

ABSTRACT OF CAPSTONE

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The Graduate School
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April 28, 2016

EFFECTS OF GOAL SETTING ON STUDENT ACHIEVEMENT

Abstract of capstone

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
College of Education
At Morehead State University

By

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Sandy Hook, Kentucky

Committee Chair: Dr. Michael W. Kessinger, Associate Professor

Morehead, Kentucky

April 28, 2016

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As more accountability is placed on schools and teachers, schools must be proactive when trying to find ways to boost their students' academic success. Because of the need to assist and nurture academic achievement, strategies that cost little more than time need to be utilized. Goal setting is a strategy that past research has shown effective in business and other areas of life. For a person to be successful in all aspects of their life, they must decide what they want to achieve and then develop a plan to achieve this. This study was designed to examine the impact goal setting might have on student achievement as well as to teach students a lesson on how to attain their goals. Through the efforts of administrators providing teachers with professional development opportunities in goal setting as well as the teacher and students' desire to see them through, this study will determine if goal setting is an effective strategy in increasing student learning

KEYWORDS: Student achievement, goal setting, professional development, determination, success

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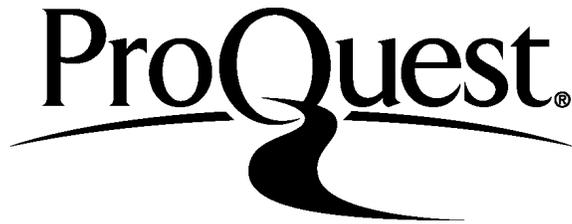
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DEDICATION

This work is dedicated to my wife, Nicole, and my two children, Hallie and Abigail. My family has always supported me and given me the time that I need to complete this work. You all are the reason for my desire to succeed.

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Chapter 1

Introduction

One of the most difficult challenges facing education in today's world is the lack of funding for resources such as additional teachers and technology. Budgets continue to shrink and schools are forced to think of new and innovative ways to increase student achievement. One of the most effective and cost efficient ways of doing so is the use of goal setting in the schools (Rader, 2005). Goal setting is a process that can be used from kindergarten all the way through higher education, as well as throughout a person's life. Though the cost is little, goal setting requires more than just deciding to accomplish something and aimlessly trying to do so (Newman, 2012).

Goal setting is a process that uses the strengths of students to improve upon their weaknesses, and ultimately helps lead them to success. Teachers, administrators, parents, and the community should have a working relationship in seeing that students are given every opportunity to succeed (Callan & Levinson, 2011). Student achievement is ultimately the goal of all stakeholders, and everyone needs to understand how they work and what role they play in helping students achieve each goal that is set.

Students learn from a variety of different ways (Callan & Levinson, 2011). What works for some students, will not work for others and educators must be careful that they meet the needs of all students. Having an understanding of why students think the way they do is vital in helping them set their goals (Ellison, 1992).

Learning the different theories of cognitive development is one way of developing the knowledge needed to understand our student's minds.

Individual and Course Goals

Individual and course goals are the most effective when working with students. Individual goals focus on individual student's needs, and requires a one-on-one working relationship with a mentor (Newman, 2012). These goals should focus on what the students want to accomplish for themselves. Individual goals should be based on what students want to achieve in their academics and should be specific to each student. Group goals, or course goals, on the other hand are goals that are for the whole group and use the individual strengths of every student to accomplish the goal for the group (Newman, 2012). These course goals typically focus on classroom goals, and even more widespread, the overall goals of the school.

The implementation of goal setting in schools is an effective way of helping students achieve. Johnson and Gramm (1990) believe that setting goals is a "powerful tool" (p. 1) in the achievement of students. Day and Tosey (2011) state that goal setting can "direct students attention to completing tasks, can motivate them to greater effort in performing tasks that move them towards achieving goals" (p. 6). Students have a much better chance of being successful when they set reachable goals and have a support base that provides consistent feedback (Punnett, 2001). Learning the goal setting process is not only a skill that will assist students in being successful in school, but will be a process that they will carry with them throughout their lives

(Newman, 2012). Clearly, there are very positive outcomes when goals are set and supported by all stakeholders of the school.

Statement of the Problem

With school budgets tightening every year, as well as there being a focus increase student achievement, schools have to become more innovative about ensuring that students are provided the opportunity to be successful. Because of this, goal setting is an option that schools have to boost the achievement levels of their students. It requires little resources; but instead the devotion, time, and commitment of the students setting the goals, as well as the support of all stakeholders. The purpose of this study was to determine the impact between a goal setting system, for both individual students and a course of study, with student achievement.

Significance of the Problem

As students age they pass through different cognitive stages and the way they learn also goes through several changes (Ellison, 1992). Setting individual goals for students allow educators to work with them by providing them with advising, nurture, and support throughout the school day. Teachers also get to know and understand the students view on life and what they want to achieve. The educators can then use that information to develop cognitive appropriate goals to help them be successful. Goals give students a direction of what needs to be achieved, and is not simply a 'do your best' strategy, which is not effective.

When working on course goals, goal setting allows students to use their individual goals and strengths also help the school to be successful. In the case of

this study, course goal setting was geared to performance on state assessment data as well as grade level performance on Discovery Education assessment; that were collected during the 2014-2015 school year. The goal setting process was implemented during that school year.

The goal setting process impacted students and teachers in a variety of ways. Students were given the opportunity to work with their teachers on a regular bases during the advising block the school has in place, and used this time to ask questions and seek guidance. Students also were taught a valuable strategy in goal setting that has the potential to positively affect their lives. The hoped outcome is that student achievement will rise and they will be successful academically.

Teachers were also impacted by the goal setting procedures. They were required to advise about twenty students each week. They also worked with their departments to analyze student data and to provide them with a background on each student. Teachers were responsible for meeting with students, helping them develop a plan to meet their goals, and providing the appropriate instruction students need in the classroom to be successful.

Background of the Problem

Finances are a major issue for Elliott County schools. Since 2008, the small school district has cut 35 positions, including teachers, aids, custodians, and other important individuals that assist in the education of the students. The school has had to end programs such as agriculture/ and our school nurse services, and continues to struggle finding the resources needed to offer students every opportunity possible.

Due to hard financial issues, the school and district face, the staff needs to look at other initiatives to increase student achievement. Goal setting is a process that requires little financial backing, and provides research helping to show its overall effectiveness.

Elliott County High School currently does not have any type of policy in place that deals with goal setting, motivation, or advising. Though some teachers do have students set goals within their classrooms, there was no structure that ensures every student in the school was receiving one-on-one advising, nor setting their goals. For the most part, students were simply told to try hard, and do not have a specific bar set for which they wanted to achieve.

Students need to be directed to specific and attainable goals; led by all stakeholders of the school who nurture and help students achieve success. Having a goal setting policy, or process that all teachers are responsible for implementing allows the school the opportunity to provide students with a plan on how they are going to accomplish these goals, as well as help them determine what is important to them (Miller & Kelly, 1994).

Local Context

Elliott County High School is located in the foothills of Appalachia. There is no interstate access to the community, and its residents have to travel at least 30 minutes in every direction to larger towns to get goods. The whole school district consists of three elementary schools, a 7th and 8th grade building, and a high school. There are roughly 1,000 students in the district, with approximately 350 in the high

school. There is little industry in the county, and the largest employers for Elliott County's citizens are the school district, state prison, and nursing home. Many people in this area have to travel over an hour to work, and some are even gone weeks at a time.

Many students in the school district live in single parent homes, or they live with grandparents or other family members (J. Whitt, Personal Communication, June, 2015). Drugs are a problem in the community and many of these students were taken from their parents due to neglect or legal problems that the parents faced.

Poverty is also prevalent with the school district has 86% of its students receiving free or reduced lunch (J. Whitt, personal communication, June, 5, 2015). The county has a \$24,226 a year median household income; compared to \$43,036, which is the Kentucky average (Census Bureau, 2014), which makes Elliott one of the poorest counties in the state as well as the country. Only 70% of its residents have a high school diploma, compared to 83% of all Kentuckians (United States Census Bureau, 2014).

The county is not very diverse ethnically. Ninety-five percent of Elliott's population is Caucasian, while only 3.5% is African American. The vast majority of the black population is in the Little Sandy Correctional Facility and are not natives of Elliott County.

The population continues to decline in Elliott County. For 10 years, Elliott has declined by about 400 residents, which is a large amount considering there are only 7,672 people in the county (United States Census Bureau, 2014). The lack of

jobs has caused a brain drain; as many of Elliott Counties best and brightest leave for better opportunities.

ECHS has traditionally been a low performing school. It has routinely been at the bottom of the state in its accountability (Kentucky School Report Card, 2014). However in the last four years the school has begun to rise academically. It has risen from the 7th percentile in 2011, to the 40th percentile in the state for 2014. It has also seen a rise in its Career and College Readiness, rising from 17% in 2011 to 65% in 2014 (Kentucky School Report Card, 2014). The graduation rate for Elliott County High School is higher than the state average, with a 95% graduation rate in 2014. ECHS was also named a highly progressive school in 2014 because of its rapid rise in its accountability (Kentucky School Report Card, 2014).

The school has a veteran staff, with many who have been there for over 20 years. In fact, in the next four years the school will have at least six teachers retire out of a staff of 32. Because of the cuts in finances, few new teachers have been hired which prevents the school from having a younger staff. Teachers in the school typically engage in district professional development and seldom seek out other areas of training. The school and community have a working relationship, and the support from the community has begun to grow as teachers and leaders are reaching out for more school/community partnerships.

Research Question

This research was designed to answer a variety of questions pertaining to goal setting that will ultimately impact student achievement. The questions were built

around the belief that goal setting was a positive factor for the achievement of students, and had made an impact on the school as a whole. The data collected from student assessments were used to inform the school if the goal setting strategy was effective. The research question for this capstone was:

1. What impacts did goal setting have on student achievement?

Two null hypotheses were examined to provide a basis for response to the research questions. The two null hypotheses were:

Ho1: Goal setting had no impact upon the performance of students on the Discovery Education assessment for English 1 in the fall of the 2014-15 school year compared to the performance obtained on the spring administration.

Ho2: Goal setting for the course had no impact upon the performance of students on the EOC assessment for Algebra 2 in the 2014-15 school year compared to the performance obtained on the 2013-2014 assessment.

Definition of Terms

The vocabulary used for this research is provided so the reader can better understand how the term relates to the research. Most terms are general terms that are used daily, however some like intrapersonal and interpersonal are not used in everyday conversation.

Goals: the end toward which effort is directed..

Motivation: The act or process of giving someone a reason for doing something.

Theory: An idea or set of ideas that is intended to explain facts or events.

Intrapersonal: The capacity for understanding the self.

Interpersonal: Awareness of the people around you

Collaboration: To work with another person or group in order to achieve or do something.

Discovery Education Assessment: Assessment program for schools to gauge student progress throughout the school year.

Annual Measurable Objective (AMO): The accountability system used by the state of Kentucky.

Career and College Ready: the level of preparation a student needs to succeed in credit bearing courses in college (Pearson.com, retrieved March, 20, 2016).

Professional Development: Skills and knowledge an employee gains to optimize his or her personal development and job growth. Developed through school and district administration, and provided at teachers schools as well as educationally sponsored conferences and events.

Chapter 2

Literature Review

The literature based on goal setting is generally very positive. Research supports the effectiveness of goal setting as well as motivation to assist students in being successful. This capstone was based on the effects of goal setting at the high school level, and the literature reviewed indicates that setting goals can be considered a strong strategy in meeting the needs of students as well as helping them be successful. One of the keys to the success of goals is student motivation. Whether it be motivating students to meet their individual goals or their course ones, motivation is instrumental in student success.

Defining Goal Setting

Goals are defined as “the end toward which effort is directed” (Webster Dictionary, 2005, p. 245). They are the outcome of having a vision, planning what it is one wants to achieve, then following that plan to success. Goals are set in all areas of life. From military engagements to corporate plans, goals help to establish a direction that an organization or individual wants to go and encompasses what consists of making those plans a reality (Riggs, 2012). Every successful organization or entity has clear and defined goals that are designed to bring the best out of people as well as a group.

According to Ellison (1992) goals not only help a person achieve success, they help to motivate those who consistently set them. Goal setting requires commitment toward achievement. Achievement requires one to be focused and

disciplined, and both are needed to have a successful and meaningful life. Goals allow people to strive for and reach what it is they want to accomplish (Ellison 1992). Learning how to plan for what a person wants to accomplish, and learning how to set realistic, reachable goals is important in life. It allows one to examine every aspect of his/her life and what is needed to realize ones dreams.

Motivation is a key component of goals. Looking at goals through the educational setting, Miller & Kelley (1994) argue that goals help to increase motivation for students as they strive to meet the demands they put on themselves. Because of the cause and effect relationships between motivation and goals and goals and motivation, educators need to be sure that they are addressing both as they move forward with the goal setting process. Once goals are set, motivation needs to immediately begin to ensure that they are addressed together. Motivation for goals is vital if they are to be met. In fact, if properly motivated, those who set goals will be “involved until their performance meets or exceeds standards” (Punnett, 1986, p. 40).

Students need a support base that provides them with motivation that builds confidence and guidance they need to be successful in whatever they are trying to achieve. That support base also needs to be instrumental in helping find what it is that motivates individuals. All students are not the same and it is the job of the support base to find what it takes to motivate each and every student.

Individual or Course Goals

Goals can be set individually or in a group. Daniels, Frenzel, Perry, Stewart and Stupnisky (2013) discuss goals and how they can be used and modified for both

the individual and the group. Looking at goals through an educator's lens, Daniels et al. explains that schools must allow students to set their own personal goals. These goals can include student's short term as well as their long-term academic goals. Daniels et al. goes on to explain that once individual goals are set, group course goals for the school can be established and the overall success of the school can be addressed.

Viewing goal setting from an educational standpoint, Johnson and Graham (1990) state that goal setting "is an extremely power tool" (p. 1), when used for academic tasks. Not only do goals allow students the chance to achieve on classroom assignments, but also it helps to direct their minds towards goal setting in all areas of their lives (Johnson & Graham, 1990). Students can use goal setting in sports, music, clubs, and volunteer work just to name a few. As discussed previously, setting goals is an important aspect of living a successful life, and schools, along with other stakeholders, need to teach this valuable life skill to our students.

Effects of Goal Setting

Building upon the importance of goals discussed by Johnson and Graham (1990), Newman (2012) elaborates stating, "transformation in schools can only happen when there is a clear target that is known and owned by those who are implementing it" (p. 12). This is a powerful statement as Newman concludes that no success can happen unless motivated students first set their goals. In his research Newman also found that success of goals must be shared between the person setting the goals and the person encouraging and helping them plan how they will reach their

goals. Once students see the effects of setting goals and understand that they must be attainable as well as well thought out and planned for, they can use them to achieve success in their academics. This success not only benefits the students, but it also benefits the school as a rise in student achievement means a rise in the accountability of the school.

Setting goals and working with students to achieve them does not solely need to be the job of teachers and the school. In fact a school needs to work with the community to help students be successful. Bagin, Gallagher, and Moore (2008) discuss the importance of a “sound school-community relations policy” (p. 44) that works to set goals for the district as well as for individual students. Bagin et al. even suggest that community members should serve on committees and be apart of the goal setting process for schools and individuals. Reaching out to the community for support as well as their perspective on the education of students allows the school and community to build a strong relationship. This helps to introduce students to community issues as well as different careers and industries. It also allows the community to feel like they have a role in the education of their children (Bagin et al.). When the community has a stake in the school system it helps to build trust and respect between all that are involved.

Goal setting is a concept that will deeply impact the lives of those that set them. Though goal setting seems like an easy concept, it cannot be taken lightly nor can a person dive into it without a clear and defined goal, as well as a plan to achieve it (Newman, 2012). Through patience, planning, motivating, and perseverance,

students can reach the levels they are striving for, while at the same time assisting in making the school better as well.

Goal Setting Theories

The positive aspects of goal setting are rooted in the development of children as they age, as well as for when they reach adulthood. Many theorists have researched how to motivate and help people develop, and the aspects of goal setting ties directly in with the theories about to be discussed. Goal setting and child development go hand-in-hand, and the theorists provide evidence for its effectiveness.

According to Day and Tosey (2011), in order for goal setting to be effective, it needs to be “specific, challenging, but realistic” (p. 5). Goals require that the learner receive feedback from those who are providing them support, and the learner needs to reflect on the work they have done so far to reach their goal (Day & Tosey). Feedback and encouragement are considered “highly beneficial” in the development and successes of students. Teachers also need to help students recognize their “feelings and emotions” (Day & Tosey, p. 5) and learn how to use them for positivity. Day and Tosey are basically describing the importance of a nurturing support base for students as they work through their goals.

Sax (1997) supports the idea that goal setting and student learning go hand in hand. Sax believes that good teachers help students develop the positive behaviors, such as goal setting, that will help them learn and be successful. He does not simply believe that teachers only need to teach their curriculum; he places a much larger role on their effectiveness of reaching each student, and working with them to set goals is

a means to do so. In fact, Sax states, “teaching involves setting goals that consider student needs and backgrounds and selecting the most effective instructional strategies” (p. 51). Sax is making the point that every child is different and has a different background. What might work for one child may not be what will help the next (Sax).

Social Learning Theory. One theory of child development, known as Social Learning Theory, is based on the assumption that children learn by observing the people and environment around them (Steinberg, 1993). This theory insinuates that “modeling and observational learning” (p. 15) is key to children developing both socially and cognitively. Part of this theory also relies on child rearing practices by parents, which can and cannot positively affect a child during the critical developing points in their lives (Steinberg, 1993). Goal setting is directly related to the idea that children learn by having support as well as by observing those around them (Newman, 2012). As a mentor to these students, teachers can provide this support as well as being a role model. When students are taught how to plan for what they want to achieve, then they will be much more likely to be successful.

One factor can deter the goal setting process as well as the achievement levels of students is the support of their parents (Sax, 1997). Many students have a wonderful supportive home. However, others have parents who are not involved in their child’s education, while others have parents who abuse them. Breaking the habits taught by unfit parents can be challenging, but educators must look for ways to reach each child and gain an understanding of the individual (Sax,).

It is important to determine how students best learn when working with students setting individual goals. Steinberg (1993) discusses Gardner's theory of multiple intelligences, which is based on the belief that there are seven different ways in which children learn. "Verbal, mathematical, spatial, kinesthetic, self-reflective, interpersonal and musical" (Steinberg, 1993, p. 75), are the different learning styles according to Gardner. The multiple intelligence theory is built on the idea that children learn differently and because of this, educators need to ensure that every student is learning in the way that they are best suited to learn.

Ellison (1992) discusses how mentors or advisors need to work with students one-on-one to help develop their goals based on the way that they process the world around them. Intelligence can take many shapes and forms, and though one student may not be strong in verbal intelligence, their strengths could lie in mathematical or in spatial intelligence. Goals should be molded around the strengths of student's learning. It is vital that mentors recognize this and understand the diverse needs of our students (Ellison, 1992).

Piagetian Theory. Another theory related to the development of children and its relation to goal setting is the Piagetian Theory. This theory, developed by psychologist and philosopher Jean Piaget, suggests that children pass through different cognitive stages as they age and develop (Steinberg, 1993). For example, children pass through the concrete to the abstract stage, which Steinberg insists occurs during the adolescent years (Steinberg). The concrete stage is when children are beginning to see different points of view and understand that the world does not

solely revolve around them. The abstract stage occurs around puberty and is when children can think more hypothetically and understand complex issues (Zhao, 2012).

The Piagetian Theory is important when developing student goals because as mentors, educators must make sure that student goals are age appropriate and are cognitively suitable (Sax, 1997). Age specific goals should be set at the kindergarten level and continued through the course of a child's educational life. However, educators must be careful to spot the changes in students thinking and ensure that they are being challenged when this occurs (Zhao, 2012). If goals are not built on a student's age, and mentors do not offer students feedback and help them to continually develop their goals, then the goal setting process has failed. Students who are in the abstract stage of thinking do not need goals that are still based in the concrete stage. Goals and activities associated with them have to be based on a child's developmental stage (Steinberg, 1993).

Intrapersonal intelligence. Goals require students to have an idea of their Intrapersonal Intelligence (Punnet, 2001). Intrapersonal Intelligence is "the capacity for understanding the self" (Punnet, p. 70). The idea of understanding oneself means that students look at what motivates them. It is looking at one's own emotions, confidence, and responsibility (Punnett, 2001). Knowing oneself is important to the goal setting process, as each student is unique and requires different plans and goals that are aligned with how they learn and see the world.

Intrapersonal Intelligence differs from Interpersonal Intelligence, which is an awareness of the people around you, and is important in setting course goals. Ellison

(1992) defines Interpersonal Intelligence “as the ability to understand others” (p. 70). Interpersonal Intelligence is developed by student interaction with the people around them (Ellison, 1992). It requires that students adapt and learn from their peers and about them. Both are important to the goal setting process. However before one can have an understanding of others as well as what is required of them personally to meet course goals, they need to have the Intrapersonal Intelligence that allows them to comprehend why they see the world the way they do (Punnett, 2001).

Setting individual goals also allows a student to have a clear focus on what they want to achieve. Day and Tosey (2011) discuss the importance of ensuring that goals are specific. For example if a student wants to raise their test scores in a class, then they need to be specific and set a goal of raising them one or two letter grades. Day and Tosey (2011) warn against being vague and stating, “do your best” (p. 7), which educators are often guilty of. Research shows that statements such as those do little to improve academic achievement. Instead, having a direct and attainable goal to work for is effective in raising achievement, and allows students to have a clear defined target for which to aim. (Day & Tosey, 2011). It’s important for teachers and students to understand that goals need to be specific and attainable. An example of this would be if you told a student to dig a deep hole, then they may dig it five feet, or even ten feet. However if they are told the goal is to reach six feet, then they know what they are working to achieve (Dotson, personal communication April 10, 2015). Statements like “do your best” (p. 7) and “try your hardest” do little in letting students know what they are working to achieve.

Teaching students to set their goals and helping them to develop a plan to reach them provides them with a road map of how to be successful. Providing them with an advisor or mentor who consistently checks on their progress provides a support base those students need. Not only does a strong support base need to provide direction, it needs to help students learn about their Intrapersonal Intelligence, and assist them in discovering themselves as well as their strengths and weaknesses (Punnet, 2011). Working with students with these things allows them to be individually successful as well as help prepare them to play a role in the overall course goals that are set by the school (Punnet).

Summary

Theories on child development are plentiful. It is nearly impossible to incorporate every notion of learning and development into goal setting. However it is the job of the mentor to examine the research and use it to apply to their students the best they can. Goals need to be challenging, reasonable and reachable as students get older and develop cognitively. Once an educator has a general understanding of the way that students learn, they can then begin to implement the goal setting process.

Individual Goals

The goal setting process begins with motivating students and setting up individual goals. In the case of education, goals would be set for every student as well as having goals set for teachers at the beginning of every school year. Each individual in the process needs to have an end in mind for what it is they are trying to accomplish. Goal setting is a life changing strategy that will help people in all areas.

Students can set goals for academics, sports, and any other aspect of their lives. The discipline and strategies they gain from learning to set and work towards meeting their goals will enrich their lives, and help them achieve success.

Goal setting at any level, especially for the individual is complex, as it requires commitment, dedication, and determination by the goal setter as well as a support base to offer them guidance. Individual goals require an understanding of one's self and how this knowledge can be used for success.

Individual goal setting differs from course or organizational goals in that they are tailored specifically to the person for which the goal is set. Unlike goals set by the school or business as a whole, which are based on the overall success of the institution; individual goals allow a person to seek out what they want to accomplish personally (Newman, 2012).

Though individual goals differ from organizational ones, they must still have the support system from teachers, and other stakeholders of the school (Day & Tosey, 2011). Having teachers work with students on their goals allows them a better opportunity to meet their goals.

The interaction between a student and a teacher is vital to the success of the goal setting process (Day & Tosey, 2011). One of the things that must occur is consistent interaction that gives the student an opportunity to discuss concerns and progress, as well as allows the teacher time to provide feedback and suggestions. Allowing the student to reflect on their plan, as well as discuss their feelings and emotions are also important during the teacher/student interaction (Day & Tosey).

Teachers and other advisers need to be an outlet for students to discuss their frustrations and concerns. Basically the teacher needs to serve as a coach and provide each student that they are mentoring with the strategies and encourage them to be successful.

Advising or mentoring requires devotion from the advisor. Because of the school setting, the advisors, which consist of the teacher and staff, are the adults assisting the students. Because of their age, students need that consistent role model figure helping them to develop, implement, and work toward reaching their goals.

Punnett (2001) discusses the importance of the advisee-advisor relationship when working through goals, and believes that the process should start at kindergarten and be built upon every year. Working with students at a young age allows them to develop the skills necessary to develop goals, as well as helps establish a positive relationship with the school and those who are advising them (Punnett, 2001). The advisor-advisee relationship is vital in the goal setting process, and requires devoted and patient adults to give students the support they need.

Group Course Goals

Much like individual goals, group or course goals require an understanding of oneself, as well as an advisor program to see that it is implemented successfully. Course goals are much broader and are devoted to improving the organization as a whole (Radar, 2005). For example, the junior class may set their goal at 70% proficient and distinguished for their end of course US History exam. Though

students are working towards the same goal, it is broad in that each student has an individual plan to reach their goal on the assessment.

Many of the same principles used for individual goals can be used for course ones. However, course goals are a challenge to both the students who have to agree to the goals, as well as the teachers and administration that help them determine what goals students want to meet. Teachers and administrators must keep up with the progress as well as provide the resources to ensure that goals are met. They also require that teachers use the capabilities and strengths of their students to set reachable goals. The process is difficult, however if implemented correctly, group goal setting for a course is a very effective way to ensure success.

There are many ways in which a school can use course goal setting to see a rise in achievement in almost any area. Individual classrooms, sport teams, grade level, department, or the school as a whole can set these goals. Though goal setting in all of these areas are effective in helping the group be successful, perhaps the best way in which goals need and can be set is dealing with state assessments. As more emphasis is being placed on overall test scores in every school, goal setting is a reliable and somewhat inexpensive way of seeing improvement (Newman, 2012).

Because Kentucky now bases its accountability system on an overall AMO score for each school, schools can now set an overall goal for their AMO, as well as all the components that make the score. At the high school level, the AMO is determined by graduation rate, career and college readiness, End of Course assessments, and program reviews (Kentucky School Report Card, 2014). Goals can

be set for all areas and if reached will help assure that the AMO goal for the year is met.

A school cannot simply set back and assume that students and teachers will set goals and achieve them. On the contrary, Day and Tosey (2011) emphasize the importance of school administration and leaders to developing policies and procedures to ensure that goal setting is occurring in the classroom, as well as for the entire school. Policies should include how the goals are to be determined as well as requiring a formal plan on how to achieve them. A thorough plan for checking on student goals, as well as providing feedback should also be one part of the goal setting policy (Day & Tosey, 2011).

To understand how group course goals work, educators need to recognize and develop the Interpersonal Intelligence of their students. This intelligence is developed by student interaction with the people around them (Ellison, 1992). Once students have an understanding of their Interpersonal Intelligence, which can be explained by knowing oneself, they then need to learn how to work with those around them (Punnett, 2001). As student's Interpersonal Intelligence develops as they age, they better learn to work with others as well as understand the point of view and differences of those around them (Ellison, 1992). This is important in meeting goals, as it requires all students working together to come up with reachable goals, as well as planning and seeing them through.

Collaboration between students increases the likelihood of success. Fuentes (2013) states "students who work collaboratively perform better than students who

work independently” (p. 50). This teamwork is a skill that needs to be taught at the kindergarten level, and needs to build on as students get older (Punnett, 2011). As students develop academically they will gain more and more experience in working with others if they are taught to do so by the school. Borders (2009) builds on Fuentes (2013) point of view by stating, “learning is a social activity, and students grow and develop by observing the behaviors of those around them” (Fuentes, p. 3). Because learning in public schools is in a group environment and not an individual one, educators need to ensure that students are given opportunities to develop in their abilities to work collaboratively.

Course goals, along with individual ones, allow students to take ownership in their learning as well as the school. If they are given the opportunity to provide their input in the goal setting process, then they will feel that they own a stake in the goal (Johnson & Graham, 1990). Like teachers and other stakeholders, students need to feel like they are part of the group and help to make the decisions. Fleming and Panizzon (2010) discuss the need for students to have ownership in their learning, and how when they take ownership, they become more interested in what is going on in the classroom, which leads to “greater student engagement” (p. 29). Student engagement is key to academic success. Allowing them to help set the goals that the school wants to accomplish increases their interests and helps them thrive to be successful (Fleming & Panizzon).

Not only do course goals provide a way for schools to ultimately be successful, they allow schools to periodically check their progress through the school

year. Newman (2012) states “school wide goals serve as barometers to periodically check the progress of the school as a whole” (p. 13). Ways in which this can be done is through school given assessments such as the Discovery Education Assessment or through programs such as Study Island. Checking progress routinely allows schools to determine where they are at in reaching their goals and determining what the next steps to be taken are (Newman). Routinely checking on student progress needs to be implemented both at the individual and group course levels. This should be part of the policy set by the school, as well as the plans set for reaching the goals.

As already stated, course goals require the full commitment of the school administration to create the policies needed to ensure they are implemented, as well as a commitment from teachers to regulate them and students to work towards them. Course goals allow people to be in one accord and know what they are working to achieve instead of everyone not having an idea of what they want to accomplish. Course goals give the organization a target to aim for and require that everyone in the school have a role in seeing that they are achieved.

Goal Setting For Teachers

Having individual and group goals are not only effective for students, they are also effective for teachers. Teachers already play a large role in the goal setting process, serving as the advisors for students and helping them implement their plans to reach their individual and group goals. However, teachers need to set their own goals that will help them focus on meeting the needs of their students as well as developing as an educator. Teachers need a support base and the resources just as

students do to be successful at what they do. Working with teachers to set their goals should be one of the first thing administrator's focuses on at the beginning of the school year.

Teacher goal setting helps to set the stage for their instruction as well as the success of their students. Rader (2005) discusses the need for teachers to set goals because "it allows teachers day to day living and instruction to take more direction and meaning" (p. 123). Like student made goals, goals that are set by teachers give them something to achieve. Ultimately the main goal of any teacher should be to see the success of their students, and when they base their goals around that concept, and work to ensure they meet them, then student achievement will rise.

Goals that students and teachers set need to be based on the learning abilities of the students. When developing goals, teachers need to create them around the learning of their students. Cwikla (2002) insists that teachers need professional development opportunities as well as sessions with the school administration in aligning their goals. As the teacher is the mentor for the student, school administration needs to be the mentor for the teacher. Though students and teachers have "different cognitive profiles" (Cwikla, p. 4) they still have the same human needs of encouragement, direction and advice from those around them (Cwikla,). Like students, teachers have worries, difficulties and challenges that are between them and their goals. Administrators must be that support system to offer the tools and knowledge teachers need to increase their abilities as teachers.

Goal setting is important to all teachers, however they are absolutely vital to new teachers who are trying to find their way. Daniels et al. (2013) discusses the three types of goals that should be looked at by new teachers. The first is called the “mastery approach” and is based on becoming a competent teacher. (Daniel et al.). All new teachers have challenges that they must overcome, and the administration needs to work with them to help them become master teachers. The second type of goal, known as “performance approach” is the “desire to demonstrate competence relative to others” (Daniels et al., p. 397). The third and final goal that should be set by new teachers is known as “performance avoidance” which is “the desire to avoid demonstrating incompetence relative to others” (Daniels et al., p. 397). These three goal types need to be discussed with new teachers and should be worked on by both teacher and their support base.

Not only do new teachers benefit from setting goals, but veteran teachers as well. Goal setting will help the performance of all teachers and help increase their mastery level, no matter how many years they have taught (Punnett, 2001). To support the development of teachers and to support their goals, a strong professional development program is needed within each school. When discussing goal setting for teachers, Killion (2008) believes that strong “clarifying goals of the staff development program is a critical function in designing the program” (p. 51). Often times staff development goals are “fuzzy” and are “based on implementation rather than results” (Killion, p. 50). To help teachers reach their professional goals,

administration needs to provide them opportunities for development in the areas aligned to their goals.

Motivation

Perhaps the most important aspect outside of developing a plan, and providing a support base for student goals, is an understanding of how to motivate students to complete their goals and ultimately be successful in their academics and life.

Although Steinberg (1993) believes that sheer ability is a key in meeting goals, motivation keeps students engaged, and provides the fuel to keep students on task. In goal setting, motivation is a key component of its success, and it is the responsibility of the mentors and all stakeholders to ensure that they find what truly motivates students, and how that can be used to see them succeed.

Motivation is key to the success of short and long-term goals (Tough, 2012). Along with motivation, students need to have “volition” which Tough defines as the “willpower and self-control” (p. 64) to reach their goals. Goals are easy to set but are hard to plan and keep students engaged to achieve them. Motivation is more than offering incentives, though they are effective; motivation is about keeping the student interested and wanting to be successful (Tough, 2012).

A major factor in establishing motivation for students is to ensure that they take ownership in their learning and goals. Rader (2005) believes that allowing students to provide their input and helping develop their plans and goals, gives them that feeling of ownership as well as an increased level of self-esteem. Radar states “motivation increases when students genuinely feel that they control what occurs in

their lives” (p. 125). Miller and Kelley (1994) believe that when students have a feeling of ownership, then they will be more engaged and will achieve at a higher level.

One important aspect of motivating students is the use of rewards as a means of getting students to accomplish their goals. Punnett (2001) insists rewards are important in the goal setting process because they make reaching them “more appealing” (p. 40). When students know that there is a prize for their achievement then they are more likely to see the goal through (Punnett, 2001). Sax (1997) says that incentives for students does increase learning, though it is still debated what types of incentives are the most effective in doing so. There are several different types of incentives that can be offered to students. Though money and other costly incentives are an option, Punnett discusses that these are not options for most schools. Instead, something as little as positive feedback can serve as the incentive students need to put forth the effort to meet their goals.

Motivation is also important to the goals of staff as well. Like students, teachers and other faculty must set goals about what they want to accomplish. Also like students, they need to be motivated and be provided incentives for success. Seyfarth (2008) discusses a theory that has to do with staff motivation, known as the “expectancy theory” (p. 82). This theory is “based on the premise that workers perform tasks to gain incentives” (Seyfarth, p. 82).

The expectancy theory consists of three components. The first being valence, which is the “positive or negative feelings attached to a job” (Seyfarth, p. 82). The

second component is instrumentality, “the perceived connection between a work outcome and that has positive valance” (Seyfarth, p.82). The third, expectancy, which is “the employees perception of the probability of successfully achieving a work outcome” (Seyfarth, p. 83). The basis of this theory is that workers first need to value their jobs, then understand that each task they complete is meaningful. Ultimately in the end, an incentive is required but can be something as little as praise or recognition (2008).

Steps To Successful Goal Setting

There are many different strategies and steps that can be used for the goal setting process. Though the literature review provides a great deal of research on the different procedures and though a lot of this research has differences, most follow a common theme. It is up to the teacher, student, and anyone else involved in the goal setting to discover which steps are the most effective for each student as well as each group.

Rader (2005) has a very comprehensive and detailed guide to the goal setting process for students. Once students have developed their goals with the help of teachers, they need to write down the goals; which is the first step Rader discusses. This allows students to actually put their thoughts onto paper and gives them the opportunity to look at what it is they want to accomplish and reflect on the list over a period of time to determine what goals they truly want to achieve (Radar, 2005).

The second step is to design a time frame for the goals. Once teachers and students set goals, a time frame needs to be designed for each individual student as

well as course goals for the whole school. Time frames should be documented and reviewed regularly by both the teacher and the students (Radar, 2005).

The third step is to develop a plan to accomplish the goals. This step is vital, as students, along with their mentors, need to determine what needs to be done to make their goals a reality. Plans should include motivation strategies, outcomes of reaching goals as well as what steps need to be taken to reach the goals. (Radar, 2005).

The fourth step is “visualizing yourself accomplishing your goals” (Radar, p.124). Radar explains that this step allows students to gain an idea of what it will be like to reach their goals. He also suggests that once they do visualize themselves being successful, it will seep into their self-consciousness and will make them more likely to see the goal through (Radar, 2005).

The fifth step is to work hard and never give up, followed by the last step, which is to self-evaluate. Self-evaluation is done after the time frame set up for each goal is complete. At this time students will reflect and evaluate if they in fact met their goals (Radar, 2005). If they did reach their goal, they can then reflect on what strategies helped them be successful and if they don't meet them, then they can come up with a new plan and change what they felt went wrong (Radar, 2005).

Other steps that are important in the implementation of goal setting is to provide consistent feedback throughout the goal setting process (Johnson & Graham, 1990). Students need consistent information as they work towards success. Callan and Levinson (2011) put emphasis on having a vision and a clear understanding of

what is wanted when the goal setting process is complete. Teachers and administrators must contact students regularly through an advisor-advisee program, in which the teachers can let students know where they stand as far as reaching their goals, the progress they have made, and what needs to be done to ensure they complete them.

Summary

The review of literature provides a full explanation of what goal setting is. It also provides detailed descriptions of the different strategies and procedures that can be used to make the goal setting process successful. Goals are not simply something people should say they are going to do then aimlessly try to meet them. Goals need to be well thought out and planned. Students need to have adults that will serve as mentors and provide them with the guidance and support needed to be successful. Not only should students set goals, but also teachers need to set goals for their own success which will ultimately assist in seeing students success. Goals can be used in other areas in life as well and is not restricted to just academics. Goals can be set in sports, personal life, and finances, among many more. Motivation is key to successful goal setting and teachers need to find what motivates each student and use this to guide students down a path of success. After goals have been set, plans have taken action, and students have taken the assessments to determine if they have met their goals; then the data from these assessments must be analyzed to determine if students were successful.

Chapter 3

Methodology

Introduction

The purpose of this quantitative study was to determine the impact that goal setting might have on students' achievement in English 1 and Algebra 2. This chapter discusses the research design of this capstone and includes information on the research design, subjects and sampling, instrumentation, procedures, and data analysis.

Two sources of student achievement data were analyzed to investigate the impact goals setting had on the two academic courses. Discovery Education assessments, which are norm-referenced, were administered to students in English 1 and the Quality Core End Of Course (EOC) assessments, which are criterion-referenced based, were administered to Algebra 2.

Research Design

The capstone's research design was an ex post facto design utilizing the performance on the Discovery Education Benchmark Assessment for English 1 and the Quality Core End of Course Assessment for Algebra 2. In English 1, comparisons between two administrations of the Discovery Education assessments were used to determine the impact goal setting in English 1. Student performances on the EOC assessment in Algebra 2 were compared over a two-year period. In the first year, 2013-2014, a course goal was not set while in the 2014-2015 school year, students set

not only individual goals but also were aware of the course goal to score a B (proficient level) in Algebra 2 on the Kentucky School Report Card.

Progress monitoring and effectiveness of goal setting were continuously monitored after the implementation of goal setting strategies with the experimental Group of students during the 2014-2015 school year utilizing the same norm referenced formative assessments. For the purposes of this study, when discussing English 1, “Control Group” references the group of students during the 2014-2015 school year, prior to implementation of goal setting. The term “Experimental Group” references the same group of students after they set their goals following the first administration of the Discovery Education assessment. For the Algebra 2 section of this study, the “Control Group” refers to the students who took the Algebra 2 EOC assessment at the end of the 2013-2014 school year. The Experimental Group were the students who set goals during the 2014-2015 school year.

Research Question and Hypotheses

The following question was the focus of the study: What impacts did goal setting have on student achievement for individual students? Two groups of students taking different subjects were compared by examining the performance on an assessment prior to goal setting to the performance obtained at the end of the school year. Another way of stating the research question for the study was: Does goal setting strategies for high school students in reading and mathematics impact those students’ reading and mathematics achievement?

Two null hypotheses were tested. One relates to the performance of student in English 1 while the other focused on students enrolled in Algebra 2.

Ho1: Goal setting had no impact upon the performance of students on the Discovery Education assessment for English 1 in the fall of the 2014-15 school year compared to the performance obtained on the spring administration.

Ho2: Goal setting for the course had no impact upon the performance of students on the EOC assessment for Algebra 2 in the 2014-15 school year compared to the performance obtained on the 2013-2014 assessment.

Subjects and Sampling

The subjects for this study included those students of Elliott County High School that were enrolled in either English 1 and/or Algebra 2. Those students taking English 1 participated in setting their individual goals for that subject. The students taking Algebra 2 participated in setting an overall course goal for the EOC assessment. This capstone was designed to determine if improvements in individual student performance for English 1 occurred, as well as the overall performance for the school in Algebra 2 occurred.

Instrumentation

Discovery Education. Freshman students took the Discovery Education assessment in English 1. The Discovery Education assessment is a diagnostic assessment that is aligned with Common Core Standards. The assessment was

accessed by students online through the Discovery Education website. Students took the assessment online, and then teachers accessed the results of each assessment for each student. The data retrieved from Discovery Education showed what level students scored on, such as apprentice or proficient, and showed individual areas of strength and weakness (DiscoveryEducation.com).

Students took these assessments three times during the course of the school year. They took their first assessment in late August, the second assessment in December, and the final assessment in April. Data were collected after every assessment to gain a better understanding of where student growth and deficits were occurring.

Study Island. Students enrolled in Algebra 2, which is an End of Course assessment area, took the Study Island assessment designed by ECHS's math teachers. The assessment served as a diagnostic assessment to establish baseline data on student knowledge in Algebra 2. Teachers used this data, as it's the closest thing that was found that best represented the EOC assessment, to identify student weaknesses. Study Island is also a web-based program purchased by the school.

The assessment content was based on Quality Core standards from which Kentucky End Of Course assessments were designed. Study Island allowed teachers to design their own assessments based on the Quality Core standards. After students take the assessment, teachers can look at the data and identified areas in which students need improvement (StudyIsland.com). Teachers used this information to

design lesson plans and deliver instruction to prepare students for the actual Algebra 2 assessment they took in May.

Kentucky Algebra 2 End of Course Assessment. The Algebra 2 EOC assessment was designed by Quality Core. The EOC was mandated by the state of Kentucky to any student who completed Algebra 2 in high school. It was a criterion-based assessment that was used to determine student overall performance in Algebra 2. The overall student score on the EOC became part of the state accountability for each high school. It impacts the school's growth, gap, and reporting of student overall achievement performance as reported on the Kentucky School Report Card.

Procedures

Assessments. At the beginning of the 2014-2015 school year, students in English 1 were administered the English 1 Discovery Education assessment. The Discovery Education assessment is diagnostic assessment that is based on the Common Core standards. Common Core standards are what the high school English 1 curriculum reflects.

Students who had Algebra 2 were administered the Algebra 2 Study Island EOC assessment also at the beginning of the school year. The assessment was designed by teachers but modeled the Quality Core Blueprint for Algebra 2 (see Appendix A). Quality Core is the company that creates the Algebra 2 EOC that students take for accountability purposes at the end of the school year.

These assessments provided teachers with baseline student scores that would be used to set goals and help monitor progress. The English 1 and Algebra 2

assessments were also administered in December to serve as a midyear check to see the progress, if any, students were making. After the second assessment, teachers compared the progress students made on the first assessment to the second. The information allowed teachers to make adjustments to their lessons and provide individual instruction to students. In May students took a third and final Discovery Education assessment. Students in Algebra 2 took the Kentucky Algebra 2 EOC assessment. These two assessments provided the data needed to determine if goal setting had an impact on student achievement.

Data management. After the first assessment, student results from both the English 1 and Algebra 2 were recorded in an Excel spreadsheet. Teachers had previously created the spreadsheet and then entered the student's names that they had in class. They created columns to record the scores from the three assessments that students would take during the school year. A copy of the spreadsheet was saved on their computer along with a printed copy for their evidence notebooks.

Once an assessment was taken, teachers would discuss the results of the English 1 and Algebra 2 scores with each individual student during the advisee/advisor period. Teachers also provided students with a 'goal tracker' (see Appendix B). The goal tracker was a teacher-made organizer that provided the student to manage the information related to their performance. Students used the goal tracker to log their first assessment score and to list the areas in which they scored poorly. For example, if students scored a novice on the Critical Evaluation

section of the assessment, they would list that information on the goal tracker as an area of focus.

As the teacher conferenced with each student during the advisee/advisor period and looked at the areas of focus, they provided students with feedback to help the student to strengthen those areas. Students then had an understanding of what areas they need to work on and what would help them improve. Students, with input from the teacher, would set a goal for the next assessment.

Goal setting. In English 1, students set their individual goals with the assistance of their teachers. Teachers served as mentors for students offering guidance based on their expertise for the subject matter. For example if a student scored a high novice, the teacher might recommend a goal of reaching proficient. However, the teacher allowed the student to ultimately set their goal.

Once all students' individual goals were determined and recorded, teachers met in content departments. They identified common areas that students were struggling in and planned how to address the needs of the students. While teachers met with their content department, they would share strategies and resources that would assist in helping students reach their goals on the English 1 Discovery Education Assessment. Some of these strategies included providing rewards for satisfactory classroom performance, and some were instructional strategies such as using graphic organizers. The strategies used were introduced to teachers during professional development that was provided for them at the beginning of the school year by school administration.

At the beginning of the school year teachers reviewed the 2013-2014 Algebra 2 EOC overall score with students. A Study Island Algebra 2 assessment was given. This first assessment provided teachers with baseline data of student performance. Teachers met with students during the advisor/advisee period. Students were given a goal tracker organizer, and the teacher and student looked at areas needing focus. For example, if students scored low on polynomial functions on the assessment, it would be listed as an area of focus. After teachers met with individual students, they then had an open discussion with all Algebra 2 students. They discussed what they wanted to accomplish as a group and set a goal that was higher than the previous school years EOC overall score.

Motivation was another strategy used in the goal setting process. English 1 teachers were given motivational posters by the school administration to hang in their classrooms. These posters encouraged students to put forth their best effort toward their classwork. English 1 teachers also provided rewards for students for effort and for scoring well on daily assessments, and for turning in all assignments.

Algebra 2 students designed posters and placed them in well-traveled areas inside the school. Some students placed a sign in front of the high school office showing what they wanted to achieve on the EOC when they took it in May. Algebra 2 teachers also hung signs in their classrooms to serve as a constant reminder of what students were trying to achieve.

Teachers also incorporated strategies they had learned in professional development that was provided by school administration. One of the initiatives

teachers incorporated into their teaching and instruction was creating learning centers inside the classrooms to address student common needs. For example, if “context” was an area of focus for a group of students in English 1, then teachers put them in a group together to work on that particular area, while other students who had an area of focus in “interpreting” worked in that area.

Other activities that teachers incorporated to assist students in meeting their goals included collaborating during adviser/advisee period, as well as creating class competitions to serve as motivation. Other English and Math teachers, who did not teach either English 1 or Algebra 2 classes, came to the English 1 and Algebra 2 teachers’ classrooms during adviser/advisee period at least once a week. They had other staff members watch their classes, and assisted English 1 and Algebra 2 teachers in providing extra assistance for students.

As an example of class competitions that were utilized, the four English 1 classes competed amongst each other to earn prizes/incentives that were awarded to the class that received the highest overall percentage on tests and other assessments. One incentive was a class period at the park, and another was popcorn and a movie in the Performing Arts Center. Teachers reported that these strategies helped motivate students and give them a reason to put more effort in their work.

Timeline. After both the individual and course goals were set, teachers met with students biweekly during the advisor/advisee period to discuss progress and to determine what the next steps would be for students to meet their goals. For example, if a student was still struggling in an area like polynomial functions, then the teacher

might recommend them to after school tutoring or provide them with extra-individualized practice in that area. Teachers also discussed goals with parents during parent/teacher meetings, telephone parents, and sent notes home discussing student progress. Teachers kept a log in their evidence notebook documenting each time they contacted a parent.

At the end of the first school semester in December, teachers then administered a second assessment. This served as a midyear progress evaluation on how students and enabled both teachers and students to determine if they were on track to meeting their goals. Once the test was administered, student results were then discussed between teachers and students during the adviser/advisee period. The midyear scores were recorded in the teacher's spreadsheets and student goal trackers. Areas of focus were looked at to see if any improvement was made, and then teachers made recommendations once again to help strengthen students in those areas.

After the December assessments, teachers met again in their content departments. They shared the student data (student scores on the assessment) with the other teachers in the department. They then strategized what steps needed to be taken to help push students forward to meeting their goals

At the end of the school year students who set individual goals took the English 1 Discovery Education assessment. Students in the course setting part of this study took the Kentucky Algebra 2 EOC assessment. These assessments served as the indicator of whether or not students met the goals they set at the beginning of the school year. Teachers and administrators then analyzed student results from the

assessments to determine if goal setting did affect student achievement on the English 1 assessment, as well as help students reach their group goal on the Algebra 2 assessment.

Data Analysis

Students enrolled in English 1 and/or Algebra 2 took a subject area assessment at the beginning of the 2014-2015 school year. This was done with no goals set. After the first assessment in English 1 and Algebra 2, goals were set. The null hypotheses were tested by a t-test for individual goals. The chi square test was conducted to determine if the frequency of the 2013-2014 to the 2014-2015 Algebra 2 EOC assessments show any significant differences.

English 1. Student performance data gathered from the first English 1 assessment were compared to the third assessment to determine if there was a statistical difference in student performance. A t-test was used to test the first null hypotheses: Goal setting had no impact upon the performance of students on the Discovery Education assessment for English 1 in the fall of the 2014-15 school year compared to the performance obtained on the spring administration. The test was conducted to determine if goal setting impacted student achievement by demonstrating the change in performance on student scores from the first assessment, before goals were set, and the last assessment that was taken in May.

Algebra 2. The course goal in Algebra 2 was determined after the initial assessment on the Study Island Algebra 2 EOC assessment. At the end of the school year, the state provided EOC assessment was administered to all Algebra 2 students.

The frequency of the student performance by performance category (Novice, Apprentice, Proficient, and Distinguish) were analyzed using the Chi-square test to determine if there was a significant difference in the frequency by category for the 2013-2014 and 2014-2015 school years. The null hypothesis for Algebra 2 was:

Ho2: Goal setting for the course had no impact upon the performance of students on the EOC assessment for Algebra 2 in the 2014-15 school year compared to the performance obtained on the 2013-2014 assessment.

Summary

This chapter outlined the design of this research and provided the specific information needed to understand the background of the students and teachers involved. The activities and general procedures that teachers used to help students reach their goals were also discussed. The instruments used to conduct this research, as well as how the research would be statistically tested, were also presented.

Chapter 4 reported the results of the English 1 and Algebra 2 assessments before and after goals were set. A discussion is also provided regarding the statistical significance of the study, as well as if the goals set by students were met or not. .

Chapter 4

Findings and Results

This chapter presents the analysis of the data gathered from student performance on the English 1 Discovery Education assessment for all students taking English 1 through the pre and posttests. The Kentucky End Of Course assessments from 2013-2014 and 2014-2015 were utilized to compare student performance for all students taking Algebra 2. The purpose of this study is to determine if goal setting has an effect on student achievement.

Subject Demographics

English 1. The participants in the English 1 part of this study consisted of 77 freshman students, and three sophomores who were repeating the class. Table 1 presents the demographics of the students taking the assessment.

Table 1

Demographics of Students Taking English 1

	Males	Females	Total
9 th Grade	33	44	77
10 th Grade	3	0	3
Totals	36	44	80

Algebra 2. There were 64 students who took the Kentucky Algebra 2 EOC assessment at the end of the school year. There were 34 females and 30 males. Students taking the assessment consisted of 13 sophomores, 47 juniors and four

seniors. The four senior students were repeating the class. Table 2 provides the demographics of students taking the Algebra 2 assessment.

Table 2

Demographics of Students Taking Algebra 2

	Males	Females	Total
10 th Grade	4	9	13
11 th Grade	22	25	47
12 th Grade	4	0	4
Totals	30	34	64

English 1 Assessment Data.

After the final assessment in Discovery Education was given, it was noted that 49 students, or 61% of the tested population, actually met their goals (see Appendix C for individual student goals). Thirty-one students, or 39%, did not meet their individual goals. Table 3 shows the overall percentage of students who met their goals and those that did not.

Table 3

English: Goals after Final Assessment

Met Goal	N	Percent
Yes	49	61.25
No	31	38.75
Totals	80	100.00

Student growth on the Discovery Education assessment grew significantly overall from the first assessment to the final one. When the difference of the student's first and final assessment scores are calculated, students, on average, grew 81 points (see Appendix D for individual student growth). In fact 95% of students made gains from their first assessment to their second, compared with only 5% that did not.

The growth, as well as student feedback, made goal setting a process that teachers are going to build upon as the school moves forward. A goal setting survey was given to students at the end of the school year to get their thoughts and perspectives on the goal setting process. It is significant to note that 91% of students agreed or strongly agreed that goal setting played an important role in their learning (see Appendix E for student survey.)

Results of t-test. A paired-samples t-test was conducted to compare English 1 Discovery Education Assessment Results in English I in pre-test and post-test scale scores to test the null hypothesis.

Ho1: Goal setting had no impact upon the performance of students on the Discovery Education assessment for English 1 in the fall of the 2014-15 school year compared to the performance obtained on the spring administration.

Based upon the results of the paired-sample t-test, $t(79)=12.293$, $p=0.000$, $d=1.37$, the rejection of the null hypothesis was warranted (Table 4). There was a significant difference in the scores for pre-test scale scores ($M= 1575.76$, $SD= 83.19$)

and post-test scale scores ($M= 1657.79$, $SD= 83.11$). These results suggest that goal setting had a significant effect on English 1 Discovery Education Assessment scale score results. Specifically, these results suggest that when a student sets a goal prior to taking the English 1 Discovery Education Assessment, their scale score is higher than if they do not set a goal.

Table 4

t-test Results: Pre-test and Post-test Discovery Education English 1 Assessment

	N	M	SD	df	t	p	d
Pre-test	80	1575.76	83.19	79	12.293	0.000	1.37
Post-test	80	1657.79	83.11				

Frequency distributions. The performance data collected from 80 English 1 students who participated in both the English 1 Discovery Education Assessment pre-test and the English 1 Discovery Education Assessment post-test are summarized in Table 5. Students taking the pre-test had not set scale score goals prior to completing the assessment. However, all English 1 students established scale score goals after completing the pre-test.

On the pre-test, most students (71.25%) fell in the novice category (1305-1600) compared to only 21.25% of the students on the post-test. Furthermore, distinguished scores also increased from 0 to 8%. Benchmark is considered a performance level of proficient (1664) or higher. On the pre-test, 88.75% of the students failed to meet benchmark compared to only 51.25% on the post-test the didn't meet benchmark. In conclusion, more students met benchmark goals when

they used a goal-setting strategy prior to taking the final English 1 Discovery Education Assessment.

Table 5

Frequency of Grouped Scores on Discovery Education English 1 Assessment (Pre-test vs Post test)

Grouped Scores	<u>Pre-test</u>		<u>Post-test</u>	
	N	Percent	N	Percent
1305-1600 (Novice)	57	71.25	17	21.25
1601-1663 (Apprentice)	14	17.50	24	30.00
1664-1741 (Proficient)	9	11.25	31	38.75
1742-2006 (Distinguish)	0	0.00	8	10.00

Algebra 2 Course Goals

The course goal set by Algebra 2 teachers and students was that they would score a B (proficient) in Algebra 2 on the Kentucky State Report Card. In order to score B (Proficient) overall, students had to average a raw score of at least 148 on the EOC assessment. Table 6 provides the cut off scores for different levels of achievement.

Table 6
Performance Level Scores on Algebra 2 EOC

Levels	Raw Score
Distinguished	151 – 175
Proficient	148 – 150
Apprentice	143 – 147
Novice	125 – 142

Though the goal set by teachers and students was to score a B (Proficient) on the Kentucky State Report Card in Algebra 2, when the assessment data was released ECHS only scored a C (Apprentice). The raw score average of students was a 145. The school scored an F in Algebra 2 in 2011-2012, and a D (Novice) for 2012-2013 and 2013-2014. Although the 2014-2015 school report card did not show the desired level of growth, the overall score of C was the highest score ECHS has ever achieved on the school report card in Algebra 2 (see Table 7).

Table 7
Algebra 2 EOC Grade at ECHS

School Year	Algebra 2 EOC Grade
2014-2015	C
2013-2014	D
2012-2013	D
2011-2012	F

Results of Chi-square. To determine if goal setting had an effect on student achievement in Algebra 2, a chi-square test of independence was used to test the second null hypotheses.

Ho2: Goal setting for the course had no impact upon the performance of students on the EOC assessment for Algebra 2 in the 2014-15 school year compared to the performance obtained on the 2013-2014 assessment.

The chi-square calculated comparing the frequency of four possible performance levels of the Algebra 2 End of Course Assessment in 2014-2015 to the performances made in 2013-2014. Table 8 provides the number of students that performance at each of the four performance levels for the two years.

Table 8

Student Performance on Algebra 2 EOC Assessment (percent)

	N	Novice	Apprentice	Proficient	Distinguish
2013 – 2014	51	25 (49.02%)	17 (33.33%)	8 (15.69%)	1 (2.96%)
2014 – 2015	64	13 (20.31%)	32 (50.00%)	19 (29.69%)	0 (0.00%)

Based upon the results of the chi-square test, the rejection of the null hypothesis was warranted. A significant difference was found in the frequency of students' performance at each level, $\chi^2(3, N = 115) = 12.554, p = 0.006$. Students who set goals for 2014-2015 Algebra 2 EOC assessment were likely to score higher compared to the students who did not set goals prior to completing the 2013-2014 assessment. In conclusion, the research supports the hypothesis that goal setting does affect student achievement, while voiding the null hypothesis that it will have no effect.

Summary

Students who participated in the individual goal setting part of this study showed significant growth. In fact, 95% of all students who took the English 1 Discovery Education assessments showed growth from the first assessment to the final one. This growth is encouraging when compared to the previous three years of Discovery Education statistics, the 2014-2015 freshman showed much more growth than their counterparts (see Table 9).

Table 9

ECHS Percentages of Growth for Past Five Years in English I

School Year	Percentage of Students
2014 - 2015	95%
2013 - 2014	55%
2012 - 2013	63%
2011 - 2012	51%

In the course goal portion of this study, which was based on student performance on the Algebra 2 EOC assessment, students and teachers set a course goal that they would score a B on the Kentucky State Report Card. Despite the fact that the goal was not met, the growth, much like the growth in the Discovery Education assessment, was significant. Also, as a school, ECHS scored a C on the Algebra 2 EOC according to the Kentucky School Report Card. This was an increase from the previous three years as can be seen in Table 8.

Chapter 5

Summary, Interpretations, and Future Actions

Introduction

The purpose of this study was to determine the impact between a goal setting system, for both individual student and a course of study, with student achievement. Goal setting was examined within two courses taught at the high school level, English 1 and Algebra 2. The research question for this study was: What impacts did goal setting have on student achievement for individual students? Two null hypotheses were tested which one focused upon individual student goals being set while the second one focused upon the setting of a goals for a subject area as a whole. This chapter is broken down into the following sections: summary, interpretations, limitations, delimitation, assumptions, recommendations, future actions and reflections. This information is based on the data, procedures and results of this study.

Summary of Results and Findings

This study investigated if goal setting had an effect on student achievement. After consideration of the findings of the analysis, results suggest that goal setting does have a positive impact on student achievement.

English 1. A t-test was conducted on the English 1 assessments. Student performances on the Discovery Education assessment from the fall assessment were compared to the student performance on the spring assessment. The result of the t-test

indicated a significant difference between the two assessments, suggesting that students scored statistically higher on the final assessment after setting their goal.

English 1 students grew on average 81 points from their first Discovery Education assessment to their final one (see Appendix C). In fact 95% of students showed growth, which was very encouraging. Teachers also kept track of the overall percentages of students scoring proficient, distinguished, apprentice and novice. Throughout the three assessments, students overall grew significantly. The amount of proficient/distinguished combined, grew from 17% on the first assessment, to 29% the second, and then 51% on the third and last assessment. The overall number of students scoring in the novice area also decreased from 52% on the first assessment, 43% on the second assessment, and then to 18% on the final assessment.

Algebra 2. A chi-square was conducted to comparing the 2013-2014 and 2014-2015 Algebra 2 EOC results. This was conducted to determine if there was a statistical difference in the frequency of students performing at each of the four possible performance levels for students who did not set a goal in 2012-2013 and those that did set goals in 2014-2015. The result supports the hypothesis that establishing a course goal and having a focus on that goal did impact student achievement in a positive way.

Throughout this study other encouraging data was found as well. After the first Study Island assessment (for Algebra 2), only 6% of students scored proficient or distinguished, followed by 32% that scored apprentice, and 59% who scored novice.

After the second Study Island assessment the proficient/distinguished percentage grew to 9%, apprentice grew to 53% and novice fell to 37%. The novice reduction was a positive outcome from the second assessment and teachers said this served as a motivation to them to keep pushing students to meet their goals.

When the students took the actual Kentucky Algebra 2 assessment, the proficient/distinguished percentage increased to 29%, apprentice was 51% and the novice level fell to 20% (see Appendix E). Though the Study Island and Kentucky EOC assessments are not the exact same test, they were both designed by using the Quality Core Blueprint for Algebra 2.

Interpretations

The hypotheses for this research were based on previous studies by authors such as Newman (2012) who suggested that positive change in schools requires clear goals. It was difficult to locate studies failing to support the general hypotheses that goal setting increases achievement or assessment scores.

The analysis conducted in this study suggests that setting goals prior to test-taking can very likely increase performance, as shown as significant among English 1 Discovery Education and Algebra 2 End of Course assessments. Because the studies presented a highly significant output, the strategy of goal setting can be extended to other assessments taken by students in public school settings. The fact that the English 1 subject population was the same from pre-test to post-test and the Algebra 2 subject population were from two different groups of students goal-setting did help improve scores when comparing the first assessments to the second.

Limitation, Delimitations and Assumptions

Limitations. This study was only conducted at the high school level. There are no results of this study indicating that it would be effective at the elementary or middle school level.

Students in this study all have similar backgrounds and come from the same region. Because of these similarities in background, it is unknown if goal setting would have an effect with students from other areas.

Delimitations. The greatest delimitation to this study was the fact that only Algebra 2 and English 1 student results were studied in relation to the effects of goal setting on student achievement. Though students in both Algebra 2 and English 1 showed improvement, it does not mean that goal setting will be as effective with other content areas.

Goal setting might not have been the sole reason for the rise in student achievement. Teacher instruction over the course of the school year could have had an impact on student achievement. Classes that students completed besides the two subjects that were part of this study could also have impacted student's achievement.

Using Study Island Algebra 2 EOC data to help monitor student data was a limitation as well. The Study Island assessment is different than the actual Kentucky EOC assessment students took at the end of the year. The Study Island assessment was designed using the Quality Core blueprint just like the actual Kentucky EOC. However, they are not the same exact assessment

Assumptions. The study examined the impact goal setting might have on student achievement. Though goals were implemented, strategies incorporated, and expectations of the study communicated to teachers, there are things that were assumed to be occurring though not proven by the evidence notebooks teacher kept, or by classroom observations.

In order for students to reach their goals teachers were required to offer them individual instruction based on their weaknesses on the assessments taken. Teachers logged these weaknesses and designed lesson plans to address them. However it cannot be determined whether the instruction going on in the classroom was exactly what teachers said they were doing.

Although motivation strategies were used to try and inspire students to put forth their best efforts to reach their goals, it is assumed that the strategies were effective. Though teachers reported students were excited by class rewards that were offered, it does not guarantee that it assisted in motivating them.

Recommendations

1. Goal setting should be implemented in other courses at the high school.
2. Implementing a goal setting policy should impact extracurricular activities such as sports.
3. Teachers should benefit from setting their own goals for areas such as class growth and professional development.

Future Actions

Because the results of this study suggested that goal setting has an impact on student achievement, goal setting is going to become part an instructional practice for the entire high school. It is going to be a requirement that teachers assist students in setting goals and monitor student progress through the school year.

Better motivational strategies are going to be used to inspire students to achieve at a higher level than they previously had. More rewards such as trips and prizes are going to be used as incentives for putting forth effort to reach their goals. Professional development in motivation strategies will be provided for teachers to incorporate into their classrooms.

The advisee-advisor program is going to be implemented differently. Because goal setting is going to become a school wide initiative, it would best serve students to meet with all their teachers instead of once single advisor. The advise-advisor block period will be a rotating period in which students can visit a different teacher daily.

The school is also going to attempt to involve parents more in the goal setting process. Phone calls, notes, and progress reports were sent home to parents, however it was felt that if there was more parent participation, then students would have achieved even more. A more concerted effort is needed to communicate with parents the goals set for students and the need for the parents to become more involved in their child's education. Parent-teacher conferences are going to be more structured, with activities, dinners, and ways to present student work.

Reflections

Many things were learned from this study. The most valuable item taken from this study was that goal setting assisted in increasing student achievement compared to early assessment data. Students scoring proficient increased drastically from the first assessment on the English 1 to the final one. Also, the 2014-2015 students who participated in the Algebra 2 EOC course goal had a higher percentage of students scoring proficient and distinguished than students who took the assessment in 2013-2014. The data obtained from this study also suggested that goal setting had an impact on novice reduction in English 1 and Algebra 2.

This study also taught the school a great deal about how to analyze student data and use it to strengthen teacher instruction. The department team meetings that teachers were involved in largely consisted of looking at student data from the assessments taken over the course of the school year. Teachers collaborated to design instruction and unity among the teachers seemed to be stronger.

The culture of the school also appeared to be stronger. Students who were apart of the goal process were more focused and discipline issues in these classes were low. Teachers reported that the advisor-advisee period allowed them opportunities to work with their students one-on-one and offer additional assistance in that subject.

References

- Bagin, D., Gallagher, D. R., Moore, E. H., & Gallagher, D. R. (2008). *The school and community relations*. Boston: Pearson/Allyn & Bacon.
- Borders, M. (2009). Project hero: A goal-setting and healthy decision-making program. *Journal of School Health, 79*(5), 239-243. doi:10.1111/j.1746-1561.2009.00404.x
- Callan, M., & Levinson, W. (2011). *Achieving success for new and aspiring superintendents a practical guide*. Thousand Oaks, CA.: Corwin.
- Census Bureau. (2014). *State & County Quickfacts*. Retrieved from quckfacts.census.gov
- Cwikla, J. (2003). The importance of setting learning goals to investigate the effectiveness of teacher professional development. *Educational Research Quarterly, 27*(2), 43-59.
- Daniels, L. M., Frenzel, A. C., Stupnisky, R. H., Stewart, T. L., & Perry, R. P. (2013). Personal goals as predictors of intended classroom goals: Comparing elementary and secondary school pre-service teachers. *British Journal Of Educational Psychology, 83*(3), 396-413. doi:10.1111/j.2044-8279.2012.02069.x
- Day, T., & Tosey, P. (2011). Beyond SMART? A new framework for goal setting. *Curriculum Journal, 22*(4), 515-534. doi:10.1080/09585176.2011.627213
- Discovery Education.com. Retrieved from discoveryeducation.com
- Dotson. R. (2015, May 23) Personal Interview.

- Eisele, P. (2012). Improving Performance in Groups: Effects of Two Different Goal-Setting Strategies and Feedback on Brainstorming Performance. *Baltic Journal Of Psychology, 13*(1), 45-57.
- Ellison, L. (1992). Using multiple intelligences to set goals. *Educational Leadership, 50*(2), 69.
- Fleming, K., & Panizzon, D. (2010). Facilitating Students' Ownership of Learning in Science by Developing Lifelong Learning Skills. *Teaching Science, 56*(3), 27-32.
- Fuentes, S.Q. (2013). Fostering Communication Between Students Working Collaboratively. Texas Christian University. 15.1 (48), 71
- Kentucky School Report Card (2014). Retrieved from applications.education.ky.gov/src/
- Johnson, L. A., & Gramm, S. (1990). Goal setting and its application with exceptional learners. *Preventing School Failure, 34*(4), 4.
- Killion, J. (2008). *Assessing impact: Evaluating staff development* (2nd ed.) Thousand Oaks, CA: Corwin Press
- Miller, D. L., & Kelley, M. L. (January 01, 1994). The use of goal setting and contingency contracting for improving children's homework performance. *Journal of Applied Behavior Analysis, 27*(1), 73-84.
- Newman, R. (2012). Goal setting to achieve results. *Leadership, 41*(3), 12-38.
- Pearsonassessments.com. (2016) What is College and Career Readiness? Retrieved from pearsonassessments.com

- Punnett, B. (2001). Goal Setting and Performance Among Elementary School Students. *Journal Of Educational Research*, 80 (1), 4-19.
- Quality Core. (2016). Algebra 2 End of Course Test Blueprint. Retrieved from <http://www.act.org/qualitycore/>
- Rader, L. A. (2005). Goal Setting for Students and Teachers. *Clearing House*, 78(3), 123-126.
- Riggs, C. (2012). Setting Goals: The Key To Setting Yourself Up After The Army. ArmyStrong.com. Retrieved from armystrongstories.com
- Sax, G. (1997). Principles of educational and psychological measurement and evaluation (4th ed.). Belmont, Calif.: Wadsworth Pub.
- Seyfarth, J. (2008). *Human resource leadership for effective schools* (5th ed.). Boston: Pearson/Allyn and Bacon.
- Steinberg, L. (1993). *Adolescence* (3rd ed). New York: McGraw-Hill.
- StudyIsland.com. (2016). Retrieved from StudyIsland.com
- Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character*. New York: Mariner Books. Mariner Books. Boston, NY.
- United States Bureau (2014). <http://quickfacts.census.gov/qfd/states/21/21063.html>
- Webster's new complete dictionary*. (1995). New York: Smithmark.
- Whitt, J. Personal Communication. June, 5, 2015
- Zhao, G. (2012). Human Science for Human Freedom? Piaget's Developmental Research and Foucault's Ethical Truth Games. *Educational Studies: Journal of the American Educational Studies Association*, 48(5), 450-464

APPENDIX A



Test Blueprint QualityCore[®] End-of-Course Assessment Algebra II

The QualityCore[®] End-of-Course (EOC) system is modular, consisting of either two 35–38 item multiple-choice components or one 35–38 item multiple-choice component combined with a constructed-response component. This approach to measuring achievement of ACT Course Standards allows users to select the configuration that best meets their particular needs, while still receiving scores on a standardized QualityCore scale.

The EOC Test Blueprint tables below show how the test items are distributed across reporting categories and depth-of-knowledge levels. The tables display ranges of the percentages of operational multiple-choice items and the number of operational constructed-response items per test. Sample standards by reporting category are provided, along with definitions of the depth- of-knowledge thinking processes covered by the assessment. The constructed-response scoring guide is also presented.

Reporting category	Percent of multiple-choice items	Number of constructed-response items**
Linear Functions (D*)	15–25	0–1
Number Sense, Quadratic Functions, and Matrices (C, E, I)	15–25	1
Polynomial Functions (F)	15–25	1
Nonpolynomial Functions (G)	15–25	0–1
Probability, Sequences, and Series (H)	15–25	0–1
Total	100	3

* Code indicates ACT Course Standards with which the reporting category is aligned.

** Constructed-response component consists of 3 items: one from Number Sense,

Quadratic Functions, and Matrices; one from Polynomial Functions; and one drawn from the 3 remaining reporting categories.

Depth of Knowledge	Percent of multiple-choice items	Number of constructed-response items
Level 1 — Recall	20–40	—
Level 2 — Skill/Concept	25–55	—
Level 3 — Strategic Thinking	15–35	3
Total	100	3

Appendix B
Discovery Education Goal Tracker

Name

Grade

August Score	Goal	December Score	May Score	Goal Met?
Areas for Focus		Areas for Focus	Areas for Focus	

Notes

Assessment #1

Assessment #2

Assessment #3

Appendix C

English 1 Goal and Final Assessment Data

	Goal	Final Assessment Score	Met Goal
Student 1	1800	1754	NO
Student 2	1670	1645	NO
Student 3	1670	1721	YES
Student 4	1670	1654	NO
Student 5	1610	1613	YES
Student 6	1670	1687	YES
Student 7	1610	1486	NO
Student 8	1610	1546	NO
Student 9	1670	1671	YES
Student 10	1670	1671	YES
Student 11	1670	1743	YES
Student 12	1610	1624	YES
Student 13	1742	1676	NO
Student 14	1670	1670	YES
Student 15	1670	1724	YES
Student 16	1742	1765	YES
Student 17	1670	1724	YES
Student 18	1670	1654	NO
Student 19	1742	1815	YES
Student 20	1670	1523	NO
Student 21	1610	1622	YES
Student 22	1610	1634	YES
Student 23	1742	1752	YES
Student 24	1670	1612	NO
Student 25	1670	1584	NO
Student 26	1610	1746	YES
Student 27	1610	1624	YES
Student 28	1610	1614	YES
Student 29	1610	1476	NO
Student 30	1610	1567	NO
Student 31	1742	1687	NO
Student 32	1610	1533	NO
Student 33	1742	1746	YES
Student 34	1670	1676	YES
Student 35	1610	1634	YES
Student 36	1670	1712	YES

Student 37	1900	1800	NO
Student 38	1670	1672	YES
Student 39	1610	1576	NO
Student 40	1610	1586	NO
Student 41	1790	1804	YES
Student 42	1670	1672	YES
Student 43	1790	1765	NO
Student 44	1610	1622	YES
Student 45	1670	1664	YES
Student 46	1670	1612	NO
Student 47	1670	1720	YES
Student 48	1610	1502	NO
Student 49	1610	1680	YES
Student 50	1670	1672	YES
Student 51	1742	1643	NO
Student 52	1742	1686	NO
Student 53	1670	1720	YES
Student 54	1670	1720	YES
Student 55	1670	1674	YES
Student 56	1670	1693	YES
Student 57	1670	1672	YES
Student 58	1610	1493	NO
Student 59	1610	1622	YES
Student 60	1742	1650	NO
Student 61	1900	1821	NO
Student 62	1610	1542	NO
Student 63	1610	1628	YES
Student 64	1780	1783	YES
Student 65	1610	1512	NO
Student 66	1670	1688	YES
Student 67	1610	1614	YES
Student 68	1670	1650	NO
Student 69	1610	1616	YES
Student 70	1610	1511	NO
Student 71	1742	1762	YES
Student 72	1742	1721	NO
Student 73	1610	1650	YES
Student 74	1670	1670	YES
Student 75	1741	1843	YES
Student 76	1670	1662	NO
Student 77	1742	1763	YES
Student 78	1610	1551	NO
Student 79	1670	1674	YES

Student 80

1742

1653

NO

Students who met goals = 49

Students who did not meet goal = 31

61% of Students met their goals

Appendix D**English 1 Student Growth from First Assessment to Final Assessment**

	August	December	March	Growth
Student 1	1688	1766	1754	+66
Student 2	1549	1364	1645	+96
Student 3	1559	1523	1721	+162
Student 4	1539	1610	1654	+115
Student 5	1474	1487	1613	+139
Student 6	1611	1674	1687	+76
Student 7	1432	1500	1486	+54
Student 8	1497	1442	1546	+49
Student 9	1577	1500	1671	+94
Student 10	1611	1665	1671	+60
Student 11	1622	1722	1743	+121
Student 12	1549	1512	1624	+75
Student 13	1654	1752	1676	+22
Student 14	1559	1553	1670	+111
Student 15	1601	1611	1724	+123
Student 16	1673	1690	1765	+92
Student 17	1622	1652	1724	+102
Student 18	1633	1654	1654	+21
Student 19	1665	1947	1815	+150
Student 20	1611	1641	1523	-88
Student 21	1559	1523	1622	+63
Student 22	1336	1722	1634	+298
Student 23	1673	1742	1752	+79
Student 24	1559	1641	1612	+53
Student 25	1611	1582	1584	-27
Student 26	1539	1500	1550	+11
Student 27	1559	1609	1624	+65
Student 28	1508	1523	1614	+106
Student 29	1519	1533	1476	-43
Student 30	1486	1487	1567	+81
Student 31	1603	1487	1687	+84
Student 32	1461	1533	1533	+72
Student 33	1633	1676	1746	+113
Student 34	1559	1601	1676	+117
Student 35	1508	1553	1634	+126
Student 36	1601	1622	1712	+111
Student 37	1787	1766	1800	+13

Student 38	1519	1621	1672	+153
Student 39	1497	1668	1576	+79
Student 40	1569	1533	1586	+17
Student 41	1752	1742	1804	+52
Student 42	1549	1563	1672	+123
Student 43	1727	1664	1765	+38
Student 44	1474	1553	1622	+148
Student 45	1549	1610	1664	+115
Student 46	1549	1582	1612	+63
Student 47	1613	1608	1720	+107
Student 48	1474	1487	1502	+28
Student 49	1474	1622	1680	+206
Student 50	1601	1553	1672	+71
Student 51	1622	1523	1643	+21
Student 52	1667	1652	1686	+19
Student 53	1611	1591	1720	+109
Student 54	1497	1705	1720	+223
Student 55	1622	1621	1674	+52
Student 56	1604	1672	1693	+89
Student 57	1612	1621	1672	+60
Student 58	1461	1533	1493	+32
Student 59	1539	1604	1622	+83
Student 60	1670	1572	1650	-20
Student 61	1764	1800	1821	+57
Student 62	1486	1523	1542	+56
Student 63	1508	1442	1628	+120
Student 64	1746	1782	1783	+37
Student 65	1474	1487	1512	+38
Student 66	1622	1664	1688	+66
Student 67	1559	1487	1614	+55
Student 68	1612	1664	1650	+38
Student 69	1508	1608	1616	+108
Student 70	1415	1512	1511	+96
Student 71	1664	1654	1762	+98
Student 72	1664	1660	1721	+57
Student 73	1519	1533	1650	+131
Student 74	1569	1611	1670	+101
Student 75	1667	1676	1843	+176
Student 76	1539	1563	1662	+123
Student 77	1611	1690	1763	+152
Student 78	1519	1563	1551	+32
Student 79	1602	1641	1674	+72
Student 80	1622	1610	1653	+31

+6474/80

Average Growth +81

Cut off Scores	
Distinguished	1742-2006
Proficient	1664-1741
Apprentice	1601-1663
Novice	1305-1600

Appendix E

Goal Setting Survey

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
1. Setting goals helped me understand what was expected of me in this class.				
2. My teacher regularly discussed my goal with me and worked with me to achieve it.				
3. Setting goals helped me feel more involved in my learning.				
4. Goal setting helped me better achieve in this class than in classes that do not implement goal setting.				
5. I plan to use goal setting in other areas of my life.				
6. I feel that goal setting helped me achieve at a higher level in this class.				

VITA

ZACHARY MAYSE

EDUCATION

May, 2008	Bachelor of Arts Morehead State Univeristy Morehead, Kentucky
May, 2011	Master of Arts Morehead State University Morehead, Kentucky
Pending	Doctor of Education Morehead State University Morehead, Kentucky

PROFESSIONAL EXPERIENCES

July 2008 - July 2012	Middle School Social Studies Teacher Elliott County High Middle School Sandy Hook, Kentucky
July 2012 - Present	Elliott County High School Principal Elliott County High School Sandy Hook, Kentucky

HONORS

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