

The Relationship Between Homework and In Class Assignment on
Academic Achievement of 1st Graders in an ELA Classroom

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HOMEWORK, IN CLASS ASSIGNMENT, AND ACADEMIC ACHIEVEMENT

Abstract

The purpose of this study was to investigate the relationship between homework and in class assignment on academic achievement. The sample for this study came from a 1st grade class at a selected elementary school. The sample consisted of 15 students, 7 boys, and 8 girls. Data were collected using scores on homework, in class assignments, and posttests. Students were taught using in class assignment and tested at the end of the unit, then students were taught using homework in addition to in class assignment and tested at the end of the unit. Both units were equivalent in difficulty and comprehension. Data were analyzed using Pearson Product Moment Correlation test and Independent T-Test. The results indicated a significant relation between homework and in class assignment ($r=.569$, $P=.027$). There was no significant difference between gender and academic achievement. The result support that the use of homework and in class assignment are beneficial in improving student's scores.

Key words: In Class Assignment, Homework, Academic Achievement

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Date: November 13, 2016

From: The Institutional Review Board (IRB) at Milligan College

Re: The Relationship Between Homework and In Class Assignment on Academic Achievement of 1st Graders in an ELA Classroom Submission type: Initial Submission

Dear Emily Knight,

On behalf of the Milligan College Institutional Review Board (IRB), we are writing to inform you that your Study 'The Relationship Between Homework and In Class Assignment on Academic Achievement of 1st Graders in an ELA Classroom' has been approved as expedited. This approval also indicates that you have fulfilled the IRB requirements for Milligan College.

All research must be conducted in accordance with this approved submission, meaning that you will follow the research plan you have outlined here, use approved materials, and follow college policies.

Take special note of the following important aspects of your approval:

- Any changes made to your study require approval from the IRB Committee before they can be implemented as part of your study. Contact the IRB Committee at IRB@milligan.edu with your questions and/or proposed modifications.
- If there are any unanticipated problems or complaints from participants during your data collection, you must notify the Milligan College IRB Office within 24 hours of the data collection problem or complaint.

The Milligan College IRB Committee is pleased to congratulate you on the approval Of your research proposal. Best wishes as you conduct your research! If you have any questions about your IRB Approval, please contact the IRB Office and copy your faculty advisor if appropriate on the communication.

Regards,
The IRB Committee

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Chapter 1

Introduction

The current recommendation of homework assignments in elementary age students starts in first grade with no more than 10-20 minutes of assigned work. This recommendation increases by 10 minute increments with each increased grade level (Graham, 2014). In the start of the 2013-2014 school year, a Tennessee district school was the first to enact a ban on homework assignments, stating that the homework was not necessary and that as educators they could not impose such a responsibility on young students to complete an assignment on their own. The research from their reasoning stated that 65-75% of their students are on free or reduced lunch, their homes are very low income and with parents working to make ends meet, they were not always readily available for homework assistance (Graham, 2014). This started the "war on homework". Many sources have continually stated that there is no known research directly correlating completing a homework assignment and high standardized test scores.

The correlation between homework and high standardized test scores is not high enough to state that homework causes higher test scores (Keith, 2009). However, he offered that the only

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subject that the correlation may be higher is math, (Strauss, 2012).

The argument that the launch of Sputnik created the great pressure for the US to succeed in math and sciences. In an effort to up show the Russians education system, US education put a strong focus on Math, Science, and was a firm advocate of homework. An argument now states that with the race against Russia now over, the push for homework should now subside, (Strauss, 2012). Students still face multiple pressures to succeed. Students have many stresses in the home environment such as parental support, extra-curricular activities, and the fact that students have an eight hour day with academic focus.

Building on research questions of homework and its impact, one question arose as to how to gauge if the homework is actually academic appropriate. Also another interesting question is if high academic achievement or if pertinent instruction in combination is the correlator, (Kohn, 2006). Based on this statement, researchers against homework have put their focus on high level instruction and those for homework have put their focus on meaningful homework assignments to reduce the usage of "busy work", (Marzano, 2007).

Many questions arise out of the research from the correlation of homework and classwork on standardized test

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scores. Is homework necessary, if homework is assigned is it meaningful, and if homework is not assigned is instruction appropriate?

Problem Statement

(Graham, 2014) and (Marzano, 2007) have both investigated if homework was necessary, most present a positive correlation between homework and standardized test scores, some pose no or little correlation. Homework has always been a vital aspect in elementary schooling, proving the need would be crucial in a society nearing homework extinction. The problem of this study was to examine the relationship between homework and in class assignment on academic achievement.

Purpose Statement

The purpose of this study was to investigate the relationship between homework and in class assignment on academic achievement.

Significance of the Study

This study will open the door to solving the age old question is homework really necessary? Since the launch of Sputnik, the United States has put an emphasis on homework on elementary age students. Many researchers (Marzano, 2007) (Graham, 2014) have questioned the significance of homework and

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whether or not it is ultimately correlated to high academic achievement.

Limitations

A limitation of this study was that the sample was not randomly selected. The sample for this study was not randomly selected. Therefore, results cannot be generalized to others. Instruments used to collect population data were not tested for reliability and validity.

Definitions of a Term

Homework: work that a student is given to complete at home.

Classwork: the part of work that a student is to complete in class.

Sputnik: world's first space satellite launched by Russia.

Academic Achievement: student success in assignments and/or homework.

Score: number of points accumulated on a task for correct answers.

Overview of Study

This study was organized into five chapters. Chapter One was an overview of the study containing all the element parts such as Introduction, Statement, Purpose, Significance, Limitations, Delimitations, and Overview. Chapter Two was a critical review of the literature used during the study. Chapter Three detailed the Research Methods used during the study. The Findings of the study can be found in Chapter Four. Chapter Five contained a brief review of the study, Summary of the findings, a discussion of the findings, conclusions, and recommendations for future studies.

Chapter 2

Literature Review

This chapter presents related literature in an in depth search of other studies and researchers. This will present the framework for the study as well as a deeper explanation needed to comprehend the study.

Those for Homework

Many studies reviewed were for homework, most found a positive relationship between homework and academic achievement. Few studies found a negative or insignificant relationship between homework and academic achievement.

In a study conducted by Maltese (2012) found that when studying homework and high grades, there was correlation to state spending more time on homework influenced having a higher grade in the class. Maltese (2012) stated, if students are spending more time on homework, they're getting exposed to the types of questions and the procedures for answering questions that are not so different from standardized tests. The correlation was found to affect the older grades, not necessarily elementary age students. Maltese furthered the

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argument as he offered the recommendation that quality over quantity should be the main goal of educators assigning homework to better ensure we can see the correlation between homework and academic achievement. The study's final statement regarded that educators need to assign the assignments that were most effective and time efficient rather than load students up with academic work.

A study by Cooper (2008) of homework and academic achievement posed similar results. He found that students in grades 2-6 achieved higher test scores when assigned an appropriate homework assignment than those who were not. He goes on to list benefits from completing a homework assignment at home such as students developing good study habits, help students recognize learning can take place at home, and homework can aid in fostering independent learning and responsible character traits.

The final recommendation from Cooper was that homework policies should be in place to ensure the correct amount is given and in the proper content area (Cooper, 2008). Teachers should be given the flexibility along with the support of the school to deem the homework appropriate and necessary.

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One key research study from whom is an advocate of homework assignment and whose studies dominate the spectrum was Harris Cooper. Cooper's study was used as guideline when homework assignments were structured. (Cooper, 2006) study of academic achievement and homework assigned show similar findings as he examined a group in several grade levels who were assigned homework and those who were not. In a pre study poll, parents were questioned about the level of homework their child was given and found that 57% were supportive in the level of homework assigned. The study compared test results from the two groups and came to some surprising facts. Students in 2nd grade found to perform better on math tests when assigned correlational homework assignments than those who were not. 3rd and 4th grade students posed higher scores on ELA assessments and vocabulary tests when given assignments to complete at home. 5th grade level students showed a greater level of understanding of Social Studies figures and concepts when paired with outside projects and assignments. 9th through 12th grade students scored higher on American History exams as well as showing a greater understanding of Shakespeare on Literature exams when given homework to be completed. Overall throughout the study, there was a positive correlation between homework and academic

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achievement, not just on higher scores on exams but proving they have a deeper understanding of the concept given.

Cooper went on to homework recommendations and followed the NEA guidelines, grades K-2 should have no more than 10 minutes of assignments to complete at home and those assignments are usually correlative to reading or mathematic foundational skills (Cooper, 2006). As each grade level increased, the time spent on homework should increase in 10 minute intervals. The final recommendation offered after the study is that homework assignments only pose a positive correlation to academic achievement when homework assignments are correlative to the test or exam used. Homework assignments should be meaningful and help to increase the level of understanding and should have an appropriate level of rigor to aid in growth of understanding. The final point from Cooper related to rigor is important. Homework has shown positive effects on academic achievement as long as rigor was challenging enough to push thinking.

The development of the path analysis model was where it showed an extension of a correlation where you can determine if links are present between the factors was studied and recommended by Keith (1989). He found that intellectual ability and study time had the strongest link possibility with academic

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achievement. His study did not show a definite link, but more so that the link is possible. Keith's study really brought light on study time and how it relates to homework and academic achievement. In this study, homework study time was minimal to better suit the sample.

Gill, (1996) found in the study conducted that academic achievement and homework are correlational and both influence the other. As academic achievement rises, homework rigor should increase to meet those learning needs. As homework becomes more rigorous, academic achievement should rise along with ability to understand and think through tougher concepts. The study offered the recommendation that homework should foster the academic needs to succeed. Homework should directly correlate to the material needed to be learned to show success on an exam. The rigor of homework should closely match the rigor of the exam. When homework and exam rigor were closely matched, a higher level of academic achievement was presented. This is thought to prove that homework can help to prepare for an exam and serve as a way of studying and review.

Hayward, (2010) was focused on a seventh grade class focused on Science. The study was set up around two grading

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periods, the first no homework was assigned, the second homework was assigned. A series of pre tests and mid period tests were given as a means to collect data points. At the end of each grading period, a post test was given to judge percent of growth throughout the unit. The study found that the average pretest score was 78%. Homework was assigned over the course of the unit, and students were also allowed to correct any missed questions on homework assignments. A posttest was given at the end of the unit and the average score was 84%. Although small, there is a correlation between assigning homework and higher academic achievement on unit tests. Another set of pre and post tests were given as a means of self-reflection. Students were asked if completing homework was important, findings from the pretest were that only 14% of the class thought homework completion was important. At the end of the unit, students were give the same test as a posttest and those results were 52% of the students thought homework completion is important and can lead to better understanding of the material.

The study concluded with the recommendation of working with your class and establishing a procedure and expectation when it comes to homework (Hayward, 2010). Students that understand that homework can lead to higher academic achievement and test

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scores. Students should be able to correct homework as it can aid in troublesome topics and content areas. The final recommendation offered was that homework should directly correlate to the exam or standards of the content and rigor should closely match.

The close evaluation of the transcripts of 18,000 high school sophomores focusing on subject areas such as Math and Science was conducted by Tai (2013). He reviewed the grades made overall in the class, then correlated those grades with time spent on homework and homework completion along with scores earned on exams. In his study he found that there was no strong correlation between actual time spent on homework and scores on tests. The data was scattered when looking at low test scores and time spent as well as high test scores and time spent on assignments. He stated, it shouldn't be a situation where students spend many hours every night poring over something new. Instead he found that there was a positive correlation between homework completion and higher test scores. Students that actually completed the assignment were shown as better prepared for the exam than those who did not complete the assignment or put in little to no effort when completing the assignment. Tai offered that, homework should be a place where students practice

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the skills they have learned in class. The recommendation was given that homework needs to work as an extension of the content lesson learned in class and should serve as a study method to prepare for the exam covering that concept.

In a study conducted by (DuBois, 2011), she focused on a Geometry class made up of sophomore level students. A series of three rigor appropriate tests were given as a means of comparing homework and the correlation to high exam scores and academic achievement. The first test was given after the unit completion and no homework was assigned. Students worked independently on the test and the mean score was 89%, there was a 55 point difference in the highest and lowest scores in the class. After the next unit completion, a second test was given. Students had a total of five homework assignments to complete during this unit. Homework was to be completed outside of class and was not gone over during class time until the next day when students turned in their work. The mean score on the second test was 95% and there was 32 point difference between the highest and lowest test scores.

The study concluded that there was a positive correlation between homework assignments and academic achievement on exams

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(DuBois, 2011). The average test scores grew from 89% to 95% and the point difference lowered from 55 points to 32 points between the highest and lowest exam scores.

Those Against Homework

Few posed opposite views on homework and academic achievement, however, Walker (2012) was adamantly against the idea. He found that in his study that spanned across multiple countries and areas of education, the more time spent on homework posed lower academic achievement scores on exams. When looking at schools compared with other schools within the same country, the results were almost identical. Students should not be posed with hours of homework each night, the results can be detrimental to their achievement Walker offered. His study also began to evaluate the homework assignments teachers were assigning. His research found that homework is typically given as a remedial strategy, where content was not covered in class, exercises for students struggling, or a way to supplement poor instructional settings. Walker goes on to recommend that homework should be given as an advancement onto what students have learned in a high quality instructional environment. It should be designed to accelerate, improve, or help students to excel to a high level of understanding of the concept.

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Walker's final conclusions were that homework should be given to accelerate and to help student excel if it is necessary (Walker, 2012). Homework should not be of lengthy time requirements and often times homework is found to be given for inappropriate reasons along with unnecessary time requirements.

In an in-depth study from Kohn (Kohn, 2006) he argued that homework is only an association not a cause of higher academic achievement. He goes on to list other possible influences of academic achievement such as quality of instruction, motivation, and content of the class. Kohn argues that positive effects from homework are too small to fully recognize the correlation. Kohn goes on to describe how we cannot fully recognize the impact of outside factors other than homework affect student academic success. The point of homework effectiveness was brought up as some homework is viewed to not lengthen understanding and thinking. Parental help may be more prevalent in those students with higher scores, not necessarily homework assignment itself. Instructor quality was discussed briefly as the spotlight of academic achievement was reliant on the effectiveness of the educator. A student with a poor quality educator is deemed to have lower academic achievement versus a student with a higher quality educator.

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Kohn deemed that there were just too many factors to consider to be able to make the direct correlation between homework and student academic success (Kohn, 2006). He did however, recognize that homework may be an influence among student academic success. Although the relationship may be small, Kohn still recognized there may still be a possible relationship just not substantial.

In another study by Kohn (2014), this time a longitudinal study, investigated students in a first grade classroom setting from 1981-2002. Found that educators assigning homework increased to over 64% during the year range. He stated that homework was quickly becoming a major part of the schooling experience for the wrong reasons. Kohn stated that homework is placing a major emotional stress on young students whom their emotional state is not prepared for. Families are now faced with declining "family time" as parents are serving as homework monitors. Kohn also argued that homework takes away time from kids just being kids. Homework imposes on exercise, rest, and time to allow the mind a break from high academic thinking. Kohn's final argument of this study was that the results from assigning homework and related academic achievement does not outweigh those who did not have homework enough to acknowledge a

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positive correlation worth putting an emotional state of a young student at risk.

Preidt (2015) examined 7,700 students average age of 14 in Spain. The study relied on data points poised from Science and Math concepts using universal screeners as a baseline. He found that when students had up to 70 minutes of academic homework to complete per day, there were small gains but not strong enough to directly correlate. When the time of homework increased to 90 minutes, students started declining in academic achievement. He concluded the study by offering the recommendation, assigning more than 70 minutes of homework per day does not seem efficient, it is a large time investment with a very low area of gain.

Conclusion

Overall most research acknowledged a positive relationship between homework, class work, and academic achievement. Major concepts were homework quality, time spent, and correlation between homework content and in class content. Few sources released negative relationships between homework and academic achievement, rather released low significance in relationship.

Chapter 3

Methodology and Procedures

The purpose of this chapter was to describe the methodology of this study, explain in detail the selection of the population and sample, describe the procedure of collecting data as well as the tool used.

Population

This study took place in a Title 1 county school in a more urban school district. This school was the only school within a 7 mile radius of the location. There were a total number of 537 students in the school. It was reported in 2015 that 88% of the school was on free or reduced lunch. Approximately 103 students received food assistance through a program run by the school nurse where food bags were sent home each week. 124 students also received Christmas help in assistance with area churches. Only 1-2% of school are of minority decent, of those students majority were Latino decent. Within the school district, this school was listed at the third lowest income in the district.

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Sample

The sample for this study came from a 1st grade class at a selected elementary school. The sample consisted of 15 students, 7 boys, and 8 girls. Three of the students were in a tier 3 RTI group due to low reading comprehension and fluency. Four of the students were in tier 2, and 8 were in tier 1 RTI instruction. Of the students, 3 were on free or reduced lunch and 2 received the food bags provided by the school nurse. At the time of sampling, 8 were overall "A" students, 5 were "B" students, and 2 were "C/D" students.

Data Collection

Data were collected using scores on homework, in class assignments, and posttests. The students were taught a comprehension unit which was divided into two sections, each section was two weeks long. The first section, students were taught story elements and all assignments were given in class. Students worked individually and also in groups. At the end of section one, grades for their section was tallied. The second section the students were assigned short stories for homework and were required to analyze the story and record answers. At the end of section two, all grades for this section were tallied. Data for the two sections were compared.

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Procedure

Before the study was conducted, permission was acquired through the school Principal and mentor teacher. A proposal of the study was submitted to Milligan College IRB and the study was approved. After approval by Milligan College, the copies of approval were presented to the Principal and the Central Office. Permission was then granted to conduct the study. The sample was selected and the study implemented. A comprehension unit was selected for the study. The unit was divided into two sections. The first half of the unit utilized no homework assignment, only in class assignments. Group work was utilized as well as discussion of the story elements. An average of 2-3 grades per student per week were taken on in class assignments. At the end of the first half of the unit, a posttest was given and scores were again recorded. For the second half of the unit, in class assignment was utilized and 2-3 grades per student were taken. This half of the unit utilized homework assignment on average 2-3 assignments per week were given and grades were taken the next day assignment was brought back. The assignments sent home and completed in class were equal in rigor and closely aligned with academic standards set forth by the state of Tennessee. At the end of the second half of the unit, another posttest was given and scores were recorded. Afterwards, data for the two halves were aggregated and compared.

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Research Questions and Related Hypothesis

Research Question 1:

Is there a relationship between homework and in class assignment on academic achievement measured by homework, posttest, and in class assignment scores?

Hypothesis 1:

There is a relationship between homework and in class assignment on academic achievement measured by homework, posttest, and in class assignment scores.

Null Hypothesis 1:

There is no relationship between homework and in class assignment on academic achievement measured by homework, posttest, and in class assignment scores.

Research Question 2:

Is there a relationship between gender and academic achievement?

Hypothesis 2:

There is a relationship between gender and academic achievement.

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Null Hypothesis 2:

There is no relationship between gender and academic achievement.

Chapter 4

Data Analysis

The purpose of this study was to investigate the relationship between homework and in class assignment on academic achievement.

Collection of Data

Data were collected using scores on homework, in class assignments, and posttests. The students were taught a comprehension unit which was divided into two sections, each section was two weeks long. The first section, students were taught story elements and all assignments were given in class. Students worked individually and also in groups. At the end of section one, grades for their section was tallied. The second section the students were assigned short stories for homework and were required to analyze the story and record answers. At the end of section two, all grades for this section were tallied. Data for the two sections were compared. The demographic profile for the participating students is displayed in Table 1.

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Table 1

Demographic Profile of Students Participating

Gender	Frequency (f)	Percent (%)
Male	8	53.30
Female	7	46.70
Total	15	100.00

Research Question 1

Research Question 1: Is there a relationship between homework and in class assignment on academic achievement measured by homework, posttest, and in class assignment scores? To answer research question one, the data from homework, in class assignment, and posttest scores were collected and compared. The mean score of the homework scores was 97.747 and the mean score of in class assignments was 96.0. The two mean scores were compared for a relationship.

Research Hypothesis 1: There is a relationship between homework and in class assignment on academic achievement measured by homework, in class assignment, and posttest scores. In order to determine there was a significant relationship a Pearson Correlation Coefficient test was administered. Results indicated there was a significant correlation ($r=.569$; $P=.027$) between the results from the scores of homework and in class assignment. The coefficient of determination (r^2) revealed that

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32% of overall academic achievement could be explained by the relationship between homework and in class assignment scores. This means that 68% could be attributed to other variables. Therefore, the null hypothesis was rejected. The results are displayed in Table 2.

Table 2

Correlation Between Homework and In Class Assignment Scores

Assignment Type	Mean	SD	r	r ²	Sig.
Homework	97.747	1.5184	.569	.324	.027
In Class Assignment	96.00	3.207			

Research Question 2

Research Question 2: Is there a difference between gender and academic achievement? To answer research question 2, mean scores of gender were compared to posttests. The mean score for males was 92.063 and for females 95.286.

Research Hypothesis 2: There is a relationship between gender and academic achievement. To determine if the mean scores were significantly different, an independent t-test was conducted. Levene's test indicated that the variances were assumed equal ($F=.059$, $P=.812$). The results indicated no significant difference between genders. Effect size was not

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needed to be determined due to data not being significant in this test. The results are displayed in Table 3.

Table 3

Independent Sample T Test of Gender and Academic Achievement

Gender	Mean	df	SD	Sig.
Male	92.1	13	4.02	.16
Female	95.3		4.31	

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Chapter 5

This chapter contains a summary of findings, conclusions, recommendations for future study, and implications for practice based on the research examining the relationship between homework, in class assignment, and academic achievement of a first grade level classroom.

Summary of Findings

In response to Research Question 1: Is there a relationship between homework and in class assignment on academic achievement measured by homework, posttest, and in class assignment scores? The data from homework, in class assignment, and posttest scores were collected and compared. The mean score of the homework scores was 97.747 and the mean score of in class assignments was 96.0. The two mean scores were compared for a relationship. In order to determine there was a significant relationship a Pearson Correlation Coefficient test was administered. Results indicated there was a significant correlation ($r=.569$; $P=.027$) between the results from the scores of homework and in class assignment. The coefficient of determination (r^2) revealed that 32% of overall academic achievement could be explained by the relationship between homework and in class assignment scores. This means that 68% could be attributed to other variables. Therefore, the null hypothesis was rejected.

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The relationship suggests that when students were active in in class assignment as well as homework assignments, grades on post tests were higher; the higher the homework score, the higher the in class assignment score. Therefore, students appear to have higher academic achievement when challenged with homework assignments. This is consistent with findings in the literature review which stated that homework aids in higher academic achievement through challenging a student's academic performance and thought after the lesson was taught (Cooper, 2008,; DuBois, 2011). Other researchers have found that homework scores are dependent upon the aid available at home rather than academic achievement (Keith, 2008). Though the thought is possible, homework scores in this study were compared to in class post test scores for the academic achievement value, students took the posttest independently and scores depict a positive growth.

In response to Research Question 2: Is there a difference between gender and academic achievement? Mean scores of gender were compared to the mean scores of posttests for each student using an Independent Sample T Test. The mean score for males was 92.063 and for females 95.286. The results were not significant at .812. Effect size was not needed to be determined due to data not being significant in this test. These findings are consistent within a study by (Hyde, 1990), where he also found

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that gender is not significant within terms of academic achievement. He went on to explain that although there is a relationship between cognitive abilities and academic achievement, there is no evidence to prove that gender has any effect on academic achievement. These results could be an effect of the fact that students of both genders were all at least on grade level target and earned similar grades on assignments.

Conclusion

The purpose of this study was to investigate the relationship between homework and in class assignment on academic achievement. This study showed that there was a significant relationship between in class assignment, homework scores, and academic achievement on posttests tested by Pearson Correlation. The independent T-Test did not yield significant results between gender and academic achievement. Effect size was not determined due to no need through insignificant results.

Recommendations

1. Future research into homework and academic achievement needs to be conducted using a larger sample population to see whether the same results could be reached.
2. Future research into homework and academic achievement needs to be conducted using a randomized sample population to see whether the same results could be reached.

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3. Future research into homework and academic achievement should utilize an instrument that has been tested for reliability and validity in collecting data.

Implications

1. Teachers should continue to assign moderate homework assignments in combination with rigorous in class assignments.
2. Parents can be encouraged that homework assignments do have a positive effect on overall academic achievement even at younger grade levels.
3. Students can be encouraged that homework assignments do have a positive effect on their overall academic achievement and should be encouraged to perform their best on the assignments.

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