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No-Zero Policy in Middle School: A Comparison of High School Student Achievement

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Project Study Submitted in Partial Fulfillment

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Abstract

Local middle schools have begun implementing a no-zero policy, which compels teachers to assign grades no lower than 50% even if a student did not turn in assignments for grading. In the study setting, high school teachers are struggling to motivate students who have attended a middle school with a no-zero policy in place. High school students who have attended a middle school with a no-zero policy show signs of learned helplessness. The purpose of this study was to examine the differences in core course grades between high school students who attended a middle school with a no-zero policy (NZPMS) and high school students who attended a middle school without this policy that would compel the assignment of F grades if earned by the student (FPMS). The theoretical framework is Seligman's theory of learned helplessness. The sample included 1,396 students in a high school who attended either of the two middle schools. Comparisons between mean high school mathematics, science, and English grades were compared using a one-tailed *t*-test. Effect sizes were measured using Cohen's *d*. The findings indicated statistically significant small to medium differences in students' core course grades. Students who had attended the NZPMS earned lower high school core course grades in mathematics, science, and English than students who had attended FPMS. Professional development activities were created to train teachers and administrators at the NZPMS about the negative effects of awarding students with passing grades without expanding any or only minimal effort. Positive social change could occur for students' academic careers and professional lives if the no-zero policy is rescinded.

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Dedication

I dedicate this project to my wonderful partner, Michael, who has supported me in every step of the way through earning this degree. He has been my number one fan and held me up when I was down. He talked through the research with me and had countless discussions over what could come out of this project. To him, I am forever grateful. I never would have accomplished this project without him by my side – I love you.

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Section 1: The Problem

The Local Problem

At the local research site in Las Vegas, Nevada, student achievement had reportedly decreased between the times when one of its feeder middle school's administrators decided to implement the minimum F policy. The minimum F policy means a student is no longer assigned a grade lower than 50%. Other school districts in the country refer to this same policy as a no-zero policy (Carifiio & Carey, 2013). If students receive less than 50% on an assignment, their grade is increased to 50% (Friess, 2008). It also means a teacher is no longer allowed to assign a 0% on an assignment (Balingit & St. George, 2016). At one high school in which the no-zero policy was implemented, students who were on track to graduate increased from 59% to 87%, but American College Testing (ACT) scores only increased from 15.1 to 15.4, which showed the policy was significantly increasing student grades but not test scores (Caneva, 2013). Locally, the no-zero policy is known as the minimum F policy but will be referred to as the no-zero policy for the remainder of this document. Local high school stakeholders such as teachers and administrators believe that because of the no-zero policy, high school students do not understand the importance of passing their classes and completing their homework or classwork on time (T. Warnick, personal communication, April 24, 2017). The high school principal observed teachers reporting a lack of motivation among students, and they noticed a drop in their overall class grade point averages (GPA). Local middle school administrators have implemented a policy that students can no longer receive anything less than a 50% on any assignment, even if it is not submitted at all (T. Warnick, personal communication, April 24, 2017).

The research problem is that when middle school students move on to attend high school, high school teachers are struggling to motivate them to complete learning activities in the classroom. Students will not try their best on state exams because the students were not held accountable for their grades in middle school. The high school principal said the no-zero policy is creating a lack of student interest and achievement in the high school setting, but he cannot, without evidence, say the no-zero policy is the cause of the lack of student achievement within the high school (T. Warnick, personal communication, April 24, 2017). Grade inflation has been studied in several universities around the country and Lehr (2016) found grade point averages have increased an average of 0.15 each decade since 1960 without intelligence increasing. Because the no-zero policy is being used in middle and high schools, the policy may be creating a culture of low student expectations and resulting grade inflation which continues through college.

Rationale

In high schools across Las Vegas, Nevada, teachers are witnessing a decline in student achievement (Friess, 2008). The lack of achievement is attributed, in part, to middle schools implementing a no-zero grade policy. This policy also allows students to not meet deadlines and turn in work whenever it is convenient without effect on grades (Brouwer, 2013). The no-zero policy is causing grade inflation because corresponding students who have course grades that have risen have not had a rise in test scores such as the ACT (Caneva, 2013). Critics of the no-zero policy claim it gives students a false sense of their ability along with the false sense of inability to meet deadlines (Tallent, 2016). The policy is not popular with parents either. Teghtmeyer (2012) found 97% of parents disagreed with the no-zero policy and felt schools

should find an alternate way of grading students. There is a need for grading reform within the local public-school system. The no-zero policy is also not popular among teachers. Teachers feel the current system of A-F grading does not convey a student's effort in the classroom (Cox, 2011). The principal of the high school under study did not approve of the no-zero policy and felt it was creating a culture of low-achieving students in high school (T. Warnick, personal communication, April 24, 2017). During a staff meeting with the mathematics department, teachers voiced concerns about the lack of student achievement they have been witnessing in the classroom. The concerns of the teachers were taken to the school administration and influenced the topic of this study. The purpose of this study was to test if there is a statistically significant difference in mathematics, science, and English grades between high school students who were enrolled in a middle school using a no-zero policy and high school students who attended a middle school not using a no-zero policy.

Definition of Terms

Grading Ceilings: A policy of a school or university which imposes the highest score a teacher or professor can assign a student, or dictates the number or percentage of students who can earn each letter grade (Gorry, 2016).

Grade Inflation: The tendency to assign a grade to an assignment or class higher than what was deserved or used in the past (Lehr, 2016).

Grading Scales: The use of a numbered scale instead of percentages to determine level of understanding (Guskey, 2013)

Minimum F Policy: A policy which prohibits a teacher from assigning a grade lower than 50% on an assignment (Friess, 2008)

No-Zero Policy: A policy which prohibits a teacher from assigning a grade of 0% for any assignment, including missing assignments (Balingit & St. George, 2016)

Significance of the Study

The study provides information, so stakeholders are better informed about the potential outcomes of implementing a no-zero policy. Stakeholders of the school district, administrators, and teachers can use this research to better understand the impacts of the no-zero policy on student achievement. Administrators can use this study to determine if a grading policy change needs to be made at their school, and teachers can use this study to help administrators find a different grading style that better suits the needs of the students. Policy changes can then be made accordingly.

Research Questions and Hypotheses

For this study, I examined student achievement in selected high school mathematics, science, and English classes based on enrollment at a middle school to determine if there is a statistical difference between students who attended middle schools with and without a no zero policy. Three research questions were posed.

RQ1: Do students who attended a middle school without a no-zero policy have a higher mean mathematics score than student who attended a middle school with a no-zero policy?

H_O1: There is no difference in the mean high school mathematics scores between students who were enrolled in a middle school with and without a no-zero policy.

H_A1: There is a difference in the mean high school mathematics scores between students who were enrolled in a middle school with and without a no-zero policy.

RQ2: Do students who attended a middle school without a no-zero policy have a higher mean science score than students who attended a middle school with a no-zero policy?

H_O2*:* There is no difference in the mean high school science scores between students who were enrolled in a middle school with and without a no-zero policy.

H_A2*:* There is a difference in the mean high school science scores between students who were enrolled in a middle school with and without a no-zero policy.

RQ3: Do students who attended a middle school without a no-zero policy have a higher mean English score than student who attended a middle school with a no-zero policy?

H_O3*:* There is no difference in the mean high school English scores between students who were enrolled in a middle school with and without a no-zero policy.

H_A3*:* There is a difference in the mean high school English scores between students who were enrolled in a middle school with and without a no-zero policy.

Review of the Literature

The current national grading system has been in place for over a century (Carifio & Carey, 2010). Currently, the no-zero policy has been gaining interest among school districts. This review of literature presents the theoretical framework of my study, the history of the current grading system, articles that discuss how the no-zero policy works and does not work. For my research, I conducted a search using the Walden University Library of peer reviewed journal articles between 2012 and 2017. To find relevant articles, I used the Thoreau, ERIC, and EBSCOHost databases. I searched words listed in the definition of terms section, which include: *minimum F policy*, *no-zero policy*, *grade inflation*, *grade ceilings*, and *grade scales*.

Theoretical Framework

Learned helplessness is the belief that nothing one does matters or will change the outcome (Maier & Seligman, 2016). The development of learned helplessness came from shocking dogs until they could escape from a room. Maier and Seligman (2016) revealed learned helplessness is not the absence but the presence of control. The presence of control means the participants in the study know what will happen but do nothing to prevent it from happening.

McCarter (2013) found that teachers in high school settings were offering too much support to students and students were failing in college. Teachers are expecting students to learn specific topics pertaining to state exams instead of problem solving, using study guides, outlining notes, and stressing important information for assessments. By teaching for the state exam and not to learn new material, this is leading to learned helplessness of students in the public school system (McCarter, 2013).

No-Zero Policy

The no-zero policy is one grading policy model that has caused controversy. The no-zero policy prohibits a teacher from assigning a grade of 0% for any assignment, including missing assignments (Balingit & St. George, 2016). Teachers are reporting students determine what assignments are necessary to earn a passing grade in their classes since the no-zero policy has been implemented in their schools. Professors are reporting a lack of achievement in students since the no-zero policy has been implemented within schools, and fear students can no longer work with deadlines because of the policy (Balingit & St. George, 2016).

This study will test the theory of learned helplessness. If students who attended a middle school with a no-zero policy achieve significantly less than students who attended a middle school without a policy, the theory of learned helplessness will be supported.

History of Current Grading System

Before the current grading system, there was not standardization of grades. Grades were originally a way for teachers to communicate with the student and parents about the student's success in the classroom (Schneider & Hutt, 2014). As grading became more standardized in the early 1900s, the question began to emerge about what was being graded. Grades became an instrumental part of the classroom and objectivity, such as effort, was left out (Schneider & Hutt, 2014). Minimum grading practices were created for students who were affluent and expected to go on to higher education (Carifio & Carey, 2010). Guskey (2013) said until 1910, teachers never used percentages in the classroom. The teachers would use narratives to describe what a student has or has not learned in the class. Even after 1910, elementary teachers still used narratives to determine what a student has learned, whereas high school teachers started using percentages. The current problem with percentage grades is that there is no difference between what constitutes a 50% grade or a 20% grade. Also, with a student being able to score 100 different percentages, the standard error of measurement is very large. If high school teachers use descriptions such as excellent, average, or poor, the standard error of measure is much smaller. One alternative to using percentage grades is to give numbered scale grades based on the level of understanding a student has on a single topic. The 1-4 scale simplifies the grading process and allows students to better understand what they know and need to work on instead of just failing (Guskey, 2013).

According to Menz (2015), Caldwell County schools in North Carolina are changing to a 10-point instead of 7-point grading scale. This means As will be 90 to 100 instead of 93 to 100. The school system feels that no matter where the F percentage is set, the students are going to struggle (Menz, 2015). School teachers assign letter grades along with assigning a numeric grade on the report cards. The school district officials said this grading structure is closer to what the students will see in college. Transcripts will change from high honors, honors, and highest honors to cum laude, magna cum laude, and summa cum laude. In the Caldwell County School District, school officials want high school students to have the same grading system they are going to experience in college. The change in the grading system was brought about because of students not seeing a connection between high school grades and college level grades in their grading system (Menz, 2015).

Grading Dilemmas

Within the education system, there are several grading dilemmas. These dilemmas include assigning appropriate grades to homework, grading consistency among teachers, grading policies, and standards-based grading. Simkin (2015) researched students being able to grade their own homework using a predetermined rubric. When the assignments were regraded, the difference between the scores was statistically small and insignificant. Allowing students to grade their own homework also resulted in a higher amount of homework being turned in to the teacher. Sprietsma (2012) examined the differences between essay grades based on the origin of the first name when graded by a teacher, and investigated German and Turkish names, and it was found there was a statistical negative difference between Turkish and German names (Sprietsma,

2013). Students with Turkish names also received lower secondary school recommendations than those with German names.

Homework is at the cornerstone of education. Watkins and Stevens (2013) studied one rural high school that decided to enforce a no tolerance homework policy and discovered when teachers and administrators hold students accountable for completing their homework, students will rise to the occasion. The higher value of the homework within the school community, the more it was returned for grades to the teachers (Watkins & Stevens, 2013).

High schools typically use a standards-based grading system. Miller (2013) implemented standards-based grading in her classroom and used mastery codes such as meets standards, approaches standards, etc. She then linked the results of her students' learning to these codes. Parents generally felt her new way of grading made sense and students felt it helped their overall learning. Miller (2013) kept a chart of the standards the students were to master by the end of school year and recorded student progress on the chart. The overall results showed students with lower anxiety about grades and greater concern with their own learning instead of keeping a specific percentage (Miller, 2013). Standards-based learning allows students to not be graded on homework for correctness or on how well their group performed, but on their mastery of the content (Shippy, Washer, & Perrin, 2013). The students are given a year to complete the assessments and are scored on each standard, instead of receiving an ambiguous percentage on a unit test (Shippy et al., 2013). Based on standards instead of percentages, students are prepared for state assessments because those are also reported using mastery codes (Welsh, 2013). Student performance on state exams increased after using standards-based grading, and it is recommended to continue its use (Welsh, 2013).

Grading policies have been at the center of controversy in education. Reddan (2013) and Paff (2015) investigated the implications of grading student work and the effects of grading on a high school student's performance. Paff (2015) found grading helps to increase student motivation by weighting grades and giving participation points which leads to high scores. Students within the study were vocal describing what they wanted reflected in a grade, which included homework points for trying, mandatory participation, and points for relevant conversational input (Paff, 2015). Reddan (2013) examined the importance of grades assigned to courses and assignments. Students overwhelmingly preferred courses that assigned letter grades instead of pass/fail classes, and wanted assessments to be class topic driven and to be at an appropriate level of rigor (Reddan, 2013).

Because grading policies vary from teacher to teacher or school to school, they are often questioned for consistency. Rauschenberg (2014) researched the consistency of course grades by looking at 3 years of state exam data on Algebra 1 and English 1 in North Carolina's public school system. Rauschenberg (2014) discovered English proficient female 12th grade students statistically received higher grades than their peers. Scores of the 12th grade, proficient females were significantly higher from the pass rates set by the teachers of the Algebra 1 and English 1 courses compared to the state exam pass scores. Because course grades are the primary reason students are admitted into college, grade inflation gives some students advantages over others (Rauschenberg, 2014). Walstad and Miller (2016) collected data from economics professors found they have a wide variety of ways for students to earn points. Grading practices were discretionary, and scores for letter grades were widely different. Substantial differences in grading practices lead to substantial differences in grades. Instructors clearly have free reign

over assigning scores to assignments and assessments, as well as course grades (Walstad & Miller, 2016). With the differences in grading comes the issue of grading bias (Rom & Musgrave, 2014). Rom and Musgrave (2014) studied a university where there was political and grading bias, and revealed that when students had the same political outlook as professors, they generally had higher grades due to open ended questions on exams. Rom and Musgrave reported the higher grades that would come with favoring students when grading assessments and suggested giving questions that reduce the effect of bias.

Need for Grading Reform

Grading reform is being called for in high schools and universities. Cheng and Sun (2015) examined the importance of assigning grades to assignments or tests by researching a high school in China where the teachers used multiple types of grades, such as homework, tests, and participation, to create the overall course grade. Cheng and Sun (2015) found that teachers in China put more weight on grades for effort than correctness, which allowed students to continue through the course with a higher percentage. Items the teachers scored the students on included homework, effort, study habits, and assessments. Because most of the items included in their grades were based on effort, the assessment part of the grade was what differed among the teachers. The grades varied because of the level of teacher experience developing assessments for students (Cheng & Sun, 2015).

Marynowski (2015) conducted a study in Alberta, Canada where grades were being analyzed by items, such as tests and homework, teachers use to determine semester grades. Items such as tests, homework, and assignments were present in all 66 student responses. However, items such as debates, discussions, and presentations were not present. Ninety seven

percent of the teacher respondents indicated students could retake assessments for higher grades. Even though the teachers were allowing students to resubmit assignments and assessments for higher grades, the researcher found that most of the teachers were only using conventional ways, such as only grading homework and tests instead of participation, to grade the students. The grades of the students and the individual weighted categories did not reflect effective assessment practices or effective teaching styles. Marynowski (2015) recommended the grading practices continue to be studied and the teachers in Alberta, Canada to be trained on different grading options.

According to Life (2012), in a Korean university, professors had a debate over which type of grading was more accurate: Positional grading or absolute grading. After collecting survey data measuring student perception at the university, Life (2012) suggested the best solution to the debate is a hybrid of both types of grading. Suggested requirements need to be established for each grading category and implemented through an entire department so the students are grading consistently. There is no one grading system that works for all students and professors. Positional grading is generally disliked by both students and professors; however, it does offer a sense of fairness to a grading system (Life, 2012).

Grade Inflation

Grade inflation is on the rise in high schools and universities. Because grades in high school determine if students are admitted into college, many teachers feel pressured to increase classroom grades. Grades were also determined to be inflated more in private schools than public schools, especially when scores were weighted higher in college admissions (Nata, Pereira, & Neves, 2014). Gorry (2016) said that since 1960, the nationwide GPA average has

increased 0.1 points among every 10 years. Because of grade inflation, some university officials had professors implement grade ceilings to prevent grade inflation. At an undisclosed large state university, data were collected on student grades distributed over 4 years. The school administrators had recommended specific grades students should earn when taking specific courses (Gorry, 2016). Professors were not to assign grades above the grade ceiling to prevent grade inflation. The students scored the professors much lower than they did on previous evaluations. Professors who were once scored as excellent by students were now scored much lower on the scale. The results of the study were that putting a ceiling on grades has a negative impact on the evaluation of professors. Lehr (2016) studied the increase in student GPA since 1960 in the high school setting, and found an increase of approximately 0.15 each decade and wanted to determine if it was due to grade inflation or are to students' intelligence each decade. After investigating data on course grades between 2009 and 2014, Lehr (2016) uncovered the undisclosed university he was analyzing imposed average grades in some disciplines and not others. Students who had average grades for the courses were approximately 0.08 higher in GPA than those who did not (Lehr, 2016). Lehr (2016) attributed the findings to grade inflation and not intelligence as the cause of the average GPA increase because of the average grade policy imposed on a department within schools.

At one Australian university, professors have begun giving students more homework and weighting it heavier to help inflate student grades. However, assigning more homework failed because the students were not doing the homework because it is never discussed again in class or gone over for clarification (Persky, 2014). Lewin (2013) found almost all universities in Australia had more administrators than teaching staff. The disproportion caused higher class

sizes, longer turnaround time on assignments, and more face-to-face teaching hours for professors. With the pressure of needing to grade assignments faster, Lewin (2013) recommended two ways of grading homework, the Aerial Evaluation for Results and Outcomes (AERO) and The Marking Assistance Device (MAD) as alternative sarcastic methods of grading. AERO is a method by which the professor stands at the top of a stairwell and throws the assignments down the stairs. Assignments which weigh the most and make it farther down the stairs received the highest marks. MAD uses the same concept except with a cantilever. The assignments are placed in the cantilever and then it is launched. Assignments that travel the farthest receive the highest grade. Professors at the undisclosed Australian University are frustrated with the workload being placed on them by universities (Lewin, 2013). Marx and Meeler (2013) studied eight universities within one state to examine GPA inflation and found the professors were increasing grades, but students were taking unlimited amounts of dropped classes or retaking classes to replace lower previous grades. The recommendation based on the research was to also add earned hours versus attempted hours ratio (EAR), which is how many courses a student passed to how many courses the student attempted, to a student transcript and have employers request this ratio

No-Zero Policy Proponents

The no-zero policy was a positive program within schools and is a grading reform system that will affect the lack of effort in students. Carifio and Carey (2012) studied one high school for more than 7 years which used the minimum 50% on quarter grades. Teachers were not allowed to give students less than a 50% for the quarter when finishing report cards. For 7 consecutive years of the study, 29,187 grades were changed to be 50% at the end of a quarter. Of

those 29,187, only 1,159 students passed the semester given the 50% for one of the quarters. This represents just 0.3% of the population. Teachers at the high school were assigning zeros for missing assignments throughout the quarter. The teachers locked the students' overall grade at a 50% for the entire quarter at the end to average for the semester. There was no statistical significance that this method of using the minimum grading inflated students' grades.

Carifio and Carey (2013) examined the difference between minimum grading and macro-minimum grading. Minimum grading is when a quarter-grade is bumped to a 50% so the students can pass for the semester. Macro-minimum grading is each individual test or assignment is given a 50%. This study was conducted for 7 years and Carifio and Carey (2013) found no statistical significance between groups for students passing or social promotion if the minimum grading was use. Carifio and Carey (2013) found that students were performing higher on state assessments if minimum grading was being used because it gave the students the sense they understood the material instead of students' feeling as though they were failures. Carifio and Carey (2015) later published additional findings saying the original 100 points scale used in schools set a 50% as a C and a 40% as a F. The grading scale was later changed to the 100 point scale that is known today. Instead of the students failing grades, grades are failing students. Because the grading scale was changed to force students to earn higher grades to pass, the grades force many more students to fail.

In another 7-year study at a particular school, the minimum grading policy was implemented and Carifio and Carey (2015) determined working class males more often received the minimum grades than any other group within the school. Carifio and Carey (2015) showed that minimum grading protected students from the teachers' biases when it came to grading.

Hochbein and Pollio (2016) also discussed the increase on student achievement with the implementation of standards-based grading and standardized tests. Teachers can have conversations about what specifically the student does or does not understand in the course instead of just marking a percentage. Post-secondary schools use GPA to judge how a student performed in high school. However, grades are often inflated with extra credit, participating in class discussions, or wearing school colors. The validity of percentage grading is being questioned. Eleven high risk high schools participated in a study called Project Proficiency. The algebra teachers chose 12 standards for the year and the students needed to master three standards each quarter. The teachers offered interventions if the students were struggling and used formative assessments to track students' growth. At the end of the school year, there was a weak positive correlation between the students' standard based grades and their scores on state assessments. After the data were analyzed and released, the teachers voiced they felt the increase was due to not teaching as many standards and being able to teach depth instead of breadth in the content.

Hopfenback (2015) collected data and analyzed student achievement from primary school through high school. There was a specific year during curriculum changes in which teachers could decide if they were going to assign letter grades to students in the 6th grade or not. Because of the grading change, students were divided into two groups, students with letter grades and those without. Students who did not receive letter grades during the 6th grade achieved higher in middle school and high school than those with letter grades. There was also a direct correlation between the students who did not receive letter grades and the graduation rate from

high school. Hopfenback (2015) is continuing the research and expects to observe a decline in the graduation rate of students who received letter grades during primary school.

No-Zero Policy Opposition

Several studies (Balingit & George, 2016; Brouwer, 2013; Caneva, 2013; Cooles Harrigan-Vital & Laville, 2014; Cox, 2011; Friess, 2008; Tallent, 2016; Teghtmeyer, 2012) discussed the No-Zero Policy and why it is extremely controversial and not effective in helping students to succeed in high school. Balingit and St. George (2016) stated the minimum F or no-zero policy is increasing adoption among school districts in the U.S. The policy allows students who have fallen behind in their course work to catch up because they are no longer given a 0% on an assignment for which they put in "good-faith effort." Teachers reported that students have already figured out how much work they must do to pass the class and then only complete the minimum. Teachers felt by using this policy, students were not prepared for the workforce because they no longer abide by deadlines. School district administrators who were interviewed are seeking grade reform and aim to show student achievement. The opposition stated students are playing the system and not actually learning because they are not doing the work, and therefore are not college and career ready.

Brouwer (2013) discussed the No-Zero Policy and in relation to assignments being a crucial part of the learning process, no matter what course the student is taking. He contended that if the student waits until other assignments are handed back and then just copies the assignment, no learning is taking place. In certain disciplines, skills need to be learned sequentially, and if the students are not learning, the students do not deserve a passing grade for the course. Brouwer's (2013) article reported that a student should never receive a zero for an

assignment and teachers should encourage students to complete assignments, even if they are late.

Caneva (2013) a national board-certified teacher, discussed how implementing a no-zero policy teaches students to only do half of the work assigned to them. At the school studied, there was a significant difference in the percentage of students on track to graduate after the policy was implemented. In the one year without a no-zero policy, 59% of their students were on track to graduate with an average ACT score of 15.1. The following year, the school implemented the no-zero policy and 87% of students were on track to graduate with an average ACT of 15.4. The teachers were outraged because so many more students were passing, but their students were not scoring equivalently on the ACT. When the teachers wanted to reverse the no-zero policy, administration refused because the on-track to graduate percentage factor was part of the school's rating. Cooles Harrigan-Vital and Laville (2014) studied students in a medial program for 3 years. The program was changing from the typical grading scale to a standards-based grading scale. Traditionally, the students performed much worse in one of the courses than the other courses in the program. When the grading scale was changed, data were collected after the forth semester for 3 years. Once data were analyzed, it was apparent the students had significantly higher scores on their state exams, but a decline in their university exam scores. Courses that traditionally had high fail rates continued to have higher fail rates and those with low failure rates continued to drop. The reasons for these changes remain conjectural.

Cox (2011) studied a district with a high school that was going through grading reform. Cox (2011) formed two cohorts of teachers – one cohort allowed students to retake exams, turn in late work, and used a 50% minimum grade. The other cohort of teachers was more traditional

in their expectations of students and deadlines. The teachers were interviewed and asked questions about their grading practices and how student effort was incorporated into their grading. After the case study was complete, there were several implications, one being a case for using alternative assessments. Students needed to be able to show they are learning the material through alternative ways other than pencil and paper. Common assessments were a success because students were being assessed equally, no matter which teacher they had for class. The last implication was that there needs to be a way to convey a student's effort on a report card. There was no correlation between letter grades, student work effort, and what the students learned.

Friess (2008) examined several schools around the country that have implemented a minimum F policy. At one school in Las Vegas, Nevada, the principal wanted teachers to lock student grades at a 50% for the quarter if it was lower so the students would have a better chance at passing for the semester. Other schools required teachers to give at least a 50% on all assignments. One school had a minimum F policy and decided to force the students who did not turn in homework to go for tutoring at lunch, before school, or after school. The teachers saw an 80% decrease in missing assignments. However, the author did mention the schools and teachers need to be flexible in their grading and there is no one-size-fits-all grading system.

Tallent (2016) discussed how the no-zero policy allows students to redo assignment or tests for a better grade. Critics of no-zero policy felt it encourages grade inflation and gives students a false sense of their abilities. The teachers felt the policy allowed students to no longer meet deadlines, and they can redo their work until they create quality work. By allowing students to not meet deadlines, the students in college were asking for things such as study guides and

more time to do their assignments. Schools are expected to teach the students life lessons and meeting deadlines with quality work. By using a no-zero policy in the classrooms, grades are being artificially inflated and there is no diligence with turning in assignments.

Teghtmeyer (2012) polled parents about the no-zero policy along with an article written a local newspaper; 97% of parents felt that if a student did not turn in an assignment, then the student should receive a zero on it. Grading is not as simple as giving a student a zero on an assignment not turned in because teachers are trained professionals who need to properly assess student knowledge. Teachers have a duty to help parents understand the strategies on grading assessments and why they assign certain scores when using the no-zero policy. Implementing the no-zero policy is not as simple as saying yes or no because teachers have a complex understanding of assessment and grading whereas the public does not.

Implications

With the results of my study, parents can potentially have more confidence in grades their children are receiving in school, and the grades correspond with the amount of learning and effort present in the classroom. Students can potentially be better prepared for college and the workforce by understanding the importance of meeting a deadline and completing an assignment to the best of their abilities. Policymakers and researchers can potentially realize the importance of students completing their work and continually working until they have mastered a concept. With the results of this study, I can potentially present my findings on the impact of using a no-zero policy on student achievement in a high school setting and offer a potential project to address the problem. I anticipate making a professional development to present to the local middle schools using the no-zero policy in the district.

Summary

Teachers and administrators in schools where a no-zero policy has been implemented are blaming policy for the lack of student achievement (Caneva, 2013). Teachers are reporting students only doing a minimum amount of work required to pass a class and not caring if they fall behind in their course work (Balingit & St. George, 2016). The no-zero policy has been implemented in schools across the country as a means to allow students to pass courses which they would not have otherwise passed. The purpose of this study was to test if there is a statistically significant difference in mathematics, science, and English grades between high school students who were enrolled in a middle school using a no-zero policy and high school students who attended a middle school not using a no-zero policy. In Section 2, I will describe the research design, setting, sample and its size, data source, and data collection methods I used to study the implications of the middle school no-zero policy in a local high school.

Section 2: The Methodology

Research Design and Approach

For this project study, I conducted a nonexperimental comparative quantitative study using archival data of students' scores recorded on their transcripts to examine high school students' achievement in mathematics, science and English classes. Students achievement was operationalized by using students' scores in mathematics, science, and English. The students were sorted by middle school enrollment based on whether the middle school a student attended had a no-zero policy in place. I chose to use a quantitative approach because I am determining if there is a statistical difference between the high school scores for students who attended two middle schools in which one middle school uses a minimum F policy and the other does not. A *t*-test was used to analyze the archived data. I used group comparison to determine if there was a statistical difference in high school student scores between students depending on their middle school of enrollment. The tracking program the district uses allowed for high school students' names to be sorted by their middle school of enrollment. I analyzed the students' average scores in core mathematics, science, and English classes and compared the two sets of data grouped by middle school enrollment. There were four variables in the study, one independent variable and three dependent variables. The independent variable is a categorical variable, which is the student's middle school of enrollment, either with or without the no-zero policy. The dependent variables were students' scores in high school mathematics, science, and English classes. Raw student scores in core high school classes were ordinal but averaged to create a calculated interval/ratio variable for comparison between groups. Since I used archival data, there was no intervention used in the study.

Reliability within my study was assumed. I used archival data and did not collect my own data; therefore, any researcher would be able to replicate the findings of this study. Validity is also assumed within my study. Because I used archival data and IBM SPSS Version 24.0, the results can be replicated and duplicated.

I analyzed students' average scores in mathematics, science, and English courses. I examined the students' transcripts and organized the data in a table. A table was used to record the letter grade in each course. Letter grades were coded as numbers. Numbers were averaged scores for each subject. I used a significance level of $p < .05$ to determine if I should retain or reject the null hypothesis. A *p*-value of .05 or less provides evidence against the null hypothesis. Standard practice in social sciences is that $p < .05$ (Rovai, Baker, & Ponton, 2013).

Setting and Sample

The setting for my study was a public high school in Nevada. This high school has 2,931 students and is located in a suburban area of the city (Shadow Ridge High School, 2017). The school has 126 teachers, 40 support staff, six assistant principals, and one principal (Shadow Ridge High School, 2017). There are 284 students who have Individual Education Plans, 56 students are labeled English Language Learners, and 1,107 students are eligible for free or reduced lunch (Shadow Ridge High School, 2017). The average class size for English is 24, 19 for mathematics, and 28 for science (Shadow Ridge High School, 2017). The graduation rate is 81% and currently 10% of the students participate in advanced placement classes (Shadow Ridge High School, 2017). The school has an ethnically and academically diverse population. The average daily attendance rate at the school is 94.6%, and it also has a 36.8% transiency rate (Shadow Ridge High School, 2017).

When collecting data, I used the student population enrolled at the school between 2012 and 2017 who attended one of the two middle schools to answer the research questions. I used a nonrandom criterion-based sampling method because not all students who attended the two middle schools also attended the high school, and not all of the students who attended the high school also attended one of the two middle schools. I collected all the students' transcripts who attended one of the two middle schools, sorted them by their middle school enrollment, and then calculated the students' grade point averages (GPA) for their high school mathematics, science, and English courses. The size of the sample was 1,396 students. Because of the size of the sample, findings will be generalizable to the middle schools being analyzed and may be useful for other districts as well.

Protection of Participants' Rights

To ensure protection of the participants, I accessed transcripts from the high school of the students who were being analyzed. When accessing the transcripts, all names, addresses, student numbers, telephone numbers, or any other personally identifiable markings were excluded. Because data are archived, there was no need for informed consent forms from the students whose transcripts were being analyzed. However, consent forms were collected from the school principal and any support staff who helped to obtain the transcripts. In order to access the data, a school administrator or secretary was needed; I personally do not have access to the data. The data was collected from the school transcript program Infinite Campus. A secretary accessed the documents and saved them in a document for me to tabulate. Consent was given by the principal to access the data, and all identifying factors were redacted to protect student rights and not violate any FERPA laws.

Data Sources

Archived data were collected from the local school district's database using Infinite Campus. The local school district keeps official records for all past and current students. Infinite Campus is a database program that organizes and stores students' school enrollment, demographics, and transcripts. The data is audited every 3 years, so they were considered reliable for the study. I used student records from 2012 to 2017, tabulated their mathematics, science, and English course grades, averaged these grades, and then calculated a *t*-test to compare differences between the two middle school groups. Generalizability is limited to schools with the same demographics. Data was organized in tables and presented as appendices of the final study report. Data included a student identifier, the course name, the letter grades for each course, score corresponding with the letter grade for each course, and an average of scores for each core subject.

Each letter grade was assigned a numerical value that is associated with calculating grade point average. As were assigned four points, Bs were assigned three points, Cs were assigned two points, Ds were assigned one point, and Fs were assigned zero points. High school course scores were averaged for each subject. IBM SPSS Version 24.0 was used to analyze data. Descriptive and inferential statistics were calculated. Descriptive statistics included the number of items in the dataset, the minimum, the maximum, the mean, and standard deviation. The mean is the average of the data and the standard deviation is the average distance away from the mean. An inferential *t*-test was used to compare the means to determine if there is a statistically significant difference between high school students' subject scores depending on which middle school students attended. The raw data will be available via written request from the researcher.

Data Collection and Analysis

In this section, I present how I collected the data from the transcripts. I also describe how I organized the data into a spreadsheet and ordered the spreadsheet based on middle school of enrollment. There are four variables in this study: The middle school of enrollment, the mean math score, the mean science score, and the mean English score. After calculating the means, I performed a one-tailed independent *t*-test to determine if there is a statistical difference between student achievement depending on students' enrollment at the two middle schools.

Data Collection and Recording

After receiving permission from Walden University's Institutional Review Board, I collected the data by having a secretary access a computer database named Infinite Campus. Infinite Campus is a database with a front-end for retrieval of the student records for the school district including demographics, schedules, transcripts, and previous school enrollments. The principal's secretary accessed the transcript portion of the program and printed the students' individual transcripts. Permission has been obtained from the high school's principal in writing allowing me to use the data and specifies a secretary was to print the transcripts for all the students enrolled in the high school. All identifiable information including, but not limited to student name, student number, birth date, address, and demographics was not included in the data. Published raw data tables will be available indefinitely.

I organized the As, Bs, Cs, Ds, and Fs that were recorded on the transcripts for mathematics, science, and English in a spreadsheet. Infinite Campus, the database used to obtain the data, lists each course as semester 1 and 2, which is why I used the following courses: algebra 1 semester 1, algebra 1 semester 2, algebra 2 semester 1, algebra 2 semester 2, geometry

semester 1, geometry semester 2, biology semester 1, biology semester 2, chemistry semester 1, chemistry semester 2, English 9 semester 1, English 9 semester 2, English 10 semester 1, English 10 semester 2, English 11 semester 1, English 11 semester 2, English 12 semester 1, and English 12 semester 2. Because I am used archival data, I obtained permission from the principal at the high school. The scale used for analyzing the variables was interval in level and follows the traditional GPA scale: A = 4 points; B = 3 points; C = 2 points; D = 1 point; and F = 0 points (How to calculate GPA, 2017).

Table 1

Variables used within the study

Variable		
Math	Semester 1, 2	0-4 scale
Science	Semester 1, 2	0-4 scale
English	Semester 1, 2	0-4 scale

The data elements I used included the following: Assigned student ID: 1, 2, 3, 4, etc.; Middle School of Enrollment: 0 or 1; algebra 1 semester 1, algebra 1 semester 2, algebra 2 semester 1, algebra 2 semester 2, geometry semester 1, geometry semester 2, biology semester 1, biology semester 2, chemistry semester 1, chemistry semester 2, English 9 semester 1; English 9 semester 2; English 10 semester 1; English 10 semester 2; English 11 semester 1; English 11 semester 2; English 12 semester 1; English 12 semester 2: 0-4; mean math score: calculated variable - average of 6 math courses; mean science score: calculated variable - average of 4 science courses; mean English score: calculated variable - average of 8 English courses. I created a table from the data to organize the scores associated with each of the subjects. The timeline for my study was for the 2017-2018 school year, comprised of two academic semesters.

Variables

The variables included three calculated dependent testing variables which were the mean math score, the mean science score, and the mean English score for which the 0-4 ordinal scale was averaged for each subject. The fourth variable is the Middle School of Enrollment that was a nominal variable coded dichotomously to indicate group, students who attended a school with a No-Zero Policy or not. I used IBM SPSS 24.0 to create the spreadsheet and record the data retrieved from the transcripts. Once the spreadsheet was created, I reordered it based on the Middle School of Enrollment and used IBM SPSS 24.0 to calculate the mean for math, science, and English for each middle school.

Table 2

Variables used within the student and their data category type

Variable	Data Type
Middle School of Enrollment	Nominal: Dichotomous
Mean Math Grade, calculated from coded letter grade	Interval
Mean Science Grade, calculated from coded letter grade	Interval
Mean English Grade, calculated from coded letter grade	Interval

Data Analysis

I calculated the mean and the variance of the data for each of the six individual groups. I then used a one-tailed independent *t*-test to accept or reject the null hypotheses using an alpha level of $p < .05$. A one-tailed independent *t*-test is directional and more stringent than a two-tailed test in the detection of a difference in means (Peck, Olsen, & Devore, 2010). Because I hypothesized students who attended one middle school have higher grades than students in another middle school, a one-tailed independent *t*-test is appropriate.

Because the sample was large, statistically significant differences were the expected results from hypotheses testing. To understand how significant differences are, effect size was calculated for each *t*-test using Cohen's *d*, which is used to calculate the effect size between two means and represents standard deviation units (Rovai & Baker, 2013). The magnitude of the effect size was interpreted as small effect, $d = 0.2$; medium effect, $d = 0.5$, and large effect, $d = 0.8$ (Rovai & Baker, 2013). Effect sizes were used to interpret the magnitude of difference for average high school grades between students who were enrolled in a middle school with a No-Zero Policy and a middle school without a No-Zero Policy.

Assumptions, Limitations, Scope, and Delimitations

Assumptions, limitations, scope, and delimitations are addressed in this section. These include anything I assumed was occurring within the study and potential weaknesses. It also includes the main points of the study and how I chose to limit the data in my study.

Assumptions

The no-zero policy is surrounded by controversy. For example, school districts assume this policy is causing a lack of achievement in students while they are in high school that is carrying over beyond school (Balingit & St. George, 2016). One assumption in this study is that high school achievement is directly affected by middle school achievement. Another assumption is the database program, Infinite Campus, has complete and correct records for all students who are attending the high school.

Limitations

There were several potential weaknesses, or limitations, to my study. The first limitation is the middle school being analyzed has only been using the no-zero policy for several years.

Students who are attending the high school were not enrolled at the time of the policy implementation in the middle school was excluded from the study. Another limitation is I am only analyzing one local high school and its two feeder middle schools. Though the schools are in the 5th largest district in the country and the sample was 1,396 students, I could have included other schools to make the study larger, but limited the study to students who attended two middle schools given time and resource limitations. There is also no randomization of the participants, and so this assumption of inferential statistical testing is being violated as is commonly done (Rovai & Baker, 2013).

Scope

At the local high school, I calculated the means of each subject and then compared the means using a *t*-test to determine if there is a statistical difference between grades achieved in high school depending on middle school of enrollment. The study was limited to courses that are included in mathematics, science, and English and letter grades including: A, B, C, D, and F. Student data was grouped based on which middle school they attended and then the grades were averaged.

Delimitations

Delimitations for my study on the no-zero policy include only using two of the feeder middle schools instead of the three feeder middle schools, and only using current high school students instead of all students who have attended those two middle schools. I chose to only include two of the middle schools because the majority of the high schools' students come from those two schools and one school uses the no-zero policy and one school does not use the policy. I also chose to only include current high school students because the schools have not been using

the policy for long enough to include students who have already graduated. A delimitation of the study is I am only including mathematics, science, and English classes and no other high school sources because I am only interested in the local impact on the core subject courses.

Data Analysis Results

For the data analysis, I collected 1,396 students' grades in algebra 1 semester 1, algebra 1 semester 2, algebra 2 semester 1, algebra 2 semester 2, geometry semester 1, geometry semester 2, biology semester 1, biology semester 2, chemistry semester 1, chemistry semester 2, English 9 semester 1, English 9 semester 2, English 10 semester 1, English 10 semester 2, English 11 semester 1, English 11 semester 2, English 12 semester 1, and English 12 semester 2. I organized the data into a table and then uploaded it to IBM SPSS 24.0. The data tables can be accessed by requesting in writing to myself. In Table 3, I have listed out all of the courses, how many students were counted for each course, the mean of each course, and the standard deviation in each course.

Table 3

Data Collected for each course including Number of Participants, Means and Standard Deviation

	N	Mean	Std. Deviation
Number of Participants	1,396		
Algebra I Semester 1	1,333	2.329	1.290
Algebra I Semester 2	1,066	2.331	1.296
Algebra II Semester 1	705	2.391	1.256
Algebra II Semester 2	374	2.262	1.232
Geometry Semester 1	1,050	2.311	1.264
Geometry Semester 2	734	2.346	1.273
Mean Math Score	1,336	2.3245	1.038
Biology Semester 1	1,394	2.331	1.271
Biology Semester 2	1,010	2.298	1.259
Chemistry Semester 1	773	2.357	1.271
Chemistry Semester 2	471	2.310	1.295
Mean Science Score	1,394	2.3166	1.079
English 9 Semester 1	1,349	2.312	1.259
English 9 Semester 2	987	2.368	1.223
English 10 Semester 1	992	2.324	1.269
English 10 Semester 2	651	2.301	1.262
English 11 Semester 1	580	2.319	1.247
English 11 Semester 2	293	2.345	1.239
English 12 Semester 1	316	2.320	1.235
English 12 Semester 2	2	3.500	.707
Mean English Score	1,375	2.302	1.023

In Table 4, I have organized the data into the two groups – the school with a no-zero policy is labeled as “Yes” and the school without a no-zero policy is labeled as “No”. The number of students, the mean, and standard deviation of each group for each type of school is listed in table 4. The number of data points for each variable is within 30 participants of each other.

Table 4

Math, Science, and English Mean Grades and Standard Deviation for Schools with and without a No-Zero Policy

	No-Zero Policy	N	Mean	Std. Deviation	Std. Error Mean
Mean Math Score	Yes	682	2.228	1.081	.041
	No	654	2.425	.982	.038
Mean Science Score	Yes	703	2.235	1.049	.040
	No	691	2.400	1.103	.042
Mean English Score	Yes	703	2.244	1.025	.039
	No	672	2.363	1.045	.040

After organizing the data and using IBM SPSS 24.0 to calculate descriptive statistics, I used a *t*-test to determine if there was a statistical significant difference in the means of math, science, and English. Table 5 presents results of hypotheses tests. Results are presented by research question.

Table 5

Independent Samples Test – t-test and p-values for Equality of Means in Math, Science, and English

		df	Sig. (1-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
						Lower	Upper
Mean Math Score	Equal variances assumed	1,334	.001	-.197	.057	-.290	-.104
Mean Science Score	Equal variances assumed	1,392	.002	-.165	.058	-.260	-.070
Mean English Score	Equal variances assumed	1,373	.016	-.120	.056	-.212	-.028

I determined there was a statistical difference in the group means, but I wanted to know how large a difference existed. To determine the size of the statistical difference, I calculated Cohen's *d*. Math had a Cohen's *d* score of 0.2693, science had a score of 0.2168, and English had a score of 0.1156. All three subjects, math, science, and English, have a small but significant difference because the Cohen's *d* values are all around 0.2 (Rovai & Baker, 2013). After analyzing the data, I have determined there is a statistical difference in student achievement in high school between students who have attended a middle school with a no-zero policy and students who attended a middle school without a no-zero policy.

Table 6

Cohen's d Analysis on Math, Science, and English Means for with and without a No-Zero Policy

	No-Zero Policy	N	Mean Difference	Std. Error Difference	d
Mean Math Score	Yes	682	-.197	.057	0.270
	No	654			
Mean Science Score	Yes	703	-.165	.058	0.217
	No	691			
Mean English Score	Yes	703	-.120	.056	0.116
	No	672			

RQ1 was: Do students who attended a middle school without a no-zero policy have a higher mean mathematics score than student who attended a middle school with a no-zero policy? Because my data returned $p = 0.001$, there is a statistical difference between student achievement in mathematics, therefore I reject the null hypothesis and accept the alternative hypothesis.

RQ2 was: Do students who attended a middle school without a No-Zero Policy have a higher science mathematics score than student who attended a middle school with a No-Zero

Policy? Since my data returned $p = 0.002$, there is a statistical difference between student achievement in science, therefore I reject the null hypothesis and accept the alternative hypothesis.

RQ3 was: Do students who attended a middle school without a No-Zero Policy have a higher mean English score than student who attended a middle school with a No-Zero Policy? Since my data returned $p = 0.016$, there is a statistical difference between student achievement in English, so therefore I reject the null hypothesis and accept the alternative hypothesis.

After analyzing the data and rejecting all three of the null hypotheses, I have determined there is a small, statistically significant difference in student achievement in high schools based on what middle school they attended. The no-zero policy negatively affects student achievement in high school based on the data and data analysis, therefore the theory of Learned Helplessness is confirmed by the results. No-zero policy offers students the opportunity to pass without learning in middle school and they are performing poorly as a direct result in high school. According to Tallent (2016), the no-zero policy teaches students to only do the minimum amount of work needed to pass a class. After students have attended middle schools with a no-zero policy, their mean mathematics, science, and English scores are lower in high school. To address the shortcoming of middle school students in the high school, I will be offering a three-day professional development on the background of the no-zero policy, what it is, and grading alternatives to the mathematics, science, and English middle school teachers. In Section 3, I will describe the professional development training the teachers and administrators can attend to understand the negative effects of the no-zero policy on student achievement.

Section 3: The Project

Introduction

After collecting and analyzing the data on high school students who attended a middle school with a no-zero policy and comparing them to students who did not attend a middle school with this policy, I have created a 3-day professional development workshop on the no-zero policy for teachers and administrators. The purpose of the workshop is to inform teachers and administrators on the negative implications of the no-zero policy. The goal of the professional development is for teachers and administrators to understand the implications of the no-zero policy on student achievement. Components of this training will include the purpose and evolution of the no-zero policy, the data tables measuring student scores in core classes created from analyses, and open table discussions on how to engage students and increase student achievement within the schools. Microsoft PowerPoint slides provide a framework for discussion in professional development (Appendix A).

Rationale

The no-zero policy is defined as a teacher is compelled to not assign a grade less than 50% to a student for any assignment or assessment (Roth, 2013). After collecting and analyzing data on a high school that has two feeder middle schools, feeder meaning their students are to attend the same high school, one with and one without a no-zero policy, I have created a 3-day professional development training to report my findings to those teachers and administrators using the policy. I chose to develop a 3-day professional development training because teachers need to be informed of the negative effects of using the policy on student achievement.

Student achievement is statistically significantly different depending on if a student was enrolled in a middle school that use a no-zero policy. Throughout the professional development training, I will be referring to my data tables and the analysis that shows there is a significant difference in student achievement based on which middle school the students were enrolled. Students attending schools with a no-zero policy are at risk of not being prepared in core subjects, such as English, mathematics, and science, which are needed to enter and be successful in the workforce (Zwaagstra, 2012a).

Review of the Literature

The data revealed the no-zero policy was negatively affecting student achievement in high school. From my research, I then created a professional development activity to train teachers and administrators on the implications of the no-zero policy. This research was conducted using the Walden Library journal search engines, Google Scholar, and ProQuest using key words such as: *Minimum grading*, *No-Zero Policy in schools*, *No-Zero grading policy, Professional Development, and Professional Development Design*. All searches were limited to studies published between the years 2012 and the present and peer-reviewed articles. After reading the literature and conducting my own research, it is apparent the no-zero policy in middle school is negatively affecting student achievement in the high schools. Students are being introduced to the no-zero policy, and it does not seem to be working like the creators anticipated. Students are only doing minimum amounts of work to pass courses instead of working to their full potential (Link, 2014). Students are no longer being adequately prepared for the job market because they no longer try their best in schools (Zubrickas, 2015).

Public Pushback of the No-Zero Policy

Sands (2013) reported on a public school in Edmonton, Canada that revoked zeros as a possible grade. Edmonton public schools have faced controversy over whether teachers should be punished for assigning zeros to missing assignments and tests (Sands, 2013). After much pushback from the community, the school district policies were revoked, and it was determined that students need consequences for not meeting deadlines (Sands, 2013). Student behavior was severely negatively impacted by no longer receiving 0% the classroom (Sands, 2013).

Zwaagstra (2015a) researched the no-zero policy saying teachers at schools with a no-zero policy are no longer permitted to give zeros when work is late or if students have cheated on their assignments. Advocates for the no-zero policy felt that cheating, turning in assignments late, and not turning in assignments at all are behavior issues and should not reflect a student's grade. Zwaagstra (2015a) also discovered the no-zero policy had supporters with cases from the 1990s. Research that is cited when used for the no-zero policy is limited to the 1990s. Zwaagstra (2015a) also stated that classroom teachers are the most prevalent opponents of the no-zero policy and after 4 years of the policy, schools need to eradicate it. Zwaagstra (2015b) also researched several school districts in England which were implementing a new zero policy which was quickly followed at other high schools. The policy does not allow teachers to separate behavior from grades. Behavior can include cheating, turning in work late, and refusing to submit assignments at all. It is documented that students within the school district being studied are figuring out how to work the grading system and that assignment due dates are just suggestions and not deadlines. A student having the ability to turn work in whenever they want causes teachers to beg students to turn in work.

Zwaagstra (2012a) researched a teacher, Lynden Dorval, in Winnipeg who was relieved from his position as a teacher because he refused to follow the no-zero policy set by his school district. There was a large public response backing Dorval and his refusal of the no-zero policy (Zwaagstra, 2012a). After Dorvel fought the school district in court, he won, and the no-zero policy was no longer mandatory within the school district. Zwaagstra (2012b) indicated the no-zero policy is controversial and evidence that it works is very weak and comes from the early to mid-1990s. Not allowing teachers to assign 0% to missing or late work takes away their ability to give students consequences for not meeting deadlines. Zwaagstra (2012a) determined the argument against the no-zero policy fails students in the real world because when a job is not completed or done accurately, the students no longer will have that job or get paid.

Roth (2013) discussed high schools in Orange County, Florida where the state has mandated that the 0 to 59% must be an F and the teachers cannot use a 0% as an incomplete grade. State law does not allow teachers or administrators to change the ranking of what an F is in the classroom (Roth, 2013). Different schools in the district use the policy differently. Some teachers refused to give less than 50% on any assignment that is turned in, some teachers give 50% whether work was turned in or not, and other teachers round quarter grades up to 50% at the end of the quarter. There has been pushback from parents saying that students should not get a grade for not turning anything in. However, teachers feel that continually giving students zeros mathematically does not allow the students to be able to pass.

Student Disadvantages of the No-Zero Policy

Teachers at schools with a no-zero policy are saying that students are no longer turning in homework, and they must determine what effort looks like to give 50% or higher grade on an

assignment (Walker, 2016). The policy is problematic and there are serious issues surrounding accountability. Teachers are professional and have systems for late work. At a middle school in Beltsville, Maryland, a teacher explained how having students complete homework on good faith undermines his ability to assign challenging tasks and a one size fits all approach does not fit for every student need (Walker, 2016). Several districts in Houston, Texas have implemented the no-zero policy, but teachers are not clear on how to use the policy to determine what a reasonable attempt at assignment looks like.

Norrell (2018) discussed the purpose of grades in a secondary setting. He talked about giving students zeros when turning in an assignment late rather than subtracting a certain percentage for being late. Grading in this manner is discipline and not showing classroom knowledge. Norrell (2018) feels that grading with zeros is toxic to students and many will shut down. Fear should not be a motivator when determining student grades. Norrell (2018) reported that one argument in favor of zeros is it is not fair to students who turn the work in on time that students to turn it in late receive the same grade as them. Norrell (2018) said that turning in assignments late should affect the student's grade because those who turn them in on time are receiving higher marks. Norrell (2018) also stated that it is not fair to students who refuse to do the work to receive a passing grade, and the zeros devastate a student's grades for forgetting to turn in an assignment. Norrell (2018) is also an advocate of the four-point grading scale because if a student would forget to turn in the assignment, the lower grade will not be devastating to their overall grade for the semester.

Cary (2016) researched a school in Greenville County that implemented a No-Zero Policy in middle schools. The teachers are no longer allowed to give zeros to students who cheat

or plagiarize an assignment. School district officials are stressing that it is individual schools that are doing this and not all schools in the district. As of now, there is no policy on how to determine when grades are given because of cheating or plagiarism. With the way grades are broken down at the specific middle school's students are receiving a 61% just for showing up to class and not turning in any assignments. The school district had been stressing that student grades were supposed to measure student knowledge and not character. By giving students grades for showing up to class, course grades are now reflecting character and not what they had learned in the course.

Himmler and Schwager (2012) researched several schools within the Netherlands where it was assumed that schools in lower socioeconomic all locations were grading leniently because the school officials felt the students were disadvantaged and had lower ability levels. After looking at several different data points such as a grade point average and state examination scores, it was determined that schools in lower socioeconomic locations were holding their students to lower standards in those from average or above average backgrounds. Schools in the Netherlands also received more funding for disadvantaged students which are one explanation for the disparity between the school types. It is apparent that there is discrimination within the data based on teachers having different grading techniques based on the child's background. It is also important to note that the state exam that was used is the PISA, which can have material not yet covered at the school. Even with all the possibilities that would create these results, it is apparent that students in lower socioeconomic parts of the country are treated differently in school than those who are of average or above average social means.

Revocation of the No-Zero Policy

Jasinski (2016) researched a local school district where the middle schools were using a No-Zero grading policy, and it was adopted in the high schools. When the student's grades were examined, the students had an overall class percentage of 56%. The students' test and homework grades did not add up to the score of 56%; they were significantly lower. Teachers were saying that incoming freshmen had lower abilities, and they no longer succeeded academically when they were coming from is the middle schools that had the No-Zero grading policy compared to the students who attended a middle school without a No-Zero Policy. School district officials said that students were moved along whether they had passed or not. The school district said they were trying to come up with a policy where the students knew what they needed to complete to move on. Since the policy was removed from the school district students are now back to receiving letters home to their parents when they have a D or F and notice they are in danger of failing.

French (2013) researched the school district in Phoenix, Arizona that no longer assigned zeros or takes points off for late assignments. Teachers are allowed to attach a zero only after the child has had several chances to earn something higher. The school district feels that showing up late or not having their homework done should not negatively reflect any students' grade. The school district put out a handbook describing to the teachers how to grade students and how to mark them appropriately. The school district is currently looking into ways for punishment of teachers who do not implement the No-Zero program.

In New Mexico, Kane (2013) researched a local high school who had implemented a No-Zero grading policy. Teachers were instructed to give students a 50% even if the assignments

were not turned in or were missing. Parents were upset at the new policy saying that it was the only school in the entire state implementing this. After receiving much criticism, the school has decided to revoke the program and go back to traditional grading. Teachers were also required to go back and change grades that would have been initially below 50% of the actual grade. Administrators feel the program is a good idea, however with the pushback from teachers, parents, and the state board of education, the school district has decided to remove the program.

Implementation of New Grading Policies

Boleslavsky and Cotton (2015) researched several different ways that schools could set up grading policies within the districts. The researchers discovered if a school controls too much information about the student and the student's ability then the grading strategies do not match the student's skills. The researchers also determined specific grading policies or grade inflation could lead to better outcomes if student abilities are correctly reported to teachers. The research showed that giving schools the ability to grade how they chose gave teachers the ability to increase classroom grades while decreasing student knowledge. It was discovered in the research that the more effort the school put into the student and the student's abilities, the less effort the student exerted in return.

Kleinman, Leidman, and Longcore (2018) researched grading policies across 620 schools in the northeast region of the United States. The researchers were determining if traditional grading within an A-F scale has statistically different results than schools that do not use traditional scales. By using a chi-square test and a p-value $< .05$, the researchers showed that there is a statistical difference between the types of grading within the schools and the letter grades assigned to the students. Kleinman, Leidman, and Longcore (2018) also discovered that

the kind of school and the enrollment at the school had no impact on the data. Kleinman, Leidman, and Longcore (2018) said after running their data, there is no evidence that all schools need to have a standardized model of grading. However, they do suggest that a unified grading scale in the United States would be beneficial to the students in the long run.

Swinton (2015) researched one school who had implemented a program called Success Equals Effort (SE^2). SE^2 uses a matrix of knowledge versus effort grades of an A- F scale, and the teachers use the matrix to determine what grade a child should receive any specific course. For example, if a child receives an F for knowledge but an A for effort, they get a C in the course. Swinton (2015) used ACT scores and GPAs to determine if this program was inflating graduation rates. Swinton (2015) compared means of six different data points and used a t-test to determine if they were significantly different. Swinton did not determine that the policy affects graduation rates, but it just speeds them up. The same students who would have graduated are graduating earlier and leaving at a quicker rate.

Zubrickas (2015) studied the student-teacher relationship within different grading scales in the classroom. Zubrickas (2015) was looking to see if there was a correlation between student abilities and job market hiring. Through the study, Zubrickas (2015) found there was a mismatch between grading and the ability levels of the students. Grading seemed more relaxed on students with lower ability levels, and lower expectations were resulting in higher grades in courses. The job markets assumed grades students receive in schools reflect ability and knowledge, but Zubrickas (2015) discovered there is no consistent grading among students and lower ability levels are showing higher grades in core classes.

Elikai and Schumann (2010) compared lenient grading to strict grading at several schools. District grading was on a strict scale and the lenient grading used minimum passing requirements. After studying students and analyzing their achievement levels within the courses, Elikai and Schumann (2010) found that the students with the strict grading scale performed higher and better than those of the lenient grading scale. Nonparametric tests and regression analysis indicated students who were in the strict scale group scored higher overall in testing than students in the lenient scale group. It was also discovered in the research that students who were in the strict scale group dropped fewer courses than those who were in the lenient scale group.

No-Zero Policy Studies

DiCostanzo (2016) conducted a research study where he examined middle schools in Delaware. The schools either used a minimum F policy or did not, and DiCostanzo (2016) compared student achievement and grades in courses. DiCostanzo (2016) broke his data down into grade level, ethnicity, English language learner status, low-income status, and special education status. After running descriptive statistics on the two different types of schools, DiCostanzo (2016) calculated a p-value < 0.05 for every source of data, concluding that there is a significant difference for students grading when it comes to using a minimum feeling grade and those who do not. DiCostanzo (2016) concluded that students and the sixth and seventh grade were less likely to avoid failing due to the minimum feeling grades.

Long (2015) studied a high school in Nevada that was using a minimum grading policy and conducted a qualitative study to determine if the minimum grading policy was effective or not. Long (2015) chose to research was designated a Turn-Around school in 2013 where the

principal and half approximately half of the stuff was replaced. Long (2015) asked questions that pertain to student achievement, student motivation, staff motivation, student self-esteem, grade inflation, and expectations. After analyzing the participant's responses to the questionnaire, it was determined that minimum grading has a negative effect impact on achievement and motivation both corresponding with a p-value of less than 0.05. Long (2015) also reported students felt minimum greeting is not fair and allows for students to graduate with a little effort and little knowledge. Long (2015) also stated that he does not have previous proficiency pass scores so he can not accurately say if minimum grading positively or negatively affected student scores on the state exams.

Tyree-Hamby (2015) studied the "relationship between teacher assigned standards-based grades and a student achievement scores on state exams" (p. 7). Tyree-Hamby (2015) used the Pearson coefficient to determine if there was a correlation between teachers' standards-based grades and student scores on the state exam. The data analysis showed that there was a strong positive and significant correlation between teachers' assigned grades and student scores on the state exam. Standards-based grading is shown to be the best indicator of student achievement on state exams.

Kebles (2016) studied the relationship between middle school and high school mathematics teachers on their perceptions of how students should be graded. Using Lui's survey of teachers' perceptions of grading practices, Kebles (2016) created a study to examine the teacher's perceptions of each other's grading practices. Surveys were given to the teachers and compiled in Microsoft Excel where descriptive statistics were run on the data. Kebles (2016) determined from the survey middle school teachers included effort in course grades and not just

ability whereas high school teachers were including ability and not effort. High school teachers felt that grading is criteria for student progress and many have their grading procedures for making up or retaking assessments. Kebles (2016) determined that middle school grades do not accurately reflect student knowledge but also reflect behavior in the classroom which is not a valid indicator of what the student has learned.

Link (2014) studied and the teachers' perceptions of grading. The purpose of the study was to determine if teachers understood the usefulness of grades and how they affect student motivation along with self-efficacy and how teachers manipulate the grading scales. Link (2014) created a quantitative study we are teachers, grading scales, years of experience, subjects taught, highly qualified, and teacher training were all considered. T-Tests were then used to determine the significant difference between the means of the groups within the study. Within the survey, it asked if assigning zeros is appropriate in the classrooms. Overwhelmingly, teachers agreed in urban, suburban, elementary, middle, and high schools that zeros should be assigned to students for not turning in grades. Teachers in the groups agreed zeros can demotivate students. However, there needs to be a consequence for students not turning in their work.

Professional Development

Professional development is a critical part of being a teacher. Siko and Hess (2014) suggested that teachers be allowed to attend as many professional development trainings as needed and obtain additional credits for attending (Siko & Hess, 2014). Professional development trainings are a place for teachers to reflect on practices, discuss new ideas, and take on the role of a mentor to a new teacher (Giraldo, 2014).

Need for Professional Development

Bayar (2014) researched the components of an effective professional development, and he found professional development is the best way to increase the quality of teachers, teacher preparation, and teacher improvement. Bayar (2014) researched the teachers' needs and the schools' needs when creating professional development. Teacher involvement, active participation, and high-quality instructors were all important pieces of professional development. Teachers who were part of the research explained how important is was for teachers to be involved in planning professional developments, active participation such as discussions, and long-term goals associated with the professional development.

Qian, Hambrusch, Yadav, and Gretter (2018) researched the importance of professional development and the support it offers teachers. One approach of professional development is to use intensive workshop during the summer, but these do not give teachers support throughout the school year to continue implementing the new material. One obstacle that Qian et al. (2018) encountered while conducting research was that experienced teachers did not feel the need for professional development because they already had all of the material they needed to be successful. Novice teachers learned more from professional development and were able to implement the strategies in their classrooms. Recommendations made by Qian et al. (2018) included creating professional development to meet teachers' backgrounds, ensure professional development is aligned with curriculum, and use motivational strategies. Qian et al. (2018) concluded with saying the most important piece of professional development is to know your teachers' backgrounds and make sure the professional development is aligned with the audience.

Mohammedi (2017) said training for teachers is imperative when sustaining education. Teachers' understandings of the professional development trainings must be significant and impactful for their classroom. Mohammedi (2017) surveyed 86 teachers before and after professional developments that were conducted over the course of a year. The results of the surveys show that teachers prefer customized professional development and the need to be beneficial to the teachers' classrooms and pedagogy.

Yoo (2016) studied the effects of online professional development with teachers and self-efficacy. Yoo (2016) looked at the teachers' self-analysis from before and after the online trainings and found that teachers' efficacy increased after attending the professional development. The teachers felt the professional development was a positive experience in increasing their self-efficacy, but had mixed reports for whether or not they would implement the professional development in their own classrooms.

Cardina and DeNysschen (2018) researched teachers within different subject areas and compared the offered professional develops by subject. Cardina and DeNysschen (2018) found core subject teacher and new teachers were offered the most professional development, whereas physical education and elective courses were not offered professional development. Teachers should all be offered the same opportunities to further their education and understanding of classroom policies and procedures. The subject being taught should not exclude teachers from attending professional development trainings, and new teachers should always be offered more support, no matter what subject is being taught.

Reforming Professional Development

Giraldo (2014) conducted action research on professional development and the impact in the classroom. Giraldo (2014) created questionnaires, interviews, observations, and journals to use the findings to create more meaningful professional development. After using the teacher input, Giraldo (2014) designed professional development to help the teachers improve classroom performance, and it was determined that because the teachers had input in the design of the professional development they had more by in with the program.

Patra, Gogoi, and Lenka (2013) researched the quality of professional development and found most professional development trainings were outdated and needed redesigned. Professional development should train teachers to connect course material to the real world and how to make a real-world environment in the classroom. Patra, Gogoi, and Lenka (2013) determined the only way to create a better education system is to create better teachers through professional development trainings that are well designed, involve the real world, and use reflective practices.

Van Driel and Berry (2012) said teacher understanding of material and being a highly qualified educator should be the main focuses of professional development. Teachers need to be trained on how students learn and fail, and teachers should be attended professional development trainings that are directly related to the subject and cliental they teach. Van Driel and Berry (2012) claimed professional development is generally limited to expert teachers, but teachers in general should be exposed to feedback, reflection, and individual attention with specific needs. Wang (2013) evaluated a professional development program at Open University, and discovered most professional development trainings are out of date and do not fit the needs of teachers.

Wang (2013) said there are three pieces to professional development: improve teachers' academic level, improve teaching strategies, and improve technology trainings. Once these three pieces are implemented in a professional development plan, it will become more successful and useful to the teachers.

Studies have been conducted on professional development and the impact on teachers' classrooms. Luo (2014) studied collaborative groups of teachers and the impact of professional development on their instruction. Luo (2014) determined professional development trainings need to include teacher perceptions, how programs can be improved, and necessary elements to professional developments. After conducting the research, Luo (2014) concluded teachers prefer trainings that help to improve instruction and teaching skills. Professional development should be designed to include the needs of the teachers to be deemed successful.

Professional development is always changing and being implemented in different ways. Engelbrecht and Ankiewicz (2016) created criteria for creating and evaluating professional development programs. Theoretical, practical, and reflective experience makes up the foundations of a quality professional development program. Professional development should help a teacher to increase knowledge in discipline and pedagogy, as well as work on skills, attitudes, and subject knowledge (Engelbrecht & Ankiewicz, 2016).

Implementation of Professional Development

Gallego (2014) created a professional development where the teachers were to journal about items such as methodology, classroom management, frustrations, observations, and grading. Because of the professional development created, teachers were able to reflect on their learning processes and discuss long-term goals or daily strategies. Many participants discussed

classroom management and how to motivate students. The purpose of the professional development was to help teachers reflect on their classroom strategies and be able to talk with one another the learning process that is being an educator.

Early et al. (2016) researched a program called Every Classroom, Every Day. Every Classroom, Every Day is a program designed to increase student achievement in math and English. Early et al. (2016) discussed the importance of professional development when implementing a new plan. Professional development should be content focused, active learning, coherent, and collective participation. Teachers are to be able to explore new ideas and discuss with one another how to implement changing practices to reach a common goal.

Calazans da Rosa (2016) researched teachers who were implementing a new multiliteracy program within a school. Teachers were required to use multiple subjects and attend trainings on these subjects. Calazans da Rosa (2016) followed the teachers through the multiliteracy course they were attending. Calazans da Rosa (2016) discovered teachers were still not implementing the new ideas in the classroom from the professional development. Professional development needs to bring valuable insight and discourse to encourage teacher participation.

Siko and Hess (2014) created professional development for teachers that also gave the teachers graduate level credit for attending. Professional development can be poorly designed for teachers which in turn makes the professional development unsuccessful when integrating new ideas. After implementing graduate credits with professional development training, Siko and Hess (2014) found that teachers had a higher level of buy in with the training.

Project Description

For the dissemination of my data, I have created a 3-day professional development for math, science, and English middle school teachers and administrators. The professional development will last from 7:00 am to 2:00 pm with an hour break for lunch. I will be the presenter for the professional development and the middle school teachers at the two middle schools in the study will be invited to participate, along with their administrators. I chose to develop a professional development to educate teachers and administrators on the no-zero policy, the history of the policy, implications, and possible changes to classroom grading. Teachers will be separated by subject level at the professional development due to the differing sizes of data in the content areas. Teachers will look at data for their own courses and analyze the tables given in the presentation.

Required Resources

For the professional development training, I will need to acquire a room large enough to hold approximately 150 people per day for the allotted time. The room will need either desks or tables so the participants are able to write down notes or responses as well as work in small groups throughout the day. I will also need access to a projector and computer to be able to show the slides that contain the data that can be found in Appendix A.

Existing Supports

I will be requesting a lecture room or the cafeteria at the high school where the data was collected to hold the training. The principal of the school is a support of me holding the training at his school. He will also be assisting me in inviting the teachers and administrators to the professional development training.

Potential Barriers

The barrier I foresee is that the administrators and teachers from the middle schools do not know I have conducted this research. I needed permission for the research from the principal at the school where the students are currently enrolled, not the middle schools. Because the teachers and administrators are not aware of the research, they might not be willing to participate in a professional development where a grading strategy they are using is creating a culture of students who are not achieving in high school. The administrators of the participants might also not want to discontinue use of the no-zero policy in their schools because it the school has higher class averages and pass rates.

Potential Solutions to Barriers

The solution to the teachers and administrators not knowing I have conducted research on the no-zero policy is to have the principal at the high school contact the principals at the two middle schools. The principals in the school district are together frequently for meetings and have developed a working friendship. By having the principal contact the schools, I feel I would have a higher turnout for the training. As far as the teachers not wanting to discontinue using the no-zero policy, after seeing the data on how students perform after using the no-zero policy for three years, the administrators should determine dissolving the policy is in the best interest of the students.

Timetable

During the professional development, I will hand out an agenda and use a PowerPoint and both are found in Appendix A. I will begin with an activity about sports around the world. The teachers will sit through a lecture where I discuss sports that are not well known. I will then

give them a short assignment for which they will be timed and will turn it in for a grade. All participants will receive a 50% unless they went above and beyond to answer the questions, even if they did not turn it in. The purpose of the activity is to demonstrate to teachers how it feels to do the work and receive the same grade as someone who did not complete the work. We will then have a table discussion for teachers to talk about how it made them feel knowing everyone got the same grade.

After the activity is completed, I will go through the purpose, history, and evolution of the no-zero grading policy. The original purpose of the no-zero policy was for teachers to round quarter grades to a 50%, so the students had a better chance at passing for the semester (Carifio & Carey, 2012). This process eventually evolved into assigning a 50% for every test or assignment if a student performed lower (Carifio & Carey, 2013). After the evolution of the no-zero policy, teachers began reporting students only doing a minimum amount of work to pass the course which normally would have tried for a higher grade (Balingit & St. George, 2016). Once finished going through the evolution of the no-zero policy, I will open the floor to a discussion of individual thoughts on the grading policy.

After the teachers have discussed their individual views on the no-zero policy, I will go over my data tables. The data shows there is a statistical difference in students who attended a middle school with a no-zero policy than those who did not attend a middle school with a no-zero policy. Students who attended a middle school with a no-zero policy are performing lower in high school than those who did not. I will discuss the *p*-values all being less than 0.05, which means there is a small statistical difference in the data. I will also show the Cohen's *d* values which show there is a statistical difference, but it is small.

For the second day, I will open the training up to a discussion. I will begin with a table discussion for 15 minutes and then open to a whole group discussion. The questions I will ask include: What causes the disparities in the data? How do we motivate students? The purpose of the discussion is for the teachers to express their concerns about the data tables and how student achievement can be increased at the high school level. After the discussion of the data tables and I will discuss different options for grading within the classroom. Some of the options include an A – F grading scale, a 0% - 100% scale, a 0 - 4 scale, and standards-based grading. We will discuss the pros and cons of each grading as an open floor discussion.

The third day of the professional development will be having a conversation about holding students accountable and what the schools will do after the training is complete. We will talk about incorporating student achievement in grades, increasing performance, and what participants have tried that works and does not work. Through the professional development, teachers are given data that shows the impact on student achievement from the no-zero policy. We will discuss draw-backs of removing the policy and what the teachers would like to see implemented in place of the policy. I will end with explaining the teachers will receive the survey evaluation in approximately one month to collect information on if the no-zero policy was revoked from the classroom.

Roles and Responsibilities

I will be performing the professional development training. I will invite the teachers and administrators several weeks before the actual trainings to allow them enough time to plan for the day. The teachers and administrators will be expected to participate throughout the training days. I have activities and discussions for the teachers and administrators to participate, and it is

expected for them to participate. Approximately one month after the training is complete, the participants will receive a survey asking their responses to the dissolution of the no-zero policy in the classrooms.

Project Evaluation Plan

The evaluation for the professional development day will be a survey given to the teachers approximately one month after the training. I am not giving the teachers the survey immediately following the training because I am looking for feedback on how the no-zero policy was removed or not from the classroom. The survey will ask how often a teacher used the no-zero policy in class, how likely they are to continue using the policy, how likely they are to discontinue the policy in the classroom, and a place for additional feedback. The questions are asked on a Likert scale of 1 -5, so the input can be analyzed using descriptive statistics to determine if the training was useful or not in reducing the use of the no-zero policy in the classroom. The survey is found in Appendix A with the other documents for the project.

The goal of the survey on the professional development is to determine if teachers have removed the policy and what they are using in its place. Stakeholders include middle school teachers who are using the policy, high school teachers who are dealing with the aftermath of the policy, students, parents, and administrators who need to answer for grades students earn at their schools.

Project Implications

My project is professional development training on the no-zero policy and its negative effects on student achievement in high school. A possible social change implication will be the dissolving of no-zero policy from the school system. My data analysis shows there is a negative

impact on student achievement in high schools after attending a middle school with a no-zero policy. With removing the policy from the schools, student achievement should increase, and teachers will hold students to a higher standard of grading once again. In a broader context, the project will hold students to a higher standard, allow teachers to assign certain grades of student knowledge (Elikai & Schumann, 2010). By accurately assigning grades to student knowledge, the students are prepared for college and the job market. Companies are seeing a decrease in student knowledge when hiring and training (Zubrickas, 2015). By removing the no-zero policy, students will receive grades that reflect knowledge learned.

The removal of the no-zero policy is necessary within the school system to hold students accountable for their own education. In order to remove the no-zero policy, teachers and administrations need to understand the lack of achievement it creates. This is why my project of a professional development training is important. Teachers and administrators need to see the data and analysis to understand students who are subjected to the no-zero policy have a lower achievement than students who are not. Teachers will benefit from the professional development by better understanding the negative effects of the no-zero policy. In Section 4, I will discuss the project's strengths and weaknesses, and I will recommend future research directions with the no-zero policy.

Section 4: Reflections and Conclusions

I have researched the no-zero policy extensively along with other types of grading that are used in middle school settings. I chose to use professional development to report my findings because I felt it was important to show the research instead of creating another policy for teachers and administrators to follow. After conducting the study and creating the professional development, I have reflected on the project and found several strengths, limitations, and future directions for my project and how to eradicate the no-zero policy from the local school system.

Project Strengths and Limitations

Professional development is one tool school officials and policymakers use to educate teachers. There are different models of professional development, but they all use standard goals, teacher prior knowledge, student achievement, and evaluation of the professional development (Bransford, Brown, & Cocking, 2000). This section will address the strengths and limitations of my professional development project.

Strengths

In the professional development I created, several strengths are apparent. I allow the teachers to understand better what the students experience when other students get the same score as them on an assignment. The teachers are given multiple chances to voice concerns and have discussions. I allow for table discussions and whole group discussions. The purpose of the two types of discussions is to let everyone have a voice at the table and then have one person voice concerns or comments for the entire table with the group. The data tables are given to show the research to the teachers for interpretation and to direct discussions towards the results

of the study. At the end of the professional development, the teachers will fill out a survey (see Appendix A) to give feedback and report addition concerns or comments.

Limitations

With all studies and professional developments, some limitations exist. The professional development I created has a limitation of only being offered to middle school teachers who are currently using the no-zero policy. The professional development could be opened to all teachers in both middle schools and the high school. However, the district I work for no longer has professional development days worked into the schedule. Without specific days listed as professional development days, it would be challenging to have these teachers attend the professional development. Another limitation of the study involves FERPA laws. Without me being able to show and analyze student work, it is difficult to explain the different levels of student work resulting in the same grades in courses. A final limitation of the study is having the teachers understand the importance of getting involved in the discussions. Middle school teachers do not see the effects of their teaching and school-wide grading policies after students move on to high school, so there could be pushback of wanting to keep the policy from the teachers to attend the professional development.

Recommendations for Alternative Approaches

To disseminate my research, I chose to design professional development to show teachers the impact of the no-zero policy on student achievement. Alternatively, I could have also created a policy recommendation. Throughout my research, I found several other grading methods that seem to be improving student achievement. These policies include standards-based grading, traditional 0-100% grading, A-F grading, and mastery-based grading. As an alternative

approach, I could have researched one or more of these grading policies and created a policy recommendation for the schools to implement. I chose to use professional development to educate teachers and administrators by providing data regarding why the no-zero policy should be removed from the school system instead of only providing alternative ways to grade. However, I do feel as a follow up to the professional development, a policy recommendation would be appropriate.

Scholarship, Project Development and Evaluation, and Leadership and Change

As an educator, I value education. Teachers and administrators are continually learning throughout their careers to keep up with the changes in education and technology. Throughout my time with Walden University, I feel I have grown as an educator, future administrator, and proponent of change. I designed my study, conducted the research, and created professional development training for others to understand the implications of the no-zero policy. With my training and education, I plan on moving into administration within my school district so I can implement the changes that need to occur to serve the students better.

Scholarship

As a lifelong learner, I chose to conduct my study to determine if students were adversely affected by the no-zero policy. During my time at Walden University, I have studied different research methods, how to create a literature review, ways to conduct data collection, methods of data analysis, and how to write scholarly papers. Throughout my journey, I have become well versed in conducting research and how to conduct it ethically. All my teachings led to me creating and conducting my study on the no-zero policy. I saw a flaw in the education of my students, and I wanted to do something to fix it. Through my teachings at Walden University, I

could ethically and definitively create a study where I can now say the no-zero policy does negatively affect students' learning.

During my past 3 years at Walden University, I have strived for perfection. I have pushed myself to obtain the highest grades and am proud of what I have learned. Without the knowledge from the courses I completed, I would not have successfully created a study that will cause a positive social change in school systems. I plan on taking what I have learned through my courses and research back to my school system and advocate for eradication of the no-zero policy within my school district.

Project Development and Evaluation

During the development of my professional development project, I reflected on the professional development meetings I have attended as a teacher. I wanted the participants to have buy-in and wish to participate in the training. I had engaged in many pieces of training in the past where when I left at the end of the day asking what was the point? I wanted to make sure teachers who attend my training would not ask themselves that same question at the end of the training. The goal of the professional development is for teachers and administrators to understand the implications of the no-zero policy on student achievement.

Professional development is a vital tool for training teachers and creating quality educators. In teacher training I designed, I wanted the teachers and administrators to see the importance of removing the no-zero policy from the school system because of the adverse effects it has on student achievement. While designing the training, I started with an outline of what I felt were the critical pieces of information that teachers needed to know. From there, I added in the data on student scores in mathematics, science, and English to back up the claims I was

making, and I implemented an activity where the teachers could see what it felt like to be in a room of students who all receive the same 50% for completing different amounts of work. Professional development is a time where teachers explore education and how to make it better, and this was what I was focused on when creating my training.

Leadership and Change

As an educator with a Bachelor's of Science in Mathematics Education, a Master's of Education in Administration and Leadership, and soon a Doctorate of Education in Administration, I plan on advancing my career and moving into the administrative side of the school system. I have been in the classroom for 9 years, and my passion is administration. After attending Walden University for the past 3 years and learning how to conduct research properly, I feel I am ready to move into the administrative side of the school district. I plan on taking what I have learned throughout my courses and the results of my study on the no-zero policy with me to this profession. I want to move into administration to be able to make a difference in the school district and provide professional development on grading practices to teachers.

Since completing my research, I have been accepted to the Leadership Academy within my school district. The Leadership Academy is required by my district to hold an administrative position. I have now completed my study and project, so the next move to be able to implement positive social change with my research is to attend the academy and gain an administrative position within the school district.

Reflection on Importance of the Work

From the moment I decided to be an educator, I wanted to make a positive change in my students' lives. I have been teaching for 9 years in a high school setting and have witnessed

policies come and go, but one policy that stays around is the no-zero policy. Over my time as a teacher, I have had administrators who firmly believe in the no-zero policy and administrators who actively dislike the policy. Administrators who dislike the policy never had research to be able to say the no-zero policy hurt student achievement definitively. Because of the lack of research, I decided to tailor my project study around this controversial topic.

After conducting my research and performing data analysis, I determined there is a negative impact on student achievement when using the no-zero policy in middle school grading. High school students perform at a lower level who had a no-zero policy than those who did not. Now that I have data that shows the no-zero policy negatively impacts students, I will be able to inform administrators of my research and hopefully eradicate the no-zero policy from the school district I where I work. As I advance my career into the administrative field, I will continue to voice my research when a colleague recommends using the no-zero policy. I set out to create positive social change within my school district, and that starts with holding students accountable for their education and not giving them a passing grade only because they showed up to class.

Implications, Applications, and Directions for Future Research

Within the school system in Las Vegas, Nevada, the no-zero policy is implemented at schools. However, from my research, it is apparent the no-zero policy results in a lack of subsequent student achievement and a culture of learned helplessness. By removing the no-zero policy from the school system, student achievement and knowledge will rise. To succeed in removing the policy from the school systems, there needs to be future research that allows additional school systems throughout the country to relate to the study and find a different solution to the grading system.

Implications

The purpose of my study was to test if there is a statistically significant difference in mathematics, science, and English grades between high school students who were enrolled in a middle school using a no-zero policy and high school students who attended a middle school not using a no-zero policy. After conducting the data analysis, it is apparent the no-zero policy does create a lack of student achievement. The potential impact of a social change is to eradicate the no-zero policy from the school systems. Teachers would be able to use grades to reflect student knowledge, students would know their grades reflect the knowledge and not behavior, and parents would see the grade their child earns reflects knowledge. Course grades are supposed to reflect student knowledge, not behavior (Kebles, 2016). By allowing students to turn in work when it is convenient is making them less marketable for jobs beyond high school (Zubrickas, 2015). The implication of this study is to create a new culture of students who work to their best abilities, turn assignments in on time, and earn grades instead of getting 50% for nothing.

Applications

The theory I used in my research is learned helplessness. Learned helplessness is when a student no longer works to their ability level and waits for the teacher to either give and do the work for them or does not do the work at all (Maier & Seligman, 2016). With the no-zero policy, students are receiving grades for not doing work, which is cultivating Learned Helplessness. By removing the no-zero policy, learned helplessness will decrease in the classroom, and real student achievement will rise. Learned helplessness is apparent in my data because students who never have a no-zero policy have higher scores in high school and those

who had the no-zero policy. If teachers are allowed to assign 0% when a student does not turn in work or take off points because the deadline was not met, the culture of learned helplessness will decrease, and student involvement and achievement will continue to rise.

Directions for Future Research

As I developed the study and the project, several directions became apparent for future research. Researchers could consider different types of grading available in the school systems and compare them to one another. Because there are several types of grading mentioned throughout my research, it would lead to other research in which different types of grading can be studied in the same manner. By understanding how grading systems in previous levels affect achievement in subsequent levels, researchers can perform additional research and discover a quality method of grading in the school systems.

I feel other approaches to research can be done with my study as well. One might consider doing a mixed-methods or qualitative research study in which interviews or surveys with teachers, students, and administration are included. Because the no-zero policy is widely used, my study could be used as a model to replicate in a larger study, perhaps a study which included several schools in a wide geographical area.

Conclusion

The no-zero policy has been surrounded by controversy because of students receiving a 50% for not finishing or turning in an assignment (Zwaagstra, 2015a). I conducted a study at a local high school where students had attended two middle schools, one with and one without a no-zero policy. After collecting archival data on the student population with scores in their algebra 1, algebra 2, geometry, biology, chemistry, English 9, English 10, English 11, and

English 12 courses, I ran *t*-tests and produced *p*-scores < .05. I determined students who attended the middle school with the no-zero policy had lower grades in high school than students who did not attend the middle school without a no-zero policy.

Once the data was collected and analyzed, I created a professional development to educate the teachers and administrators at the middle schools on the implications of using a no-zero policy. The policy created a culture of students who do not perform as well as those without the policy and therefore are underachieving in high school. It is the job of educators to provide a quality education to all students. Students' grades should reflect their knowledge of the material, not whether they showed up to class (Norrell, 2018). After interpreting data, it is apparent the no-zero policy needs to be questioned because it creates a lack of student achievement in subsequent grade levels.

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Appendix A: The Project

Professional Development Day

No-Zero Grading Policy Day 1 of 3

Day 1:	
7:00 am – 8:00 am	Opening Activity on Grading • "Sports of the World"
8:00 am – 11:00 am	No-Zero Grading Policy • Purpose • History • Evolution
11:00 am – 12:00 pm	Lunch on your own
12:00 am – 3:00 am	Data Analysis • Look over data • Table discussions

Professional Development Day

No-Zero Grading Policy Day 2 of 3

7:00 am – 11:00 am	Small Group Table Discussion • What causes the disparities in the data? • How do we motivate students? • Why do we need to change this policy? Whole Group Discussion on Conversations
11:00 am – 12:00 pm	Lunch on your own
12:00 pm – 3:00 pm	Alternative Grading Options • Standards Based Grading • 0-4 Scale • A-F or 0% - 100% ○ Pros and Cons of each

Professional Development Day

No-Zero Grading Policy Day 3 of 3

7:00 am – 11:00 am	How do we hold students accountable? • Open discussion at tables and develop ways to increase student achievement increase
11:00 am – 12:00 pm	Lunch on your own
12:00 pm – 3:00 pm	What is the plan? • Thoughts on removal? • Implementation • What will replace it?

No-Zero Policy Professional Development

1. **Name**

2. **Subject Taught**
Mark only one oval.
- Math
- Science
- English

3. **On a scale of 1-5, how often did you use the No-Zero policy in your classroom before today?**
Mark only one oval.

	1	2	3	4	5	
Not Likely						Very Likely

4. **On a scale of 1-5, how likely are you to continue using the No-Zero policy in your classroom?**
Mark only one oval.

	1	2	3	4	5	
Not Likely						Very Likely

5. **On a scale of 1-5, how likely are you to discontinue the No-Zero policy in your classroom?**
Mark only one oval.

	1	2	3	4	5	
Not Likely						Very Likely

6. **Additional Feedback for Instructor:**

No-Zero Grading Policy

Janelle Dennis

Sports of the World Activity

- Short lecture
- Timed Assignment on lecture
- Turn in at the bell

Activity Discussion

- No one fails the assignment
- The lowest you can get is a 50%
- The amount of effort or correctness does not matter
- How does that make you feel if you worked really hard?
- How does that make you feel if you didn't do the assignment?

No-Zero Grading Policy - Purpose

- To help motivate students
- Give students a chance to pass courses
- To round quarter grades to a 50% at the end to give students chance to pass for the semester

No-Zero Grading Policy - Evolution

- Originally was to round grades at end of quarter
- Individual assignment grades were increased to a 50%
- Can no longer give a student a 0% for missing assignments – they stay blank or they get a 50%

Data Analysis

	No-Zero Policy	N	Mean	Std. Deviation	Std. Error Mean
Mean Math Score	1	682	2.2282	1.08123	.04140
	0	654	2.4250	.98171	.03839
Mean Science Score	1	703	2.2348	1.04946	.03958
	0	691	2.3998	1.10302	.04196
Mean English Score	1	703	2.2435	1.02536	.03867
	0	672	2.3633	1.04502	.04031

		df	Sig. (1-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
						Lower	Upper
Mean Math Score	Equal variances assumed	1334	.001	-.19686	.05657	-.28999	-.10374
Mean Science Score	Equal variances assumed	1392	.002	-.16503	.05766	-.25993	-.07013
Mean English Score	Equal variances assumed	1373	.016	-.11973	.05584	-.21164	-.02782

	No-Zero Policy	N	Mean Difference	Std. Error Difference	d
Mean Math Score	1.0	682	-.19686	.05657	0.2693
	.0	654			
Mean Science Score	1.0	703	-.16503	.05766	0.2168
	.0	691			
Mean English Score	1.0	703	-.11973	.05584	0.1156
	.0	672			

Group Discussion

- At your table, discuss the following questions:
  - What causes the disparities in the data?
  - How do we motivate students?
  - Why do we need to change this policy?
- After you are done, we will discuss them as a whole group

Your Position on the Policy

- What is your position as an educator on the policy?
- What is your position as a hypothetical student on the policy?
- What is your position as a stakeholder on the policy?

Alternative Grading Options

- Standards Based Grading
- 0 -4 Scale
- A – F
- 0% - 100%
  - Pros and Cons of each

How do we hold students accountable?

- Have an open discussion at your table
  - How do we incorporate student achievement in grades?
  - How do we increase student achievement?
  - What have you tried that works or does not work?

What's the plan?

- Thoughts on removal?
- Implementation
- What goes in its place?

Evaluation

- Please follow the link to evaluate today's presentation:
- https://goo.gl/forms/mudjwsFBzOHNtJug1