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The Effects of Self-Monitoring Checklists and Extrinsic Rewards on Missing Assignments for Students with Learning Disabilities

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Abstract

Students with learning disabilities struggle with homework completion and the organizational skill set needed at the middle school level to obtain academic success. The purpose of this study was to investigate the use of a self-monitoring form, weekly goal setting conference with the teacher and extrinsic rewards to examine the possible decrease in missing work and increase in intrinsic motivation with fifteen eighth grade students with learning disabilities. During stage one, students were required to complete an Assignment Monitor on Monday of each week and conference with the teacher to set an obtainable goal in order to decrease missing work and stay current with daily school work. A Resource Monitor survey was given at the conclusion of every six-week grading period to assess student satisfaction and possible increase in intrinsic motivation with the implementation of weekly monitoring and goal setting. Stage two provided the students with an extrinsic reward implementation to assess if there would be a positive relationship between the decrease in missing work and extrinsic rewards in students who chronically did not respond to initial implementation of stage one. Results of the implementation of the extrinsic rewards, use of the Assignment Monitor and weekly goal setting and review showed a decrease in missing work from grading period 2 to grading period 4 in 87% (13/15) students. Students reported overwhelmingly that they were motivated by the extrinsic motivator or Free-choice Friday with a majority of students rating the implementation either a 4 or 5 out of a possible 5 score.

Chapter One

Introduction

Some students with learning disabilities struggle with the organizational skill set to be successful with the workload at the middle school level. Having multiple classes and passing time has led to difficulties for students of this age to stay organized and have appropriate materials they need in their classes. This can lead to feelings of frustration and learned helplessness. Students who lack skills such as organization of materials, having a daily goal or plan for their resource period, and knowledge of cause and effect of missing assignments and their impact on their overall grades seem to have persistent missing work and late assignments, tend to feel hopeless and in turn, lose motivation and give up on academic success. The goal of this project was to implement a self-monitoring system coupled with a weekly goal setting conference with the teacher to help promote intrinsic motivation in students with learning disabilities. The use of extrinsic motivators was implemented in stage two to determine if these types of rewards (praise, visual reinforcement, and free-choice Friday) would increase their motivation to complete missing assignments and ultimately, accomplish weekly task completion goals.

Teachers of students with learning disabilities and at-risk students face many challenges such as student motivation towards schools and successful student behaviors. Students demonstrate maladaptive motivational patterns such as learned helplessness and an inability to thrive and complete work. Students become disinterested and lack motivation to push themselves through difficult tasks. They believe they are unable to complete tasks based on past experience and beliefs. Witzel and Mercer (2003) explained that “the repeated failures and low achievement associated with learning disabilities often lead to learned helplessness, in which students attribute

failures to internal causes and successes to external causes, such as luck or the ease of a task (Dweck & Elliot, 1983, Settle & Milich, 1999)" (p. 89) In agreement with that position, but also expanding on those events such as low achievement and failures, Fincham (2012) showed that learned helplessness has long-term impacts on the student and their ability to push through difficult experiences. He states "learned helplessness results from experiencing uncontrollable events that cause individuals to expect future lack of control. It is characterized by decreased motivation, failure to learn, and negative emotions such as sadness, anxiety, and frustration" (Fincham, 2012, para. 1).

Research has also shown that students with learning disabilities demonstrate behavioral patterns involving a feeling of alienation within the school setting and amongst peers, poor views on their outlook towards school and underachievement in their academic classes. Researchers Fulk, Brigham and Loman (1998) found that there were consistent differences that led to conclusions about students with learning disabilities that possibly explain their motivational level in comparison to other groups, which included students with emotional or behavior disorders (EBD) and students with average achievement. These researchers found that students with learning disabilities reported avoiding work more and did not feel as positive toward school compared to students in the other groups. Male students with learning disabilities also felt more alienated than females and EBD students. In summary, students with learning disabilities have to overcome negative views of school, motivation to do work and alienation, especially with male students. Witzel and Mercer (2003) concluded that

> The need for extrinsic motivation increases for students with learning disabilities. Not only may the use of praise help these students develop an intrinsic purpose for a behavior, praises will also help them in the short term while they have difficulty maintaining and

developing internal control. (p. 94)

These findings served as the basis of this project. Not all students have an internal motivation to perform well in school and the use of external motivators may prove to be a successful tool in increasing motivation. Teachers struggle with helping students maintain motivation in class when they struggle academically and lag behind their peers. Using verbal reinforcements with even the smallest accomplishments can change the students' attitude and help them push through a difficult or seemingly hopeless task. Witzel and Mercer argued that "the more educators learn about praise and other methods to increase motivation for learning and performing in a manner effective to students' future growth, the more likely it becomes that all students will achieve to their fullest abilities" (Witzel & Mercer, 2003, p. 94). The goal of this project was to make use of verbal praise and visual praise bulletin board to help motivate my students to make purposeful goals and achieve them during a week's time. As students with learning disabilities have struggled with the completion of daily homework, appearing to lack an internal drive and motivation to find self-satisfaction in work completion, it was important to find external motivators that could possibly increase internal motivation.

Creating opportunities within the classroom for students to receive praise could possibly promote student motivation. Students may increase motivation by having opportunities to create short-term, concrete goals. These goals would be able to be managed and achieved within a week's time providing opportunity for positive teacher reinforcement through praise. I wondered if students were taught to self-monitor their missing and late work, and also conferenced with at the beginning of each week to set a weekly goal, would their motivation increase? Formatively assessing students' use of an Assignment Monitor may prove successful for students who underachieve or lack internal motivation because other researchers have found

that “formative assessment’s emphasis on instructional modifications and student improvement supports student motivation and enables them to maintain high engagement and achievement (Cauley & McMillan, 2010, p. 5). Providing a structured form that assessed students formatively and help them to self-monitor and adjust their goals when they seem to be lagging behind in goal completion should be beneficial to their short and long-term success. Additionally, student reflection on why their goals were or were not met may increase their feelings of self-directions and the endorsement of their own activities.

The type of project that was implemented was an Action-Research with Case Study Design. The project took place in an eighth grade learning disabilities resource class. The project began on September 29, 2015 and concluded on March 20, 2015. Students that participated in this experiment were students with learning disabilities or other health impairments.

Two questions were addressed in this project. First, do additional goal review involvement and extrinsic motivators improve homework completion rates? Information was collected each week from the electronic grading system which included missing assignments, grade and percentage for each core class. Data was also collected on the student’s ability to set a weekly goal to achieve. This data was compared throughout the first two grading periods to determine if there were fewer missing assignments, an increase in goal achievement, or both.

After the information on missing assignments and goal achievement was compiled and reviewed, two students who did not seem to be responding to self-monitoring and goal setting in a positive manner were identified. Rewards were offered to the entire class but the data on missing work and goal achievement was examined for the two case study students in particular to determine if the external rewards impacted the amount of missing work (from the baseline at

grading period 2 to the end of grading period 4). I assessed the overall improvement in making achievable goals that can be attained by analyzing the information collected on the Task Completion Goal Review and Action Plan.

A second research question concerned the relative contributions of each of the two components: goal review with the teacher and extrinsic motivators. Students completed a Resource Monitor Survey at the end of each grading period monitored. An overall rubric score increase would show student increased in positive motivation and a buy-in that they felt that the system put in place helped them in goal achievement over the course of the three grading periods that were measured. The survey measured their feelings on whether using self-monitoring forms and goal setting coupled with extrinsic rewards improved their attitude and intrinsic motivation toward school and decreased their missing work. I assessed the overall improvement in making achievable goals that can be attained by monitoring the overall percentage of weekly goals achieved and scores from the end of grading period 2 were compared to those of grading periods 3 and 4.

Not only did students with learning disabilities benefit from this project, but also their teachers who had struggled with students with low motivation. The on-going issue of lack of motivation and learned helplessness with students with learning disabilities nags at educators and parents. This study provided a partial solution to the issue of missing assignments and general apathy towards school. The following chapter highlights research that has been done regarding student motivation, self-monitoring, goal achievement and extrinsic rewards, and their effects on intrinsic motivation.

Chapter Two

Literature Review

The purpose of this project was to find a method of self-monitoring that helped to promote motivation and in turn, decrease missing work in students with learning disabilities. The rationale for this project was that students with learning disabilities tend to have issues with academic motivation, organizational skills and learned helplessness due to years of struggle within the classroom setting, which has a negative impact on work completion. This study illustrates that by using tools to monitor missing work, setting weekly work completion goals, and providing extrinsic rewards, the number of students' missing assignments decreases. This review of relevant literature begins by outlining issues of student motivation and the effects of extrinsic rewards on intrinsic motivation. It also will provide information on the effects of the extrinsic rewards and their impact on academic achievement. Students may lack the motivation to complete the work on their own, but providing a format that allows for students to set a task completion goal and earn an extrinsic reward when the goal is achieved can increases their motivation to complete the work.

Motivational Considerations of Student Engagement

The motivation that students have for completing homework varies greatly between students and across grades, and identifying effective motivational interventions requires a consideration of the student's current developmental stage. McDermott (2014a) stated, "regarding education, children, adolescents and adults are motivated for many different reasons" (para. 2). Students in elementary grades are motivated more by love and nurturing responses. McDermott (2014b) determined that "the main driving force behind a [young] child's motivation in a classroom is not to learn, not to impress their classmates, but to receive loving responses

from their parents and teachers" (para. 1). Children are "blank slates" and are motivated by the love and nurturing they receive from their parents and teachers and in turn "expect to be rewarded by love after doing work" (McDermott, 2014b, para. 5). But these types of rewards are not as effective as children develop and enter middle school and high school. McDermott (2014c) argued that intrinsic motivation decreased in secondary students as their interests change. He suggested that students become more concerned with other non-academic issues such as their appearance, extracurricular activities, prom dates and parental involvement. This may cause the middle school child to lose interest in academics and discontinue their "teacher-pleasing" behaviors that are often seen throughout elementary school. Exploring the different types of rewards and how they impact student behavior is necessary when trying to change student behavior.

It is useful to think of motivation (and rewards) as being separated into the two categories: extrinsic motivation and intrinsic motivation. Cherry (2014) defines extrinsic motivation as, occurring "when we are motivated to perform a behavior or engage in an activity in order to earn a reward or avoid punishment" (Cherry, 2014, para. 2). Extrinsic motivators include grades, verbal praise, money or other material rewards (stickers, candy, etc.). The use of extrinsic rewards in middle and high school grade levels is a common motivator for work and task completion.

Alternatively, "intrinsic motivation involves engaging in a behavior because it is personally rewarding: essentially, performing an activity for its own sake rather than the desire for some external reward" (Cherry, 2014, para. 2). Dev (1997) defines intrinsic motivation

> as (a) participation in an activity purely out of curiosity, that is, from a need to know more about something (Deci, 1975; Gottfried, 1983; Woolfolk, 1990); (b) the desire to

> engage in an activity purely for the sake of participating in and completing a task (Bates, 1979; Deci, Vallerand, Pelletier & Ryan, 1991) and (c) the desire to contribute (Mills, 1991). (p. 13)

He also summarized that academic intrinsic motivation is measured by a number of different things. The student with intrinsic academic motivation is able to persist with a task assigned, uses an appropriate amount of time to persist on a given task and a curiosity for learning. They also have positive self-efficacy toward academic activities and a desire to select activities that are interesting to them. Dev (1997) states that,

> this type of student is more likely to complete the chosen task and be excited by the challenging nature of an activity. The intrinsically motivated student is also more likely to retain the concepts learned and to feel confident about tackling unfamiliar learning situations. (p. 13)

Ultimately teachers want all their students to be intrinsically motivated, but some students are not and extrinsic rewards are needed to produce task completion and also produce student success, which may positively impact intrinsic motivation. Students with learning disabilities or low-achieving students often have greater experience with failure than success, and subsequently lack the intrinsic motivation to persevere with a task or assignment due to these negative experiences and poor peer comparisons. Studies on motivation investigating students with learning disabilities and low achieving students agree that the use of extrinsic rewards can be effective as long as they are delivered appropriately by the teacher. Appropriate delivery involves relevance, fairness, and authenticity and care.

Rewards contingent on performance must be obviously related to that performance. Witzel and Mercer (2003) determined that "teacher praise can be delivered in combination with

other reinforcers. Contingent verbal praise must focus on the value and the relevance of the task rewarded" (p. 91). For example, verbal praise, one type of extrinsic reinforcer, can be paired with other rewards, or it could be considered the extrinsic reward itself.

It is also important for the rewards to be equitable for all students. Witzel and Mercer (2003) explored the idea that learning disabled students compare their reward to those of equally performing students in the classroom and evaluate whether they are receiving the reward for a similar performance or if the reward is not equitable to their classmates' performance. This shows that they do compare the reward to the requirements and effort needed in the rewarded task. Rewards must match the efforts or ability needed to complete the task. In other words, the rewards should be genuine as to not undermine the performance or intrinsic motivation.

Another factor that affects the ability to receive a reward genuinely or develop intrinsic motivation is the perceived caring of the teacher in regards to the student or task. Wentzel (1997) explored the idea "that students will be motivated to engage in classroom activities if they believe that teachers care about them" (p. 411). A caring teacher may present some of the following behaviors, they model caring behavior to their students, engage in dialogue that leads to understanding and perspective taking, and expect and encourage students to do the best they can with their abilities. Wentzel's study showed "significant relations between perceived caring from teachers and students' efforts to achieve academic as well as social outcomes" (p. 416). So, clearly there are other factors that motivate a student to learn that are also within the control of the teacher in the classroom.

Extrinsic Rewards and their Effects on Intrinsic Motivation

Relevant research on the effects of extrinsic rewards on learning and intrinsic motivation can be divided into three general categories: effects on intrinsic motivation, effects on learning

activities or performance level on a test, and how students differ in how they respond to intrinsic and extrinsic motivators. Deci (1971) and Cameron, Pierce, Banko and Gear (2005) explored the idea of extrinsically rewarding students and researched its effects on intrinsic motivation in comparison to students who did the same tasks without the extrinsic rewards. Cameron, Pierce, Banko, and Gear (2005) also looked at the effects of extrinsic rewards while learning an activity and performing a specific level on a test. Emmet and McGee (2013) explored the overall effects of extrinsic rewards on a general school population which had a low-achieving students and poor test scores. Lastly, Hayenga and Corpus (2010) identified four distinct profiles of intrinsic and extrinsic motivations in middle school students. The profiles that were identified combined different extrinsic and intrinsic motivations and were researched to see which combination achieves higher grades and better overall school performance.

Effects of extrinsic rewards on intrinsic motivation. It is thought that applying extrinsic rewards to students to increase motivation may not necessarily be successful in the long term in regard to intrinsic motivation and may actually undermine intrinsic motivation in students. Deci (1971) explored the use of monetary rewards on college-aged students and the effects extrinsic rewards had on internal motivation. He also explored the use of verbal reinforcement and positive feedback as a means of extrinsic rewards. The study addressed two separate hypotheses, 1) if a person is engaged in some activity for reasons of intrinsic motivation, and if he begins to receive the external reward (money) for performing the activity, the degree to which he is intrinsically motivated to perform the activity decreases and 2) if a person is engaged in some activity for reasons of intrinsic motivation, and if he begins to receive external rewards in the form of verbal reinforcement and positive feedback for performing the activity, the degree to which he is intrinsically motivated to perform the activity is enhanced (p.

108). These hypotheses were tested with college psychology students in the field and laboratory. There were two sets of twenty-four students that were selected and assigned randomly to either a control or experimental group. In both laboratory studies, students were given a puzzle, which appeared to be intrinsically motivating. Students were tested in three sessions and were instructed to replicate picture configurations; one group was externally rewarded with money while the other group was rewarded with verbal praise and positive feedback.

The study was both quantitative and qualitative in nature. Students were timed to complete the task of replicating the configuration and also timed for their "free-time" period to see how much of the 8-minute interval was used to continue to work on the puzzle which indicated motivation. In the first experiment, the timing of completing the configuration was impacted in the experimental group by adding monetary reward for completing each puzzle. This was then taken away for session three. In the second experiment, the monetary reward was replaced by verbal praise in session two. At the end of each session, students were given a 9-point scale to measure to what degree the task was enjoyable and interesting indicating intrinsic motivation.

Deci found that both hypotheses were supported. Intrinsic motivation did decrease with the use of a monetary reward as opposed to praise and reinforcement. Both groups did find the task enjoyable and scored between low 7 to mid-8's on the 9-point scale with the second group exposed to praise and reinforcement scoring slightly higher. In conclusion, students did appear to perform at a higher level on tasks when they were rewarded with social approval.

Although this research points to the use of verbal praise instead of tangible rewards, a few concerns about the hypotheses are noted. The use of college students is limiting because these students may have different motivation levels than that of a K-12 student. Though the

sample was done randomly, the size of the sample was small and may not necessarily generalize to a larger population or a younger population. Another question raised in these studies was the ability to generalize into the area of academics, as the task of completing a puzzle would appear more enjoyable and less interesting than an academic assignment or high-stakes test.

In a similar study, Cameron, Pierce, Banko, and Gear (2005), explored the use and impact of achievement-based rewards, and found that extrinsic rewards can have a positive impact on intrinsic motivation. The rewards were offered to participants in a learning phase, a test session only, or both learning phase and test session. Rewards in the learning phases were tied to achieving a progressively challenging standard (solving three, four, and five problems over three trials). Rewards in the test phase were given for meeting an absolute standard of performance.

Participants in this study were university students in an Introduction to Psychology class and were participating in the study for college credit. There were 119 students chosen for this study but the researchers did not include any demographics of the group such as gender make-up or how they were chosen. The experiment was a 2 x 2 factorial design with two levels of rewards during learning (reward and no reward) and two levels of reward during testing (reward and no reward). These students were randomly assigned to one of four condition groups: reward during learning and testing (LTR; n=32), reward during learning and no reward during testing (LR; n = 28), reward during testing and no reward during learning (TR; n=30) and no reward during learning and testing (NR; n= 29).

Similarly to Deci (1971), students in a lab setting were given a puzzle to solve. This study used puzzles in which subjects are asked to find the difference between two cartoons. The researchers reported that this task was of high interest and challenging to university students.

During the learning phase, participants were asked to work on three sets of three puzzles. They were asked to find the required number of differences and there was no time limit for completion. Subjects in the LR and LTR groups were given money for meeting criterion on each level at the levels of $1.00 for the first trial, $3.00 for the second trial, and $6.00 for the third trial. The NR and TR groups did not receive money for trials during the learning phase. After the learning phase, subjects were given a questionnaire that assessed task interest, competence, and perceptions of affective autonomy. Affective autonomy, as the authors described it, is the ability to enjoy things and have happiness during leisurely hours. They were also to rate reasons for doing the task, perceptions of how well they did, and whether they had the choice to do the puzzle. After completing the learning phase, subjects were asked if they would like to complete a 3-minute test with 10 new puzzles. All students chose to do this. They were given false information on how other participants performed and that they generally fell into three categories: finding fewer than 15 differences, between 15 and 20 differences, and more than 20 differences. Participants were offered $1.00 for fewer than 15, $3.00 for between 15-20, and $5.00 for more than 20 differences found. All participants were told they had more than 20 and the ones in the reward condition were all given $5.00. Subjects then completed the same questionnaire as previously stated. They were also given a free choice period of 8 minutes and measured of intrinsic motivation based on how much time they chose to spend on puzzles which indicated intrinsic motivation.

These researchers found that when rewards were given for achievement on the puzzle-solving activity either during learning or after testing, individuals spent more time on the activity and reported a greater task interest than did non-rewarded participants during free choice period. This supports that achievement based rewards increased intrinsic motivation for the target

activity. The rewards had the effect of reducing off-task behavior and kept participants focused on puzzle-solving activities.

Effects of extrinsic rewards on achievement. Although Deci (1971) reported that monetary rewards did decrease intrinsic motivation to a task in comparison to social approval, Cameron, Pierce, Banko and Gear (2005) showed that extrinsic rewards that are tied into leveled performance standards can have a positive effect on self-perception of task achievement – and perhaps indirectly on intrinsic motivation. A study done by Emmett and McGee (2013) supports multi-leveled reward systems. In the research conducted, the purpose was to discover the critical attributes of a student achievement program implemented at one urban high school as a part of a school improvement process. The "Think Gold" program that was implemented utilized extrinsic motivation to influence change in student attitudes and behaviors toward state assessments by drawing a direct connection between performance on the assessment and personal benefit for individual students. The program contained three levels of recognition with the intent of providing access to students of varying abilities. Levels of recognition included, Level 1= "Proficient" or "Advanced" on two or more state assessments; Level 2 = Improvement of two or more performance bands on all combined state assessments; and Level 3= Proficiency on school-based assessments throughout the year. Recognition for achievement included a host of measures, including a five-minute express lunch pass, special "Think Gold" ID cards, spirit packs, and participation in school sponsored events.

In the school years between 2003-2008, student achievement as measured by state assessments indicated that less than 30% of students demonstrated proficiency in English/Language Arts and less than 15% demonstrated proficiency in Math. The "Think Gold" was developed to improve the students' achievement on the California Standards Test (CST).

Data from the CST's were compiled and recorded. These data were also compared to seventeen other schools in the district. Students were also given a survey to evaluate their perception of the impact of the "Think Gold" program with regards to their performance on the CST's.

Findings were similar to Cameron, Pierce, Banko and Gear (2005), that multi-leveled rewards did positively affect performance in students with low motivation. In 2009, 16.8% of the students in 9th grade scored "proficient" or "advanced" in two or more state assessments and after implementation of the "Think Gold" program that provided extrinsic motivators to recognize students. Results from the students' surveys indicated that students at each level were motivated by the use of the "Think Gold" recognition as an extrinsic motivator. An increase from 70% to 77% was noted with "Think Gold" students that indicated their performance on the state assessments was important to them. Teachers witnessed an overall change in attitude and improved effort by students on the state assessment. The program was not effective for all students, as 50% indicated that they would have had the same care or concern about the state assessment with or without the program. These authors concluded that the impact of the use of extrinsic motivators helped to increase achievement in students. While these results do not directly support the transference of extrinsic motivators to intrinsic motivation, there is some evidence that students internalized some motivators into their value system. While this is not intrinsic motivation, internalization of regulatory sources is a step toward intrinsic motivation, as does the success that students experienced.

Extrinsic motivators and student characteristics. Realizing that extrinsic rewards can show some positive effects in student achievement, it may depend on the motivational profile of the student. Hayenga and Corpus (2010) connect both intrinsic and extrinsic motivations and group students into four student profiles. Through cluster analysis they identified motivation

profiles among middle school students and explored the significance of the profiles by relating them to academic achievement at two points of time; first and fourth quarter of the academic year (p. 374). They also looked at stability of these profiles over the course of a school year. Participants in this study were middle school students.

Motivational constructs were measured with two scales (see Hayenga & Corpus, 2010) using a five point Likert-type scale ranging from *not like me at all* (1) to *exactly like me* (5). Intrinsic motivation was assessed with 17 items tapping students' curiosity-driven engagement, preference for challenging work, and inclination to master material independently. Letter grades were collected in the first and fourth quarter of the academic year to correspond with the times when the motivation constructs were measured. Grade point averages, at each time point, were computed on a 4-point scale. A research assistant administered the motivational survey verbally in small groups of 20.

They found that students fit into four profile clusters. The "high quantity" group had high levels of both intrinsic and extrinsic motivation. The "good quality" group had high intrinsic motivation but low extrinsic motivation. The "poor quality" group had low intrinsic motivation but high extrinsic motivation. The "low quantity" group had both low intrinsic and extrinsic motivation. Although a majority of students remained in their initial cluster, 43% changed clusters. The general trend shifted in a change to a poorer quality cluster. They rarely switched from one extreme to another. At both time measurements, students in the good quality cluster received higher grades than did peers with poorer quality motivation. So then it would appear having greater intrinsic motivation to extrinsic motivation would indicate a high academic achievement. This research revealed that both forms are related to academic achievement. Another contribution of this study is the exploration of the stability of a cluster from fall to

spring. It was more common to see a change along the dimension of motivation quantity (movement between high and low groups) than the dimension of motivational quality (good and poor groups). Also there was a poorer quality motivation over time (losses to intrinsic motivation) (p. 380).

Not all students arrive in class with a "good quality" of intrinsic motivation needing little extrinsic rewards (grades or other tangible rewards). This study appears to challenge one to think of the different profiles of students and that they are not all "in it" for the same thing. It solidifies that having a multi-dimensional reward system may benefit many different student profiles. Students with high intrinsic motivation needed little extrinsic rewards to achieve whereas other students without the high intrinsic motivation benefited from a multi-dimensional reward system. It was discovered there was a "buy-in" for under-achieving students and students with academic struggles who had little to no intrinsic motivation. The multi-dimensional reward system improved academic achievement. Both Cameron, Pierce, Banko and Gear (2005) and Emmett and McGee (2013) clearly saw benefits to having tiered extrinsic rewards for pre-determined academic or performance levels. Students of all levels appeared to gain using a multi-tiered reward and it correlated with intrinsic motivation though not always at a meaningful level.

Self-Monitoring & Self-Regulated Learning

Given the research findings on how rewards impact various elements of student motivation, how does self-monitoring impact low-achieving students or students with learning disabilities? Could the use of self-monitoring student checklists promote student self-regulation if the process proved successful in the classroom? Understanding the impact of using teacher feedback and checklists during the learning process and its connection to guide learners to excel and achieve

goals and thus promote student self-regulation in the classroom is a key element in improving student motivation in the targeted population. Students' abilities to self-monitor their learning could better drive teachers and learning communities to center instruction around the use of formative-type checklists that promote self-monitoring. Implementing a process of goal setting and review of task completion could promote student self-regulation within the classroom. Pintrich and Zusho (2002) provided a definition of self-regulated learning, which "is an 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 features of the environment"(p. 64-65). Whereas self-monitoring requires the use of goal-setting and monitoring oneself, but does not involve the same intrinsic drive that self-regulation does.

Achievement Goal Theory

Cauley and McMillan (2010) stated that "achievement goals fall into two categories: performance goals and mastery goals" (p. 3). Their definition is that performance goals are "ego-involved" and these involve comparisons of students' performances with one another. The emphasis for performance goals is on individuals out-performing others for the sake of receiving an external reward for superior achievement on academic tasks. On the other hand, mastery goals focus on improving and mastering new skills for the sake of satisfaction and learning. Mistakes are treated as opportunities for improvement (Cauley & McMillan, 2010).

In agreement with Cauley and McMillan, Covington (2000) explained that "the basic contention of achievement goal theory is that depending on their subjective purposes, achievement goals differentially influence school achievement via variations in the quality of cognitive self-regulation process" (p. 174). As previously described, self-regulation is a process

where the learners set goals, monitor and control their cognition, motivation and behaviors in the learning process (Pintrich & Zusho, 2002). Covington (2000) also adds, "self–regulation refers to students being actively engaged in their own learning" (p.174).

Use of self-monitoring formative assessments and their effect on student achievement and performance

Raising students' academic achievement, in particular, state or nationwide test scores, has become a topic in the forefront of educational debates. Can formative assessments promote self-regulating behavior help educators increase student achievement? Cauley and McMillan (2010) stated that, "when students focus on improvement and progress, they are more likely to adopt mastery goals and develop high self-efficacy and expectations for success" (p. 5). Having high self-efficacy is the belief in one's own ability to be able to complete tasks and reach goals. Teachers' emphasis on using formative assessments that focus "on instructional modifications and student improvement supports student motivation and enables them to maintain high engagement and achievement" (Cauley & McMillan, 2010, p. 5). Several studies appear to show this to be true, one in particular researches the use of Formative Assessment-based Mobile Learning (FAML) in which students are learning in a real-world environment and the device supports and guides them through the learning process by using the "practicing, reflecting and revising" process. Hwang and Chang (2011) found that the learning achievement of students in the experimental groups was significantly better than the control group. It implies that the formative assessment-based approach was helpful to the students in improving their learning achievement in a mobile learning environment.

Another study, Shafiq and Siddiquah (2011) indicated that using quizzes as a form of assessment also increases student achievement among college students. The study revealed that

students who received regular quizzes outperform those who experienced no quizzes. The classroom quiz improved the students' achievement by regularizing their studies through frequent and timely feedback, students came to know regarding their lacking areas and their misconceptions related to the topic. Just using formative assessments embedded in the curriculum is not good enough though. Yin, Shavelson, Ayala, Ruiz-Primo, Brandon, Furtak, Tomita and Young (2008) found that embedded formative assessments did not have the impact expected on students' motivation, achievement or conceptual change. Simply embedding assessments in curriculum will not impact students' learning and motivation, unless teachers use the information from embedded assessment to modify their teaching, or students use that information to modify their study habits and strategies. When formative assessment is implemented with fidelity William, Lee, Harrison and Black (2004) firmly concluded that that formative assessments do produce tangible benefits in terms of externally mandated assessments. Additionally, Pintrich and De Groot (1990) also found that

> Motivational components were linked in important ways to student cognitive engagement and academic performance in the classroom. Self-efficacy was positively related to student cognitive engagement and performance. Students who believed they were capable were more likely to report use of cognitive strategies, to be more self-regulating in terms of reporting more use of metacognitive strategies, and to persist more often at difficult or uninteresting academic tasks. (p. 37)

The authors indicated that the self-regulating strategies could include goal setting, planning, comprehension monitoring, effort management and persistence – suggesting that highly engaged students already do, in part, what formative assessments are designed to do.

The use of formative assessments to drive instruction is not a new concept to most

educators. Authors have claimed that, "research has accumulated that shows a positive relationship between formative classroom assessment and student motivation and achievement on both classroom and large-scale assessments (Brookhart 1997, 2007; Black and Wiliam 1998a; McMillan 2004)" (Cauley & McMillan, 2010, p. 1). As a result of their review of teacher practices, Cauley and McMillan (2010) concluded that "formative assessment's emphasis on instructional modifications and student improvement supports student motivation and enables them to maintain high engagement and achievement" (p. 5).

Formative assessments that promote self-regulation and the effects on motivation in students

Not all students thrive for gains in their academics. For students who struggle with school or who are low achieving, can the use of formative assessments increase their motivation? Black, Harrison, Lee, Marshall and Wiliam (2004) stated that students who are told that feedback "will help you to learn" learn more than those who are told that "how you do tells us how smart you are and what grades you'll get." The difference is the greatest for low achievers (p. 18). In terms of teaching practice, they suggest that motivation and self-esteem are more likely to be enhanced when a course has many low-stakes assessment tasks, with feedback geared to providing information about progress and achievement, rather than high-stakes summative assessment tasks where information is only about success or failure, or about how students compare with their peers (grades) (Nicol & Macfarlane-Dick, 2006). In addition to the findings that determined that meaningful feedback focusing on specific progress and achievement, Hwang and Chang (2011) found that students using Formative Assessment-based Mobile Learning guiding mechanisms with their learning environment showed significant improvement in both their "learning interest" and their "learning attitude." It seems that consistent positive feedback

is key in increasing motivation. Cauley and McMillan (2010) stated feedback about progress in learning gives students hope and positive expectations for themselves. They indicated that low-achieving students require feedback that is highly specific and immediate. In another study, three students who were diagnosed with ADHD were taught a system of self-management: intervention system, which was used to enhance class preparedness. This study indicated that with the use of training, monitoring, fading and maintenance, "self-management procedures were effective in enhancing classroom preparation behaviors" (Gureasko-Moore, Dupaul, and White, 2006, p. 176). The previous findings reinforce the use of self-monitoring tools that promote self-regulation to be successful in achieving positive classroom student behaviors.

Formative assessments that focus on developing students' skills in self-regulation appear to promote achievement, motivation, and positive behavior. Having purposeful formative assessments which are low-stake and include consistent feedback can increase student achievement and motivation. Purposeful assessments enable teachers to tie in assessment that not only reinforces the concepts taught in the classroom, but also allow for the teacher to assess students learning gaps. Teachers should then adjust their teaching to reflect the results of the formative assessment. This may require re-teaching. Low-stakes assessments appear to decrease student anxiety when grades are considered. Feedback needs to be given constructively with a positive tone to emphasize what they are doing right. Feedback to students that focuses on developing skills, understanding and mastery, and treats mistakes as opportunities to learn is particularly effective (Cauley & McMillan, 2010). There is a large body of empirical evidence, mainly published in the USA, showing that learners who are more self-regulated are more effective learners, more persistent, resourceful, confident and higher achievers (Nicol & Macfarlane-Dick, 2006). In conclusion, there appears to be strong evidence to support the use of

formative assessment to improve student achievement and motivation.

Specified Learning Disabilities

Middle school students with learning disabilities are the focus of the current study. Students who have a learning disability can be categorized in a number of different ways. Heward (2012) indicates that learning disabilities are associated with problems in listening, reasoning, memory, attention, selecting and focusing on relevant stimuli and the perception and processing of visual and auditory information. Students that possess one or more of these traits can "experience one or more of the following characteristics: reading problems, deficits in written language, underachievement in math, poor social skills, attention deficits and hyperactivity and behavioral problems" (p. 1). WETA (2008) indicated that fifteen percent of the U.S. population, or one in seven Americans, has some type of learning disability, according to the National Institutes of Health. They also indicate that 80% of these students have reading and language skill problems. Learning disabilities can run in families but a genetic link is not necessarily always the case.

Students with learning disabilities can be impacted negatively by persistent failure at tasks and lose the ability to persist when tasks become difficult. In Witzel and Mercer's (2003) article, they demonstrated that "the repeated failures and low achievement associated with learning disabilities often lead to learned helplessness, in which students attribute failures to internal causes and successes to external causes, such as luck or the ease of the task (Dweck & Elliott, 1983, Settle & Milich, 1999)" (p. 89). Learned helplessness "results from experiencing uncontrollable events that cause individuals to expect future lack of control" (Fincham, 2012, para. 1). Fincham (2012) reported that "in the early 1970's, Carol Dweck demonstrated that some children adopted the view that once failure occurred the situation was out of their control

and there was nothing they could do" (para. 3). Before a task is begun, the student feels that they will fail as they have always done in the past, unless they have an accommodation or additional support. The repeated failures lead to a self-fulfilling prophecy of "I have never been good at this, so I will never be good at this in the future." In one study, the primary purpose was to examine differences in motivational beliefs among three groups of participants (LD, EBD and AA-Average Achievement) (Fulk, Brigham & Lohman, 1998, p. 304). Results highlighted some characteristics of students with learning disabilities that possibly explain their motivational level in comparison to other groups: 1) students with learning disabilities had less positive views about school than the other groups, 2) students with learning disabilities were motivated to avoid work, 3) male students with learning disabilities felt more alienated than the other groups, and 4) males reported more feelings of alienation than did their female learning disability counterparts. This study displays the numerous preconceived notions that students with disabilities have prior to entering the classroom. It is important to focus on motivation with the students who have learning disabilities because these students enter the classroom with academic disadvantages, low self-efficacy and a sense of learned helplessness, as they lack the self-regulating behaviors that would normally produce academic success. However, students with learning disabilities may be able to increase motivation and achievement with the use of self-monitoring and extrinsic rewards.

Synthesis

While student motivation towards academic work has been shown to change throughout a child's school years (McDermott, 2014a), studies suggest that teachers can positively impact motivation by showing caring behaviors (Wentzel, 1997), providing external rewards (Cameron, Pierce, Banko, & Gear, 2005), giving consistent, positive feedback (Hwang & Chang, 2011) that

focuses on developing skills (Cauley & McMillan, 2010) and deterring learned helplessness for students with learning disabilities (Fulk, Brigham & Lohman, 1998). Motivational interventions are important because they have been linked to improved student achievement (Deci, 1971; Cameron, Pierce, Banko & Gear, 2005; Emmett & McGee, 2013).

Achievement goals that focus on performance and goal setting coupled with extrinsic rewards were the focus on this research project. The use of self-monitoring and goal setting strategies were combined for students with learning disabilities, as some of these students may not be motivated to complete academic work. The methods of this project are presented in Chapter Three, and the results are discussed in Chapter Four.

Chapter Three

Methods

The main purpose of this project was to investigate if self-regulation interventions and extrinsic rewards had a positive impact on homework completion for students with learning disabilities. This was an Action Research project with a mixed method of gathering data. The second phase of the project was a case study. The project began on September 29th and concluded March 6th. The first trimester was used to gather general data and second trimester was used for the examination of the case studies chosen from data in the first trimester.

Context

This Action Research project took place in Southeastern Wisconsin in a suburban type setting. The school population was approximately 775 students in the middle school level which consists of seventh and eighth grades. The school district draws from many smaller communities and rural areas to compose the entire school district.

Participants

There were fifteen total participants in this study in two resource classes. There were twelve boys and three girls in two classes. There were eight students in Class 1 and 7 students in Class 2. The three girls were in the same resource class. The ethnic breakdown of the two classes was fourteen White/Caucasian and one classified as two or more races which were Black/African American/White Caucasian. The participants were in eighth grade and were all either classified as Specific Learning Disabilities or Other Health Impairment. These students mainly belong to a middle level socioeconomic status.

Table 3.1

Distribution of Participants by Class and Gender

Gender	Class 1	Class 2
Females	3	0
Males	5	7
Totals	8	7

Materials

There were a variety of tools used in this project implementation.

Self-monitoring checklist. The first assessment piece was a weekly self-monitoring checklist (Assignment Monitor) which was used in conjunction with the school district's electronic grading system. There was space provided for four core classes and room to list missing assignments and current grade (see Appendix A). The checklist was used every Monday throughout the entire project to collect data to obtain each student's overall tally of missing assignments.

Goal-review document. Along with the checklist there was a weekly goal-setting piece that helped students to plan their week (see Appendix B). The Goal Review and Task Completion form was used during grading period 3 and 4. This was used to obtain an overall percentage of weekly goal achievement for each class. Information was recorded weekly in a percentage of Goal Review and Task Completion sheets. The number of students indicating they met their goal was divided by the total number of students in both classes (n=15) which was

reported in a percent.

Motivational survey. Finally, to measure attitude and motivation a Resource Monitor Survey (see Appendix C) was given at the end of grading period 2, 3, and 4. A score of 1 to 5 was possible for each item with 5 showing that the students was motivated by the item stated. Using the range of 5 -25 total score out of questions 1 – 5, a percentage was taken from student score divided by the total possible score of 25. During grading period 3 and 4, an additional question concerning the use of extrinsic motivators was added and data was collected separately to represent motivational levels of students in conjunction to free-choice Friday and verbal and visual praise.

Extrinsic Rewards: Students were able to earn free-choice Friday if the achieved their weekly goal. This was only tied into the weekly goal, so students who had additional missing work, but achieved their goal could have the option of free-choice Friday. During this time students could use their personal device, computer or make another choice during the class period. They were also given a notecard to decorate their name and display on a bulletin board.

Procedures

The timeline for the project is presented in Table 3.2. Every Monday students logged in using the electronic grading system and the self-regulating checklist, during resource class and filled in the Assignment Monitor which included all missing assignments and current grade in each of the four core classes. After that was completed, the student met one-on-one with the teacher to set a weekly goal to accomplish that addressed their current missing work and academic goal. This goal was to be achievable in a five day period and had to pertain to improvement in current grade or missing work. Students reviewed the goal on Friday with me to

see if goal was met and completed the task they set for themselves. The same data was collected on missing assignments periodically to ensure that the students were filling out their forms with honesty and integrity. Bi-weekly checks were completed to ensure the students recorded the information accurately and periodically after that point to ensure accountability. Data from Assignment Monitor was collected from the third week of school until the end of grading period 4.

After grading period 2, two students who consistently had not met their goals, or their missing work did not decrease were chosen for further investigation. Those students were targeted in the implementation of extrinsic rewards (free-choice Friday, verbal praise and Wall of Wow). All students were allowed to participate in these incentives and data was collected to determine if there was a change in missing assignments for the class as a whole and for the case study students.

At the end of each six-week period (grading periods two, three, and four), the Resource Monitor Survey was given to assess the students' motivational level and general like or dislike of monitoring system and during second trimester, this assessed how well they were motivated by the extrinsic rewards. In grading period 3 and 4, students also answered an additional statement: "I am motivated to meet my weekly goal in order for me to participate in free-choice Friday."

Table 3.2

Table of Timeline for Action Research Project

Dates	**Description**
Sept. 29	Began utilizing weekly self-monitoring checklists and one-on-one student-teacher conferencing and weekly goal setting
Oct. 13	Implemented survey to students in resource and continue to progress monitor on a weekly basis
Nov. 25	End of Trimester 1: Students completed another survey and data were collected and analyzed to choose case study students
Nov. 26 – Jan. 22	All students continued to participate in progress monitoring but also participated in an additional extrinsic reward for achieved progress
Jan. 22	Students completed survey again to monitor motivation
Jan. 22 – March 6	End of Trimester 2: All data was collected from the Trimester and last survey completed

Analysis

The effectiveness of the intervention of increased intensity in weekly goal setting and the addition of extrinsic incentives was assessed by comparing the number of missing assignments for the class as a whole during grading periods 2 and 4. The relative contributions of goal setting and conferencing was assessed by an examination of motivational responses and the additional motivational item added in grading period 3 and 4.

Chapter Four

Results and Discussion

Analyses focused on whether 1) adding goal review with the teacher and an extrinsic motivator along with the use of the Assignment Monitor change homework completion rates with middle school students with learning disabilities and 2) what were the relative contributions of each of the two components: goal review with the teacher and extrinsic motivator.

Research Question 1: Does additional goal review involvement and extrinsic motivator improve homework completion rates?

The process of individual goal setting and monitoring coupled with extrinsic motivator had a positive outcome with a majority of the students meeting task completion goals. This conclusion was determined by the number of missing assignments and the Resource Monitor Survey that was given at the end of grading period 2.

Overall, the number of missing assignments decreased from grading period 2 to grading period 4 (see Table 4.1). The number of missing assignments decreased for eleven out of the fifteen students, two students remained the same for each grading period consistently having no missing assignments and two students increased their number of missing assignments. The data of missing assignments in grading period 2 was consistent with patterns of missing assignment in past years, but was different in grading 4. Students generally have relatively fewer missing at the beginning of grading periods 1 and 2 due to light homework load, review of previously taught material and general enthusiasm for the new school year to start. This is usually followed by an increase in missing student work, which tends to increase for grading periods 3-6. In light of this typical increase in missing assignments, the observed overall decrease is more meaningful than

at first glance. In general, students indicated that goal-setting and conferences were helpful in assisting them in meeting their goals, and also indicated that the extrinsic rewards were a source of motivation: this will be discussed more in the next section.

Case Study Students. Missing homework data were examined and one student from each class was chosen to be the focus of the case studies to see if the goal review and extrinsic motivators would increase student motivation and in turn, decrease the number of missing assignments from grading period 2 to grading period 4. Class-wide differences were minimal between the two classes. Class 1 did have 3 females and was earlier in the afternoon compared to class 2 which was all males and was held the last hour of the day.

In Class 1, Student 1 was chosen for the first case study student. Student 1 had a total of 42 missing and late assignments recorded in his Assignment Monitor during grading period 1 and 2. Student 9 was chosen in Class 2 with a total of 36 missing assignments recorded in his Assignment Monitor for grading periods 1 and 2 combined. For most of the other students the use of self-monitoring tool and individual goal setting without use of reflection and intrinsic motivators appeared to be successful with most students having fewer than 10 missing assignments across both class periods.

Case study students had a history of late and missing homework; and neither student experienced much success with program implementation from previous teachers. Weekly monitors, progress reports, daily emails to parents were all different methods tried, but none of them seemed to provide any positive results. Although the focus of this study was to try and find a successful intervention for students with chronic homework issues, data was also kept on all students to observe an overall possible impact from using the Assignment Monitor, goal review and implementation of extrinsic rewards.

Table 4.1

Assignment Monitor Data: Total Missing Assignments for Class 1 in Grading Period 2 and 4

		Grading Period 2	**Grading Period 4**	
Student	Class Period	Missing Assignments (*f*)	Missing Assignments (*f*)	**Difference in Missing Assignments**
1	1	42	5	-37
2	1	0	0	0
3	1	4	0	-4
4	1	2	3	+1
5	1	2	1	-1
6	1	9	7	-2
7	1	0	0	0
8	1	27	8	-21
9	2	36	49	+13
10	2	5	0	-5
11	2	11	8	-3
12	2	6	1	-5
13	2	6	2	-4
14	2	0	0	0
15	2	1	0	-1

Research Question 2: What were the relative contributions of each of the two components: goal review with the teacher and extrinsic motivators?

This question was answered by looking at student responses to the Resource Monitor

Survey. The survey contained 5 questions during grading period 2 and 6 questions during grading periods 3 and 4 when the extrinsic motivator was in place. Each statement had a possible rating of 1-5, with a score of 5 indicating strong agreement and a score of 1 indicating strong disagreement with each statement. Individual scores were assessed and an average for each class was taken to determine the percentage of overall satisfaction to each statement (See Table 4.2).

Impact of goal setting. Data indicate that the use of self-monitoring checklists coupled with one-on-one weekly goal setting and reviewing had a moderate positive effect on a majority of the students with learning disabilities in grading period 2, with average ratings of 3.6 (item 1) and 3.5 (item 2) respectively for the direct questions regarding the usefulness of the weekly monitor and goal setting (see Table 4.2). When goal setting and monitoring was paired with extrinsic rewards on grading periods 3 and 4, however, ratings for both items were lower, averaging 3.25 and 3.1 across both grading periods. This suggests that students became more neutral regarding the impact of goal setting on their success.

Table 4.2

Resource Monitor Survey Results: Scores reported are an average score out of 5 possible. Whole Class (Case Study 1)(Case Study 2)

Statement #	Grading Period 2 (Without Extrinsic Motivator)	Grading Period 3	Grading Period 4
(1)"Using the weekly monitor every Monday has helped in reducing late or missing work for my classes."	3.6(1)(3)	3.3(3)(4)	3.2(1)(3)
(2)"I feel that goal setting with my teacher and following up on Friday has been helpful in my organization process."	3.5(1)(4)	3.2(1)(3)	3.0(1)(4)
(3)"The use of self-monitoring and goal setting conference would be helpful to me throughout my school career."	3.7(2)(2)	2.9(1)(3)	3.3(1)(3)
(4)"I would share this strategy with others who I felt were struggling to complete work."	3.2(2)(4)	2.8(1)(4)	3.1(1)(3)
(5)"I believe this method of monitoring is directly related to my success at school."	3.1(3)(3)	2.6(1)(3)	3.0(1)(4)
(6)"I am motivated to meet my weekly goal in order for me to participate in Free-choice Friday."	NA	4.9(5)(5)	4.5(5)(4)

Impact of extrinsic rewards. Item 6 was examined to determine the effectiveness of the implementation of extrinsic rewards and whether or not it had a positive impact. According to students, the extrinsic reward of free-choice Friday was very motivating. Seven students in Class 1 scored this item a 5/5 and one student scored question 6 as a 4/ 5 during grading period 3. Student 1 scored item 6 a 5/ 5, indicating free-choice Friday was "very much so" a motivator to complete his weekly goal during grading period 3 and grading period 4. Six students in Class 2 scored this item 5/ 5 and one scored it a 4 out of 5. In grading period 4, Student 9 scored the same statement a 4/5 which indicated the extrinsic reward was not a motivating factor for him as

much as it was the previous grading period in which he scored item 6 a 5 out of 5. The average score for item 6 for both classes was a 4.9/5 for grading period 3 and 4.5/5 for grading period 4 indicating the extrinsic motivator was successful in helping students complete their weekly goal and in turn reduce their missing assignments. It should be noted that inclusion of the "Wall of Wow" was also present as a motivator, but was not directly assessed.

Case Study Students. Did the addition of the goal review conferencing and extrinsic reward impact the student group and specifically the case study students? The data collected had mixed results which indicated great improvement in Student 1 and no improvement in Student 9. Student 1 decreased missing assignments from 42 at the end of grading period 2 to only 5 at the end of grading period 4. Student 9 increased missing assignments from 36 at the end of grading period 2 to 49 at the end of grading period 4.

While Case Study 1 showed great improvement in the reduction of assignments his scores on the Resource Monitor Survey stayed consistently low throughout the process. This finding was most interesting because it indicates that he believed that the process of self-monitoring and goal setting had little to do with his overall change of missing assignments. In grading period 2, he rated the process at 1.8 and in grading period 4 a 1.0 average out of a total of 5 indicating he felt the process was not assisting him with his success to achieve his weekly goal and earn the extrinsic reward even though his missing assignments decreased and his ability to meet his weekly goal to earn the reward was continuously highly motivating. His classmates had a much higher average which is shown in Table 4.3.

Student 9, Case Study 2, did not show improvement in reduction of missing assignments during this project having 36 at the end of grading period 2 and 49 missing assignments at the end of grading period 4. However his ratings on the Resource Monitor Survey conflicted with

this information. His overall satisfaction with the process of self-monitoring, goal setting and reviewing, was moderately positive, as he scored himself at an average of 3.4 out of 5 for both grading periods 3 and 4. This is surprising considering it is in conflict with the number of missing assignments. In grading period 3, Student 9 strongly agreed that Free-choice Friday was a motivator but only moderately agreed in grading period 4 which indicated the extrinsic reward was not as motivating factor for him as much as it was the previous grading period.

Additional Considerations. Goal setting and external rewards.

As stated, students were given a Task Completion Goal Review and Action Plan to fill out on Fridays during grading period 3 and 4 to determine whether or not they accomplished their goal and earned their free-choice Friday. The form also included an area for them to reflect on the why or why not the goal was met or not. This was implemented only during the phase two of the project but was used with all students. Data was collected to determine what percentage of students met their weekly goal. The overall goal completion rate was 63% during grading period 3 and 85% during grading period 4. These percentages were not broken down by class but rather an overall weekly completion rate. The data shows that students improved their skills in setting and meeting a weekly task completion goal.

Goal completion rates had a pattern of consistencies throughout grading periods 3 and 4 (See Table 4.3). The data was compiled on all fifteen students as a whole. Students generally had a higher percentage of goal completion percentage at the beginning of each grading period and dropped to lower percentages as the grading period progressed. This pattern is common in all grading periods from year to year as students get bogged down with homework, tests and long-range projects that complicate their ability to complete daily work. A week goal is short-term and provided the structure they needed to follow through within a week's time. Students

goal completion rate increased from a 63% to 85% with the use of extrinsic motivators and teacher review of goal setting.

Table 4.3

The Percent of Students Who Reported Meeting Their Task Completion Goal Each Week: Class 1 and 2 Combined for Grading Periods 3 and 4

Time Period Grading Period 3	Completion Rate Grading Period 3	Completion Rate Grading Period 4
Week 1	94%	100%
Week 2	40%	100%
Week 3	64%	86%
Week 4	77%	83%
Week 5	67%	76%
Week 6	38%	64%
Overall Grading Period	63%	85%

Affective Observations.

Students had an overall positive experience with the system put in place to monitor, review and reward if goal was completed. Students were motivated by verbal and visual praise as well. Students were able to use a notecard when goal was achieved each week and decorate them with their name using markers, colored pencils and glitter paint. Appendix D shows the bulletin board and examples of the creative notecards that were made. The students looked forward to completing these and choosing the spot they wanted to display them. They requested more glitter and other supplies to continue their creativity.

Chapter Five

Recommendations

This project investigated whether weekly student self-monitoring and goal setting coupled with the use of extrinsic motivators would decrease the number of missing assignments in students with learning disabilities. In phase one of the study, each week students examined their current grade, percentages and missing work and set a goal related to task-completion of missing assignments. In phase two of implementation, increased teacher involvement during goal setting and extrinsic rewards were implemented and given to those students who met their weekly goal. Data revealed an increase in goal completion and a decrease of missing work. Students rated the system's usefulness in helping them complete their goal and earn the extrinsic reward. Students showed a decrease in their opinion of the usefulness in the self-monitoring but at the same time showed a consistent high rating of the reward as a motivator to complete their goal.

Conclusions

The results of this study are consistent with findings in literature by Witzel and Mercer (2003) who concluded that:

> the need for extrinsic motivation increases for students with learning disabilities. Not only may the use of praise help these students develop an intrinsic purpose for a behavior, praises will also help them in the short term while they have difficulty maintaining and developing internal control. (p. 94)

In the current study, students with learning disabilities responded positively to the potential to earn the extrinsic rewards and worked diligently to achieve their weekly goals. As Witzel &

Mercer (2003) state, extrinsic rewards can lead to intrinsic motivation. While there was no data directly collected to substantiate this hypothesis, observations consistent with it were made during my project. The verbal and visual praise, along with the extrinsic rewards appear to have had an impact in self-satisfaction and intrinsic motivation. When the extrinsic rewards were implemented on Friday, it was often observed that students would continue their academic work even though it was not required as part of the free-choice. While much research on intrinsic and extrinsic motivation has warned of the hidden cost of rewards (Deci, Koestner, & Ryan, 1999; Deci, Koestner, & Ryan, 2001; Kohn, 1999; Murayama, Matsumoto, Izuma, & Matsumoto, 2010), when student initial motivation is low, rewards can support intrinsic motivation.

Limitations

The project had a number of notable limitations. First, the size and characteristics of the sample limit generalizability to an overall student body population. Only fifteen students were focused on for this project and it is possible that the results may not be transferable into a larger group setting as the class size was only 7 or 8 students as compared to 30 in a regular classroom setting. Students were predominately male ranging from 13-14 years of age and either were diagnosed with specified learning disabilities or other health impaired (generally ADD or ADHD). Generally this group can be less motivated and lack organization skills to complete their work in a timely manner. This can be largely from disinterest or outside interferences such as lack of home support. Another limitation could be the students' general acceptance to the project implementation. Quite possibly, these students responded in a positive manner to the use of self-monitoring and goal-setting techniques because they have either had previous experience or had a predisposition to be agreeable to the process.

Another factor that may have impacted the results of this study is the time of day the

intervention occurred. Both classes were in the afternoon and last hours of the school day. Could the study have showed a better result if the classes that were monitored occurred in the morning? Possibly, but all class periods throughout the day are the same amount of time, and students are more alert and attentive in the morning. Additionally, the focus for students at the end of the day is likely homework completion, rather than studying and preparing for an upcoming test as a student in a morning class might possibly do.

A third potential limitation is whether or not the goal achievement improved because their ability to write achievable goals did not actually improve but rather their goals were adjusted to make sure they were able to earn the extrinsic reward each Friday. Students initially had a difficult time grasping what a weekly task completion goal looks like. Changing a letter grade from a "D" to an " A" within a week's time is not a reasonable goal and neither is decreasing their 10 missing assignments down to 0 in four days. So changes in goal completion ratings could have occurred because students wrote achievable goals that were realistic, or they may have written a goal that simply could be achieved easily in order to earn the reward. In reviewing the goals of the students, and knowing that my involvement in helping set goals was not completely consistent given the proper time throughout each class period, the students likely had some weeks in which the goals were not as difficult. Goal achievement could also have had a higher percentage simply because the workload in their classes was not as rigorous. A possible conclusion as to why students failed to meet the goals may be as simple as they had too lofty of a goal that just couldn't be accomplished within a week's time with their regular homework load. Goal completion rates fell during each six week grading period at different times, indicating that the goals that they set were likely reasonable and perhaps they had too many other daily homework assignments that took precedence over their weekly goals.

Additionally, there was a notable difference between the two case study students. The system in place produced a positive result with one student and not the other. Interestingly enough, the student that this project worked for consistently rated the process of monitoring and goal setting as *not* helpful but was motivated to earn the extrinsic reward. This student took full advantage of Free-choice Friday and used it as a break at the end of the day. The student that did not see positive results rated the use of self-monitoring and goal setting as useful but indicated a decline in the effectiveness of the extrinsic reward. The most plausible explanation is that the amount of missing work produced a feeling of helplessness. Even though the student would earn the reward, often times, he would continue work as normal because he was so far behind. This may have not let him experience the real break of "free-choice Friday." Thus, it may be necessary for students who feel too far behind require additional elements of the intervention.

Recommendations

The success of this study will lead to its replication in future years. One proposed change includes greater regulation of the standard as to how they would earn the extrinsic motivator of free-choice Friday. Students were clearly motivated to achieve their weekly goal to earn their Friday rewards, but the bar may not have been set high enough from each individual to maximize their growth. Even though students achieved their goal and earned the reward, some of them still had many missing assignments or had poor grades in their classes. Future implementations of this project will involve higher standards, with the external reward being contingent on having no missing assignments each week to determine if that will decrease missing work or eliminate it with some students. If students are motivated enough and want to earn that time, they will work to eliminate their missing work. This idea, however, may not work for all students, such as the case study students who had chronic missing work, who may require something like the Task

Completion and Goal Review sheet and initial goal setting to help students “chunk” their tasks and not feel so overwhelmed.

References

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom. *Phi Delta Kappan*, *86*(1), 9-21.

Cameron, J., Pierce, D., Banko, K., & Gear, A. (2005). Achievement-based rewards and intrinsic motivation: a test of cognitive mediators. *Journal of Educational Psychology, 97(4), 641-655.*

Cauley, K., & McMillan, J. (2010). Formative assessment techniques to support student motivation and achievement. *The Clearing House:A Journal of Educational Strategies, Issues and Ideas*, *83*(1), 1-6.

Cherry, K. (2014). What is the difference between extrinsic and intrinsic motivation? *About.com Psychology*. Retrieved June 10, 2014, from http://psychology.about.com/od/motivation/f/difference-between-extrinsic-and-intrinsic-motivation.htm

Covington, M. V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Reviews Psychology, 51,* 171-200.

Deci, E. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, *18*(1), 105-115.

Dev, P. C. (1997). Intrinsic motivation and academic achievement: What does their relationship imply for the classroom teacher? *Remedial and Special Education*, *18*(1), 12-19.

Emmett, J., & McGee, D. (2013). Extrinsic motivation for large-scale assessments: A case study of a student achievement program at one urban high school. *The High School Journal, 96*(2), 116-137.

Fincham, F. (2012). Learned helplessness . Education.com. Retrieved from http://www.education.com/print/learned-helplessness/

Fulk, B., Brigham,F., & Loman, D. (1998). Motivation and Self-Regulation: A comparison of students with learning and behavior problems. *Remedial and Special Education.19*(5), 300-309.

Gureasko-Moore, S., Dupaul, G. J., & White, G. P. (2006). The effects of self-management in general education classrooms on the organizational skills of adolescents with ADHD. *Behavior Modification*, *30*(2), 159-183.

Hayenga, A., & Corpus, J. (2010). Profiles of intrinsic and extrinsic motivations: A person-centered approach to motivation and achievement in middle school. *Motivation and Emotion, 34*, 371-383.

Heward, W. (2012). Characteristics of learning disabilities in students. Education.com. Retrieved from http://www.education.com/reference/article/characteristics-learning-disabilities

Hwang, G., & Chang, H. (2011). A formative assessment-based mobile learning approach to improving the learning attitudes and achievements of students. *Computers & Education, 56*, 1023-1031.

McDermott, P. (2014a). Developmental motivation: Motivation through the ages. Retrieved from http://sitemaker.umich.edu/356.mcdermott/home

McDermott, P. (2014b). Developmental motivation: Motivation through the ages [Children need love]. Retrieved from http://sitemaker.umich.edu/356.mcdermott/motivation_in_children

McDermott, P. (2014c). Developmental motivation: Motivation through the ages [High School]. Retrieved from http://sitemaker.umich.edu/356.mcdermott/motivation_in_middle_high_school_years

Nicol, D., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, *31*(2), 199-218.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, *82*(1), 33-40.

Pintrich, P. R., & Zusho, A. (2002). Student motivation and self-regulated learning in the college classroom. In J. C. Smart & W. G. Tierney (Eds.), *Higher Education: Handbook of Theory and Research* (Vol. XVII, pp. 55-128). New York: Agathon Press.

Settle, S. A., & Milich, R. (1999). Social persistence following failure in boys and girls with LD. *Journal of Learning Disabilities. 32*(3), 201-212.

Shafiq, F., & Siddiquah, A. (2011). Effect of classroom quizzes on graduate students' achievement. *International Journal of Academic Research*, *3*(5), 76-79.

Wentzel, K. R. (1997). Student motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology*, *89*(3), 411-419.

WETA Organization (2010). *What is a learning disability?* (WETA)Retrieved June 10, 2014, from http://www.ldonline.org/ldbasics.

Wiliam, D., Lee, C., Harrison, C., & Black, P. (2004). Teachers developing assessment for learning: Impact on student achievement. *Assessment in Education: Principles, Policy & Practice*, *11*(1), 49-65.

Witzel, B. S., & Mercer, C. D. (2003). Using rewards to teach students with disabilities: Implications for motivation. *Remedial and Special Education*, *24*(2), 88-96.

Yin, Y., Shavelson, R., Ayala, C., Ruiz-Primo, M., Brandon, P., Furtak, E., Tomita, M., & Young, D. (2008). On the impact of formative assessment on student motivation, achievement, and conceptual change. *Applied Measurement in Education*, *21*, 335-359.

Appendix A
Assignment Monitor

Assignment Monitor

Name:_____

Date:_____

Math Current Grade:_____

_____

_____

_____

Science Current Grade:_____

_____

_____

_____

Language Arts/Reading Current Grade:_____

_____

_____

_____

Social Studies Current Grade:_____

_____

_____

_____

Total Missing Assignments:_____

Assignment Completion Weekly Goal:

_____

_____

_____

Appendix B
Task Completion Goal Review and Action Plan

Task Completion Goal Review and Action Plan

Was task completion goal accomplished this week? Yes No
Reflection:
If yes, what contributed to my success in accomplishing my goal? (time management, task chunking, using time wisely in resource)

_____

_____

If no, what could I improve on for next week's task completion goal?

_____

_____

Appendix C

Resource Monitor Survey

Resource Monitor Survey

Please answer the following questions rating them from 1 (not at all) to 5 (very much so). Take a moment to think back to previous grading periods to ensure that you are answering to the best of your ability.

1. Using the weekly monitor every Monday has helped in reducing late or missing work for my classes. 1 2 3 4 5

2. I feel that goal setting with my teacher and following up on Friday has been helpful in my organization process. 1 2 3 4 5

3. The use of self-monitoring and goal setting conferences would will be helpful to me throughout my school career. 1 2 3 4 5

4. I would share this strategy with others who I felt were struggling to complete work. 1 2 3 4 5

5. I believe this method of monitoring is directly related to my success at school. 1 2 3 4 5

6. I am motivated to meet my weekly goal in order for me to participate in Free-choice Friday. 1 2 3 4 5

Appendix D

"Wall of Wow"- Student Bulletin Board