to their goal. The fourth lesson was how to determine and plan if they were on or off track to be successful in their goal for the week. The final lesson for the week was to discuss what they learned, and the students were given the opportunity to determine if goal examples were the right level of challenge.

Goals

The students created short term goals each Monday for each week of work. The students met with me to determine what their goal would be for the week. They would also discuss with each other their plan to be successful in completing their goal by the end of the week. The first goal setting week the students took it slow and picked a slightly less challenging goal just to get their feet wet in goal setting. I observed the students during our biggest work block each day to see if they were on or off task the data is in Figure 1 that I collected.

Figure 1

Student on task during Work time block

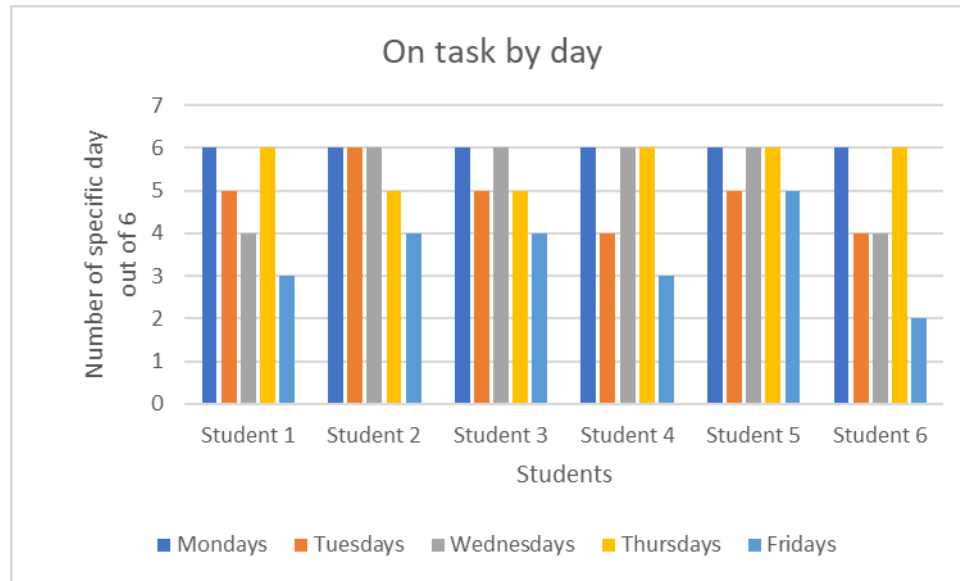


Note: This graph is to show how often the students were on task during our worktime.

In figure 2, I was hoping to find some interesting data that connected to the day of the week for each student. I didn't find that. What I did find was on the days that I met with students for check-ins were much more productive than days that we didn't check in. This data told me that the students are still new to goal setting and needed that reminder from meeting with me to continue their path to be successful with their goal.

Figure 2

Comparison on task during work block by day

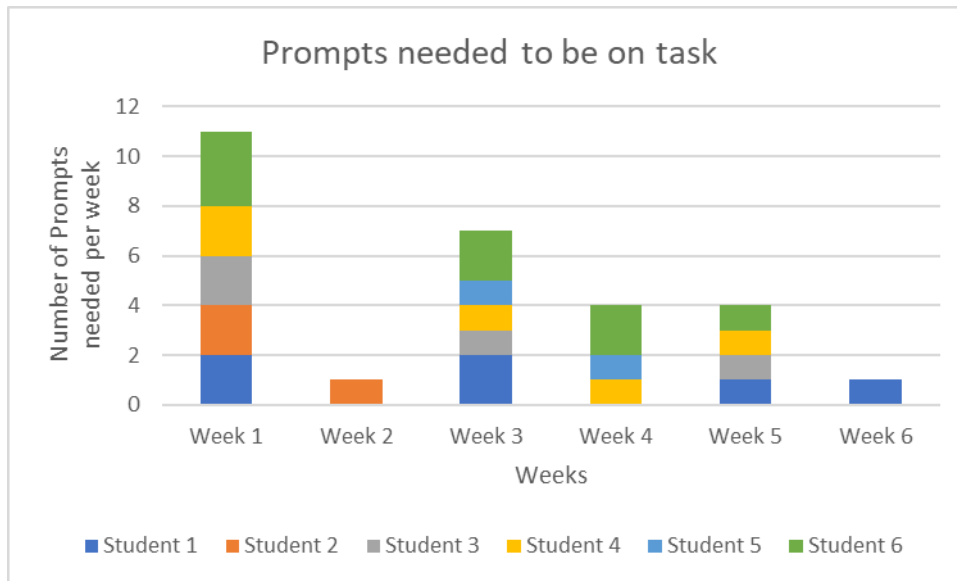


Note: Are the students on task more depending on the day?

In figure 3, this is the data that I collected during work time when I needed to give a prompt for the student to remember to work on their goal that they wanted to accomplish. I limited myself to one prompt per day per child. As the weeks went on the students picked more engaging and challenging goals. As you can see the first week needed more prompts than the rest of the research time. I choose the afternoon work block because it is longer and most of my students are usually on free choice by the end of the day. This was as close as I could get to see if the goal setting was really motivating them or not. I feel that this time is a very accurate portrayal of the effectiveness of the study.

Figure 3

Prompts needed during work time to work on goal



Note: Were prompts needed to continue student work throughout the week?

At the end of the study, I did very quick exit interviews about the students' feelings about the work that they had accomplished over the last six weeks. I would say that even though I feel that all six children benefited from this goal setting free choice study, only five of the students felt the benefit and continue the work in the classroom even though the study is complete. I am glad that they all enjoyed the work, but I wish they would have all liked to continue the work. I did get some of my younger students, first and second years that saw what the third years were doing and asked if they could work on meaningful free choice as well. I have children creating non-fiction books, making how to books, learning about new types of art and many more things. I hear students talking about how they need to be doing meaningful free choice. Our old free choice is now what we call a brain break.

Figure 4*Exit question about Goal Setting work*

	Did you enjoy the work?		Will you continue the work?	
	Yes	No	Yes	No
Student 1	x			x
Student 2	x		x	
Student 3	x		x	
Student 4	x		x	
Student 5	x		x	
Student 6	x		x	

Note: Exit question in student interview

My final question to my students was how did you feel about this work? I was hoping for some deep thinking about the work that they had accomplished during the study. I think my expectations for the question was a little high, I enjoyed discussing what they learned and how they felt about it. In figure 5, these are the answers I got about how they felt about the work. They were excited to help the younger students to learn about meaningful free choice and how to set a goal and be successful. They are running our classroom when it comes to free choice right now, they are supporting each other and giving each other ideas. The discussions alone to me are a win for the study. I could not have hoped for a better outcome with this study. This is something that I will continue to teach about in my classroom for the rest of my teaching years. The students are prouder than I have ever seen them.

Figure 5*Exit question at the end of the study*

How did you feel about the work?	
Student 1	I liked the work, but I didn't like picking my own topic. It was too much work. I also didn't pick interesting enough work.
Student 2	I liked having a goal. I picked more meaningful topics. I learned a lot.
Student 3	I learned more than regular free choice. I kept learning more on free choice.
Student 4	I felt good about what I was learning. I liked what I was learning about.
Student 5	I liked having a goal to work towards. I will continue when I'm on free choice.
Student 6	I liked having something to work towards. I will continue this meaningful free choice.

Note: Exit interview question How did you feel about the work?

In conclusion I feel like the data that collected and the study that was completed was worth while for my classroom. These students and the rest of my students that were not apart of the study benefited. I also believe that my future students will benefit as well.

Action Plan

The goal of the study was to determine the effects of goal setting, having choice and student conferencing on the students' intrinsic motivation within a lower elementary Montessori third year student. Given then evaluation of my data I can draw numerous conclusions regarding the aim. One conclusion being that students are more motivated to be on task on the days that they had conferences with the teacher. My recommendation would be that the students have their goal always written out and with them. Seeing the goal reminds them and keeps them motivated more than not having it visual. Another conclusion being that students are more engaged and

intrinsically motivated with the ability to have the choice of what they will learn about in their free choice learning. This will make the work more meaningful, and they will feel good about completing it. The student conferencing also gave the students some practice at self-evaluation of their work. They were given the opportunity to make changes to their goal if they had more required work that week. I think that this is essential because that is a life skill that is very valuable to the students. Another conclusion is that meeting as a small group was motivating to the students and increased engagement hearing what the other students were going to choose to explore and discover.

One thing I wish I would have done differently is I wish that we would have met as a group on Fridays to talk more about our successes and what we need to work on for the next time. I think that this is an important discussion to have that goes along with the growth mindset things that I have always done in my classroom. This is something that I will change when I continue this work with my whole class. I think finding a way to be efficient with all students and helping them to set goals and evaluate throughout the week would be far more than beneficial for the students. I also would recommend that they have the goals at their seats with them to look at every day.

Overall, I am happy with the way this study went and after some more tweaking off the above listed things, this would be the ultimate goal setting scenario for classroom teachers.

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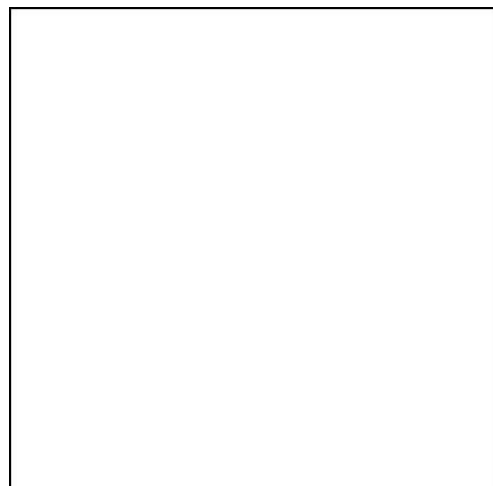
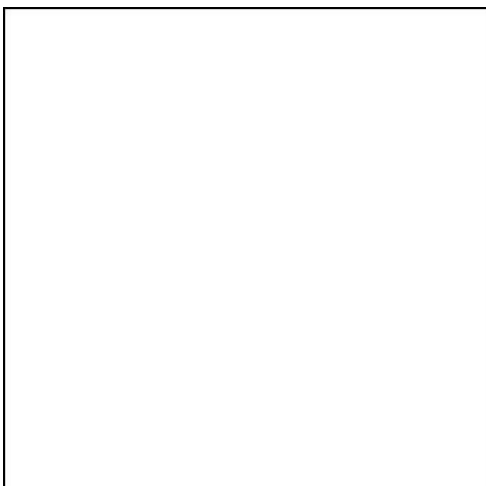
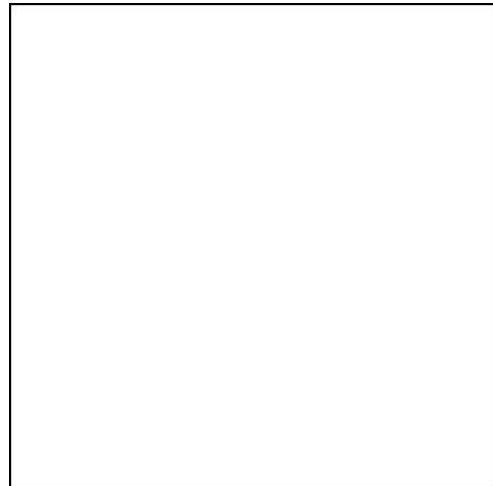
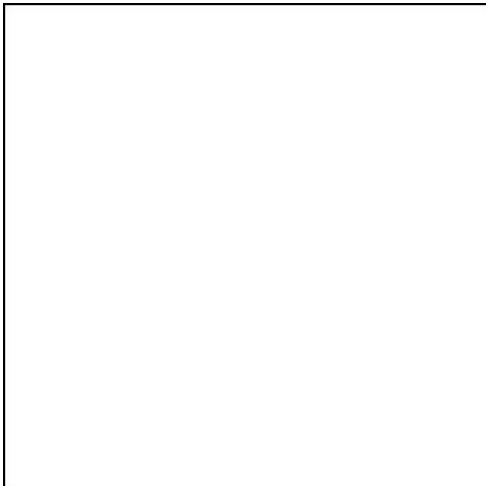
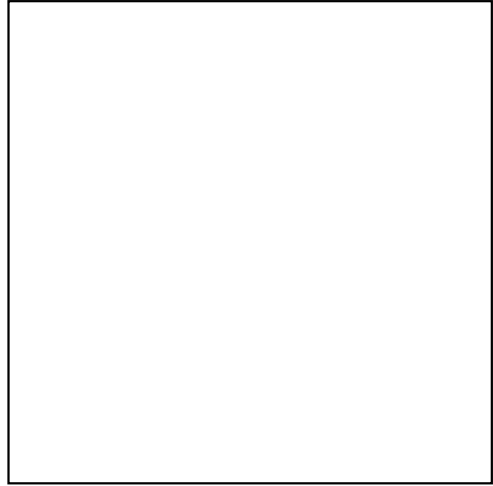
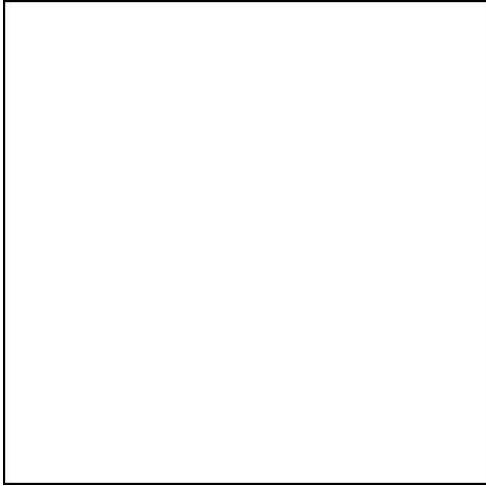
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Appendix A

Weekly Post it Goals

Student Number _____



Appendix B

Post it Observations

Student Number _____

Week _____ Date _____

Appendix C

Student Number _____

Goal Check in

Date _____

I am proud of

I still need to work on

My next steps will be

Date _____

I am proud of

I still need to work on

My next steps will be

Date _____

I am proud of

I still need to work on

My next steps will be

Date _____

I am proud of

I still need to work on

My next steps will be

Appendix D

Needed a prompt? Observations

Student Number _____

Week _____ Date _____

