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# Reexamining Homework to Teach Executive Functioning in Elementary Schools 

Rachel Zalles<br>Dominican University of California

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Rachel Zalles
Candidate
Elizabeth Truesdell, PhD
Program Chair
Jennifer Lucko, PhD
First Reader
Jaci Urbani, PhD
Second Reader

# Reexamining Homework to Teach Executive Functioning in Elementary Schools 

by

Rachel Zalles

A culminating thesis submitted to the faculty of Dominican University of California in partial fulfillment of the requirements for the degree of Master of Science in Education

Dominican University of California

San Rafael, CA

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#### Abstract

Research shows that homework is not as beneficial for students in elementary school as it is in upper grades. However, in order to be successful in upper grades, students must learn the skills to complete homework. These skills are defined as executive functions and are important skills for students to have moving forward yet these skills are not being taught early enough. The purpose of this research project was to better understand the relationship between homework and executive functioning in elementary schools and see how homework can be better used to teach and enforce executive functioning skills. In this study, parents and teachers were interviewed to discuss their personal philosophy on homework, executive functioning and their experiences with both. Those who did not participate in an interview were invited to answer a short survey asking similar questions in multiple choice form. The data shows that although executive functioning skills are important for a student to be able to successfully complete their homework, there is a disconnect between teachers, parents, and the administration around homework expectations. However, until homework is changed from a district level, homework cannot be used to teach executive functioning skills at an elementary school level.


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## Table of Contents

Abstract ..... iii
Acknowledgements ..... iv
List of Tables ..... vii
Chapter 1 Introduction ..... 1
Statement of Purpose ..... 1
Overview of Research Design ..... 2
Summary of Findings and Implication of the Study ..... 3
Chapter 2 Literature Review ..... 5
Introduction ..... 5
What is Executive Functioning? ..... 5
Homework ..... 7
Homework \& Executive Functioning ..... 13
Conclusion ..... 13
Chapter 3 Methods ..... 15
Research Approach ..... 15
Research Design ..... 16
Participants ..... 16
Data Collection Procedures ..... 17
Data Analysis Procedures ..... 18
Validity and Reliability ..... 19
Researcher Positionality ..... 20
Chapter 4 Findings ..... 21
Homework Further Develops Executive Functioning Skills ..... 21
Homework and Independence ..... 22
Homework and Routines. ..... 22
Teaching of Executive Functioning Skills ..... 23
District Homework Policy ..... 24
Issues with Homework ..... 26
Conclusion ..... 28
Chapter 5 Discussion ..... 30
Implications for the Literature ..... 30
Implications for Practice \& Policy ..... 30
Limitations of the Study ..... 31
Directions for Future Research ..... 32
References ..... 33
Appendix A ..... 36
Appendix B ..... 38
Appendix C ..... 40
Appendix D ..... 42
Appendix E ..... 44

## List of Tables

Table 1 List of Pseudonyms of Teachers Table 2 List of Pseudonyms of Parents..... 17

## Chapter 1 Introduction

Most parents have been here. They pick their child up from school after spending a whole day working themselves to find that their child is unable to complete the assigned homework without help. Now it is the parent's responsibility to sit with their child through the arguments, tears and even screaming matches to help them complete their assignments but how did we get here? Isn't homework supposed to be done independently by the student? According to a study in 2011 completed by Marte Ronning, over half of parents reported needing to help their child complete their homework (Ronning, 2011). However, most homework policies state that students should complete their homework independently or with minimal support from parents or family members. This discrepancy is just one example of the many conflicting ideas and approaches surrounding homework policies in elementary schools today.

## Statement of Purpose

The researcher used a mixed methods, constructivist approach to answer the research questions: How can homework be used to teach executive functioning skills at an elementary school level? What executive functioning skills are necessary to independently complete homework? How do teachers currently teach executive functioning skills to their students? How do parents currently teach executive functioning skills to their children?

The majority of research that has been done regarding the effectiveness of homework in schools has been done in middle school and high schools. However, the research that has been done at the elementary school level reports that homework assignments during the lower elementary school years have little to no effect on a student's academic achievement in upper grades and instead impacts a student's mental health and their relationship with their family (Brookings Institution, 2014). Moreover, leading advocates against homework believe that the
amount of homework causes stress on students and can affect their leisure time and time with family (National PTA, 2006). On the other hand, advocates for homework believe that it plays a critical role in the development of student's achievement and long term academic success. Not only does homework help students with long term academics, it helps students learn skills such as organizational skills, time management, gain confidence when handling frustration and helps students learn how to solve problems interpedently (Shahzada et al. 2011). However, these skills are only learned when students complete homework independently.

While much research exists on the benefits and negative effects of homework for elementary aged students, few studies have explored the relationship between homework and building executive functioning skills. This study explores the relationships between homework policy and the development of executive functioning skills for children at the elementary school levels.

## Overview of Research Design

Homework in the school district this study took place has been an ongoing debate for many years. Since the researcher has been employed as an resource specialist in the district, homework is brought up at the beginning of the year staff meeting and each year teachers from various grade levels have conflicting opinions on how homework should be assigned. Additionally, the researcher became interested in this topic when she noticed that the majority of students on her caseload had at least one executive functioning goal in their Individual Education Plan (IEP). This prompted the researcher to wonder how other students with executive functioning needs but who didn't have an IEP were supported in the general education classroom. The researcher became curious if homework could be used to help teach and reinforce executive functioning skills.

The research method in this study involved the collection of data from both parents and teachers at a public, K-5 elementary school in Northern California. The school has a total population of around 400 students. The majority of families are middle class, Caucasians. The school has an average class size of 20 students per classroom with most grade levels have 3 classes.

Data was collected for this study from interviews and surveys from both teachers and parents. A total of four teachers and three parents participated in an interview, 127 parents responded to the parent survey and 15 out of 18 teachers responded to the teacher survey. Parents and teachers were asked similar questions to see the different viewpoints on the same topic. In crafting her research questions, the researcher wanted to ask participants open ended questions to get a better understand of their opinions on both homework and executive functioning as well as how the two are connected. By collecting data through surveys, the researcher was able to reach a much larger group of people and get a broader understanding of parents and teachers views on the subject.

## Summary of Findings and Implication of the Study

This study found that both teachers and parents believe that executive functioning skills are important for students to learn in order to complete homework independently. Both teachers and parents believe that students must learn executive functioning skills in order to complete homework independently but that homework helps reinforce executive functioning skills. Some of the skills that were found to be the most important are independence, organization and routine building. Many teachers believed that creating that routine early, such as first or second grade, is one of the most important parts of homework.

Another finding that this study uncovered is the miscommunication between the school district, the school site, the teachers and the parents. Since the Green School District leaves their
homework policy loose and up for the different school sites to decide how to interpret it, the school district is creating confusion between the teachers and parents as well as misperceptions between teacher in different grade levels. This confusion is creating inconsistencies between expectations about the purpose of homework at the school site.

Based on the findings in this study, teachers need to look at how they assign homework to help students who might not be functioning at the same level as their peers. By assigning homework in a way that students can complete independently, students will begin to build executive functioning skills. Additionally, the researcher believes that until the school site is able to create a consistent homework policy based on the Green School District policy, homework cannot be used to teach executive functioning skills.

## Chapter 2 Literature Review

## Introduction

This chapter is an examination of research literature on homework trends, executive functioning skills and how homework and executive functioning are related to each other. Information was gathered from academic library searches using online resources. The information is organized into three sections.

The first section discusses research on executive functioning. This research looks to define what executive functioning is and the historical context of executive functioning. Next, the second section of the literature review will discuss homework. More specifically, the history of homework, the ongoing debate about whether homework is necessary for younger students, and the long term impact for achievement. Finally, the literature review will explore the relationship between executive functioning and homework.

## What is Executive Functioning?

According to van der Sluis, de Jong and van de Leij, executive functions are defined as "the routines responsible for the monitoring and regulation of cognitive process during the performance of complex cognitive tasks." (van der Sluis, 2007, p. 427). These executive functions are the skills required for a person to complete tasks involving attention, emotional regulation, flexibility, inhibitory control, initiation, organization, planning, self-monitoring and working memory (Goldstein, Naglieri, Princiotta, \& Otero, 2014). Executive functioning skills are used daily in schools when students are asked to complete assignments, plan a project and focusing on a lesson. Not only are these skills used in schools, they are used in adulthood as well. Executive functions control and help regulate cognitive and social behaviors such as impulse control, paying
attention, remembering information, planning and organizing time and materials and responding appropriately to social situations (DiTullio, 2018).

History of executive functioning. The term executive functioning was first defined in the 1970s however, the concept of a control mechanism for the skills referred to as executive functions has been discussed as far back as the 1840s (Goldstein, Naglieri, Princiotta, \& Otero, 2014). In the 1950s, psychologists and neurologists became interested in understanding "the role of the prefrontal cortex in intelligent behavior" (Goldstein et al. 2014, p. 3). In 1953, a British psychologist by the name of Donald Broadbent began to study the differences between automatic and controlled processes in the brain (Goldstein, et al. 2014). In his book, Perception and Communication, Broadbent began researching how the human brain processes information (Broadbent, 1958). Broadbent's research was used as a jumping off point for other psychologists to continue to research how the brain processes information. In 1975, Michael Posner coined the term 'cognitive control' in his book titled Attention and Cognitive Control (Goldstein et al. 2014). In his book, Posner suggested that there was a "separate executive branch of the attentional system responsible for focusing attention on selected aspects of the environment" (Goldstein et al. 2014, p. 3). Psychologist Alan Baddeley suggested a similar system as a part of his working memory theory in which he argued that there was a component he referred to as the central executive which allows for information to be manipulated in one's short-term memory (Baddeley, A., Sala, S.D., \& Robbins, T.W., 1996). It was also proposed that attention is regulated by a "supervisory system which can over-ride automatic responses in favor of scheduling behavior on the basis of plans or intentions" (Shallice, 1988, p. 337).

In 1995 Muriel Lezak suggested that executive functions consisted of components related to planning, purposeful action and effective performance (Lezak, 1982). It was thought that each
of these components involves a specific set of related behaviors (Lezak, 1982). This theory was adapted by Reynolds and MacNeill Horton in 2008. They suggested that executive functions represent one's ability to make decisions, plan actions and generate novel motor outputs adapted to external demands (Reynolds \& MacNeill Horton, 2008). In 2013, Naglieri and Goldsein conducted a nation-wide survey to study behavioral aspects of executive functioning (Goldstein, et al. 2014). In this study, they suggested that executive functioning "is best represented as a single phenomenon, conceptualized as the efficiency with which individuals go about acquiring knowledge as well as how well problems can be solved across nine areas" (Goldstein et al. 2014, p. 4). These nine areas include attention, emotion regulation, flexibility, inhibitory control, initiation, organization, planning, self-monitoring and working memory. These areas are now widely accepted within the psychology community as skills that fall under the umbrella of executive functioning (Goldstein et al. 2014). Moreover, these nine areas are all important skills that students need in order to complete their homework.

## Homework

Homework is defined as "all study activities, tasks and assignments that students perform outside the formal setting of the classroom..." (Davidovitch \& Yavich. 2017, p. 90). This is a broader definition for homework. However, the definition of homework can be narrowed down even further to describe activities allocated for training, enhancement, implementation of knowledge and learning new capabilities involved in independent research (Davidovitch \& Yavich. 2017). Although these two definitions are very similar, the second definition is more closed aligned with the researcher's view on homework. The researcher believes that homework is a specific type of learning that takes place in the home. Homework is using skills previously
learned to complete an assignment at homework. This is the definition that the researcher was using throughout the course of this study.

Homework is traditionally assigned to students to practice skills previously taught in class, ensuring the student's readiness for the next lessons and further learning, encouraging active participation in the discipline studied, developing personal responsibility, study capabilities, maintaining a time frame, self-confidence and personal sense of achievement (Davidovitch \& Yavich. 2017). Many educators also use homework as a form of communication between school and family (Davidovitch \& Yavich. 2017). For example, homework keeps parents stay informed about what their children are working on in school. It can also be used for teachers to send updates about a child's behavior in class through the use of a planner.

According to Shahzada, Ghazi, Shahzad, Khan and Shah, the homework assigned in schools generally falls into one of four categories: practice homework, preparation homework, extension homework and creative homework. Practice homework is defined as an assignment designed to reinforce a newly acquired skill and promote mastery (Shahzada et al. 2011, Harris, 2007). Some people in the education community believe that practice homework is the most effective kind of homework as it allows students to apply a recently learned skill in a "direct and personal way" (Shahzada et al. 2011). Preparation homework is generally reading to prepare students for an activity in the classroom (Shahzada et al. 2011). Preparation assignments are generally designed to help students gain the maximum benefit when new material is covered in class. Some homework assignments can be both practice and preparation by introducing new material through the practice of old material (Harris, 2007). Extension homework is generally defined as a long-term assignment that is parallel to classwork (Shahzada et al. 2011). Students could complete an extension homework project such as a science fair project. The final type of
homework that is traditionally assigned in schools, according to Shahzada, Ghazi, Shahzad, Khan and Shah, is creative homework. Creative homework is a long-term project that is directly related to what students are learning in the classroom such as a book report or current event project (Shahzada et al. 2011). In his book The Battle Over Homework, Harris Cooper agrees with these four categories of homework however, he believes there is an additional type of homework called integrative homework (Harris, 2007). Integrative homework asks students to apply many of the skills previously learned and apply them to a project. This type of homework is very similar to Shahzada's definition of creative homework. Furthermore, Trautwein, Niggli, Schyder and Ludtke believe that there are three main reasons that teachers assign homework. The three primary reasons homework is assigned is to enhance achievement in the classroom, improve student motivation and self-regulation and to establish a positive link between the school and the home (Trautwein et al. 2009).

The history of homework in schools. Although historians are unable to pinpoint when homework began being assigned to students, there has been a debate about homework and whether or not it should be assigned for decades. According to Gill and Schlossman, homework has been a debate as early as the early $19^{\text {th }}$ century when various school districts around the country chose to pass anti-homework regulations. Between 1890 and 1940, homework was harshly criticized and even discouraged by educators as being harmful to a student's health, character and family (Shahzada et al. 2011). It was even argued by some that homework was an ineffective instructional tool (Shahzada et al. 2011). This anti homework movement was also called the progressive education movement (Gill \& Schlossman. 2004).

During the 1940 's, the debate about homework changed. Educators and parents shifted their views on homework from wanting to abolish homework all together to wanting to reform
homework and make it more creative and individualized (Gill \& Schlossman. 2004). It was during this time that the pro-homework movement formed, with parents and educators believing that homework needed to be more rigorous (Gill \& Schlossman. 2004). With the launch of Sputnik in 1957, the pro-homework movement received a boost and became more popular throughout the United States as concerns grew that American students might not be able to keep up academically with their Soviet counterpart (Gill \& Schlossman. 2004).

The National Commission of Excellence in Education was formed in 1981 to directly "examine the quality of education in the United States (U.S. Department of Education, 1983). In 1983 A Nation at Risk was published by this commission (U.S. Department of Education, 1983). The purpose of $A$ Nation at Risk was to outline how to move schools "back to basics" and focus improving the declining educational standards in the country (Gill \& Schlossman. 2004). As a result of The National Commission of Excellence in Education, schools were told to begin assigning more homework to students; especially to high school aged students (Gill \& Schlossman. 2004). In 1986, three years after A Nation at Risk was published, William Bennett, a member of the U.S. Department of Education, published What Works which endorsed homework unequivocally and provided specific recommendations for educators (Gill \& Schlossman. 2004).

While many educators support homework for its value in reinforcing daily learning and fostering the development of study skills, once again a backlash against homework began growing in the late 1990s and early 2000s (Bempechat, 2004). Parents and teacher began complaining of excessive homework in schools, especially for younger students (Gill \& Schlossman. 2004). According to the National Assessment of Educational Progress (NAEP), homework in the majority of grade levels averages less than 1 hour per night however, students in lower grade (elementary aged children) have seen a substantial increase from an average of 52 minutes per week in 1981 to

128 minutes per week in 1997 (Gill \& Schlossman. 2004). According to Gill and Schlossman, homework in the last 20 years has increased for the youngest students even though the research suggests homework has few benefits for this age group and remained the same for middle and high school students where the research has shown is more beneficial (Gill \& Schlossman. 2004).

Homework \& academic success. Bempechat argues that homework plays a critical role in the development of a student's achievement and motivation. Homework is beneficial for students because it requires students to sustain attention on a task for a set amount of time, avoid distractions, set goals, make decisions such as where to begin, look at the big picture and the details, determine the time for completion and organize their materials (Stockall, 2017). In addition, Shahzada argues that homework is beneficial for students long term academic success by enabling students to learn organizational skills and time management in addition to helping students gain confidence in dealing with frustration and how to solve problems independently (Shahzada et al. 2011). Cooper (2015), argues that the positive effects of homework can be grouped into four categories. The first positive effect of homework is immediate academic affects such as better retention of factual knowledge and better critical thinking skills. The second positive effect of homework are the long-term academic effects such as improved attitudes towards school and better study habits. Nonacademic effects of homework include greater self-direction and selfdiscipline, better time organization and more independent problem solving. Lastly, Cooper believes that homework creates better parental appreciation and involvement in their child's schooling. Bempechat maintains that parents do not realize that by advocating for little or no homework for students in elementary school, they are ultimately setting students up to be less prepared for the academic demands and obstacles that they might face in higher grades (Bempechat, 2004). Not only does homework allow students valuable practice of skills learned in
class but it also helps create good study habits that will help students be more successful in their future learning.

Negative effects of homework. Research on the topic of homework being beneficial for students in elementary school and its impact on academic success is inconsistent (Bempechat, 2004). According to the article Teachers' Perception Regarding the Effect of Homework on Students' Academic Achievement, as early as the 1930's "measurement experts used evidence to confirm that in the pre-high school grades, homework had no beneficial effect on student achievement" (Shahzada et al. 2011). In 2006, the National PTA recommended that homework increase 10 minutes per night per year. For example, in first grade, students would be expected to complete 10 minutes of homework every night. When these students move into second grade, the students homework would increase by 10 minutes to a total of 20 minutes. Researchers from the Brookings Institution and the Rand Corporation looked into these guidelines to see how often homework is assigned in elementary schools. The researchers discovered that the majority of students in the U.S. spend less than an hour on homework regardless of their grade level. This has remained consistent throughout the past 50 years (Brookings Institution, 2014). However, in the last 20 years, homework has increased primarily in lower grades. This increase is associated with negative effects on student achievement. (Brookings Institution, 2014). Leading advocates against homework say the amount of homework students are being assigned have the potential to negatively impact children's time with their family (National PTA, 2006). Not only does it affect family time, it can cause undue stress to a child. Additionally, research done by the Brookings Institution (2014) states that students who spend more than the recommended time for their grade on homework can experience little to no increase in academic achievement. According to Cooper (2015), homework can also cause students to have a loss of interest in academic material, physical
and emotional fatigue, less time for leisure activities such as sports or theater and confusion of instructional techniques.

## Homework \& Executive Functioning

"Homework is a responsibility that rightfully belongs to the child or student" (Shahzada et al. 2011). However, in a study by Marte Ronning, parents reported helping their child with homework between $45 \%$ and $58 \%$ of the time (Ronning, 2011). If homework is designed to be completed by the student, why are so many parents assisting their children with their homework?

According to van der Sluis et al, executive functions are the routines responsible for the monitoring and regulation of the cognitive process during the performance of complex cognitive tasks (van der Sluis et al. 2007). There are three main executive functions that are necessary for a person to learn new information. Shifting is one's ability to switch between tasks or strategies while working on a specific task (van der Sluis et al. 2007). Inhibition is the ability to "deliberately suppress dominant, automatic or prepotent responses in favor of more goal-appropriate ones" (van der Sluis et al. 2007, p. 428). Lastly, updating is a person's "ability to monitor and code incoming information and to update the content of memory by replacing old items with newer, more relevant, information" (van der Sluis et al. 2007, p. 428). All three of these executive functions are used by students in academic areas and are critical for a student to complete an assignment, especially completing homework assignments. In order for these skills to further develop, homework must be completed independently by the student.

## Conclusion

In conclusion, the literature shows that executive functioning skills are necessary for students to be successful in completing their homework independently however, little research has been done about how homework helps students build their executive functioning skills. In order
for students to be successful academically, it is imperative that teachers find a way to teach their students executive functioning skills. One possible way to teach these skills is through changing the type of homework that is assigned to help teach these executive functioning skills. This study aims to examine how homework can be used to teach executive functioning skills in elementary schools.

## Chapter 3 Methods

This study utilizes a mixed methods constructivist research design approach to answer the following research questions: How can homework be used to teach executive functioning at an elementary school level? What executive functioning skills are necessary to independently complete homework? How do teachers currently teach executive functioning skills to their students? How do parents currently teach executive functioning skills to their children?

## Research Approach

The primary goal of a constructivist researcher is to seek understanding of the world they live and work in (Creswell, 2014). A constructivist researcher asks open-ended questions to their interviewees to collect data. Asking open ended questions allowed the interviewees to offer their opinion on a specific topic without feeling influenced by the researcher. This method allowed the researcher to study an ongoing problem at the site where this study takes place, examine new techniques for teaching executive functioning skills and gather information to help the site adjust how homework is assigned.

A mixed methods approach is appropriate for this study because it combines personal interviews with participants using open ended questions and data collection via short interviews. By collecting data through both quantitative and qualitative approaches the researcher will be able to gain a more complete understanding of the research problem (Creswell, 2014). Collecting data through a mixed methods approach was necessary for this study. By collecting data through a mixed methods approach, the researcher was able to gain a deeper understanding of the topic by reaching a larger audience than if she had only interviewed participants.

## Research Design

This study took place during the spring semester of the 2018/2019 school year at a suburban, public elementary school in Northern California. The school serves Kindergarten through $5^{\text {th }}$ graders. According to the school's website, the population of the school is approximately 400 students in total. The majority ( $80 \%$ ) of students attending this elementary school are white, $9 \%$ of students are Hispanic, $6 \%$ Asian, $5 \%$ two or more races and $1 \%$ Black. The socioeconomic status of the school's population is predominately middle-class with $9 \%$ of students coming from low-income families. Roughly $4 \%$ of the school's total population are English Language learners and $7.5 \%$ of students receive free and reduced lunch. According to the school district website and school profile, the average class size is 20 .

## Participants

The participants in this study were teachers from upper elementary grade levels as well as parents of students in general education classrooms and students receiving Specialized Academic Instruction through a pull-out Resource program. There were a total of four teacher participants and three parent participants who volunteered to be interviewed. Due to the majority Caucasian population in the area were this study took place, most of the participants were Caucasian. All teachers were sent an email with a link to participate in a short survey. In this email, teachers were asked if they would be willing to participate in a full interview. Those who expressed interest in being interviewed were approached to schedule a date and time for the survey. The teachers who were selected as interview participants have all been teaching for $10+$ years. The parents who volunteered to be interviewed for this study each had at least two children in their household, all of whom had attended the school where this study took place. Parents were also invited to participate in a short survey. A total of 127 parents responded to the survey. To protect the identity
of the interview participants, the researcher assigned pseudonyms to each interviewee. Pseudonyms for both teachers and parents are listed below.

Table 1 List of Pseudonyms of Teachers

| Pseudonym | Grade Taught |
| :---: | :---: |
| Ms. Scott | Fifth |
| Ms. Palmer | Fourth |
| Ms. Martin | Third |
| Ms. Vance | First |

## Data Collection Procedures

Data was collected for this study in two primary ways, formal in person interviews and short ten-minute surveys that were sent to participants via email. All four methods of collecting data (parent interview questions, parent surveys, teacher interviews and teacher surveys) were created by the researcher (see Appendix). The researcher chose to use a survey as a means of collecting information from a larger population of participants without participants needing to commit to a longer, more in-depth interview. The surveys for both teacher and parent participants were designed to be taken in one sitting and take a maximum of ten minutes to complete. Each survey consisted of nine or ten statements in which the participant was asked if they Agree, Somewhat Agree, Somewhat Disagree, or Disagree with each statement. Here are some examples of the types of statements teachers were asked their opinion on in this survey. "Homework should be assigned daily in elementary schools. I think elementary schools set students up for success in upper grade with the amount of homework they assign in elementary school. I believe homework is important for long term academic success." Parents were asked to respond to similar statements
in the parent survey. Statements included parent's opinions about homework and executive functioning. Some statements included in the survey were: "I think my child's school could do more to teach my child executive functioning skills. I believe homework is important for long term academic success. Homework should be assigned and recorded daily in elementary schools."

Those who volunteered to participate in a full interview were able to choose a date and time that was convenient for them. All questions were open ended and designed to promote a discussion about homework and executive functioning at an elementary school level. More specifically, teachers and parents were asked about how homework could be used to promote executive functioning skills both in school and at home. Parents and teachers were asked similar questions to get opinions from both perspectives. Some examples of questions asked to teachers during the interviews are as follows, "How do you track the completion and accuracy of homework?" "How do you teach executive functioning to your students?" "Do you think there is a connection between homework completion and a student's executive functioning skills?" Examples of questions asked to parents during the interviews are as follows, "Do you believe homework is beneficial for your child's long-term academic success? Why or why not? Does your child complete homework independently or do they need direct support from you, a family member or a tutor? "What are the skills a child needs to be able to do homework independently?" All interviews were recorded on a personal, password protected device to ensure accuracy. Interviews were transcribed by the researcher using the application Transcribe.

## Data Analysis Procedures

Data analysis was approached from a comparative lens. First, the researcher read over the survey responses and created a chart to document responses to each question for both teacher and parent surveys. Then, the researcher reviewed the responses from interviews and assigned initial
codes to the data. Expected codes included: independence, time management, routines, habit forming, parent involvement, and purpose of homework.

The researcher then listened to the interviews from both parents and teachers. While listening to the interviews, the researcher took additional notes, noted times for specific quotes and ideas brought up by participants and wrote down key words to use as codes. After coding interview data, the codes from both surveys and interviews were organized in a concept map to reveal primary categories relevant to the research questions. This was then analyzed through the lens of the theoretical framework and the research questions to generate the primary themes in the data. Additionally, themes were analyzed for both parents and teachers to determine significant differences and similarities in their perspectives. Throughout the data analysis, the researcher was mindful about her own bias and made it a point to give equal weight to all perspective.

## Validity and Reliability

To ensure validity and reliability, the researcher used triangulation to support the collected data. According to Bazeley (2013), triangulation commonly involves collection of one or more alternative sources of data and checking to see if the inferences drawn are compatible with the first instances. Triangulation, in practice, can provide the researcher with a rich and complex picture of the social phenomenon being studied (Bazeley, 2013). By using a mixed methods approach to this study, the research was able to collect both qualitative and quantitative data through lengthy interviews on average lasting 30 minutes and through surveys. A total of 15 out of 18 teachers responded to the teacher survey. Emails were sent to parents by the researcher requesting their participation in a short survey. A total of 620 parents were emailed with a 127 or $20 \%$ of parents responded however, some parents were emailed more than once due to families with multiple children at the school.

## Researcher Positionality

The researcher is a graduate student at Dominican University of California obtaining a Master's of Science Degree in Education. She currently holds two California Teaching Credentials in Multiple Subject and Special Education. She is the Resource Specialist/teacher of record at the elementary school that the study took place.

Homework has been a debate in the district that this study took place for many years. Teachers, parents, and district employees are divided on the subject and the issue of homework is brought up at the beginning of every year at staff meetings, intake conferences and back to school night. As an Education Specialist, the researcher does not assign homework for her students but often helps students with their homework because of time management problems at home, parents unable to help their child due to lack of time/understanding, lack of student independence or students not understanding the assignment.

The researcher has also witnessed students who do not possess effective executive functioning skills. Nearly $95 \%$ of students on the researcher's caseload have at least one Individual Education Plan (IEP) goal for executive functioning. However, there are additional students at the school who do not receive Specialized Academic Instruction (SAI) who struggle with executive functioning, are unable to complete homework independently and are not receiving explicit instruction in this skill set in their classrooms. The researcher was mindful for her own bias regarding the close link between homework completion and executive functioning needs infiltrating the research.

## Chapter 4 Findings

In investigating if and how homework develops executive functioning skills, several themes emerged. The primary themes that emerged were how homework creates executive functioning skills when it is completed independently by the student, a lack of communication surrounding the school's homework policy and finally, how homework is breaking down at the school site. The main theme that was consistent throughout interviews with both teachers and parents was how homework does help create executive functioning skills however it must be done independently by the student in order for these skills to be built. There has also been a lack of communication between teachers, parents, and the administration about the expectations of homework which is ultimately leading to homework breaking down at the school site were this study took place.

## Homework Further Develops Executive Functioning Skills

Throughout the course of this study there was a consensus from both teachers and parents that homework helps create executive functioning skills but only when it is completed independently by the child. Out of the four teachers interviewed and three parents, all interview participants agreed that skills such as independence, organization, time management, and creating a routine are all important skills students need to learn and are all skills that are reinforced by completing homework. These skills are all ones that require teaching in order to develop and use successfully in daily life however, less than half of teachers surveyed reported that they are able to teach their students executive functioning skills. When asked why, Ms. Scott explained that they did not have enough time to explicitly teach their students these skills. Both teachers and parents interviewed believed that homework could be used to help reinforce executive functioning skills.

## Homework and Independence

Although there was a consensus among teachers and parents that homework helps build executive functioning skills, only $29(23 \%)$ out of 127 parents who responded to the survey reported that their child completes his or her homework independently. When asked if their child struggles with executive functioning skills, over half of parents who responded to the survey reported that their child struggles with organization, time management and planning ahead. This data shows that the majority of students at the site are not able to complete their homework without direct support from an adult even though the school's homework policy directly states that "completing homework is the responsibility of the student" and that "the student can successfully complete it (homework) without help" (Green School District Homework Policy). However, independence consistently came up in conversations about homework with both teachers and parents. When asked why they thought homework was not being completed independently, one teacher stated that she believed that parents struggle to give up come of that control when it comes to homework. She went on to say that many parents are used to doing a lot for their child and helping them with their homework naturally becomes a part of that. By stepping in to help their child, parents are taking away that independence. By completing homework independently, students will ultimately feel more successful in their education.

## Homework and Routines

In addition to independence being one of the most important executive functioning skills homework helps create, one of the younger grade teachers, Ms. Vance, stated that she also believes it helps students create a routine and structure at home. In order for a student to be able to complete homework independently, a student must first learn how to do homework. Ms. Vance went on to say that although homework is optional in her classroom she strongly recommends to her student's
families, as a teacher and a parent of high school aged children, it is important that students complete their homework. She continued to explain that during back to school night she emphasizes that it doesn't matter if they get all the math problems correct but the importance of getting students into the habit of completing their homework stating that she "feels strongly that setting this routine is the most important part of homework." Ms. Vance was not the only teacher to feel strongly that setting up a routine at home is one of the most important parts of homework. All four teachers interviewed stated the importance of creating good homework habits early. Teachers were not the only ones who believed that creating a routine at home is one of the most important parts of homework. Parents were in agreement as well. Ms. Hartman stated that she believes creating a routine at home has helped her child understand that homework is an expected part of school. Not only does it help the student create executive functioning skills but it allows for students to take ownership of their own learning.

## Teaching of Executive Functioning Skills

Another question that came up during interviews is whose responsibility is it to teach executive functioning. When asked in an interview who should be primarily responsible for teaching these skills, an upper grade teacher, Ms. Scott, explained that she believes teaching these skills is a partnership between teachers and parents. Additionally, Ms. Palmer, another upper grade teacher, also believed that teaching executive functioning skills is a partnership however, she believed it is important for the teachers to help identify the students who are struggling with these skills. Ms. Martin explained that she believes teachers, parents and anyone involved in the child's development such as a nanny or grandparent should be on the same page to help create consistency between home and school. However, the majority of parents (102 or 80\%) responded to the survey saying that they believed it is the school's responsibility to teach these skills to their children.

Clearly, the majority of parents believe that it is more the teacher's responsibility to teach these skills. Although parents and teachers appear to be on different pages when it comes whose responsibility it is to teach executive functioning skills, in order for students to learn these skills, all parties involved in the student's life need to understand the importance of executive functioning skills and how they relate to homework. Executive functioning skills cannot be learned just in school, they need to be taught and reinforced at home as well. For example, in order for a typical student to complete homework they need to be able to write down the assignment and gather the necessary materials to complete it. This is all done at school but once a student gets home, they need to have a space and time dedicated to homework. Once homework is completed, the student needs to make sure it gets back to school and turned in. In order for a student to complete all these steps, they must first have the executive functioning skills such as independence, organization, planning and having a set routine.

## District Homework Policy

## The Green School District homework policy states

homework should have a positive impact on student learning and is defined as the assigned learning activities that students work on outside of the classroom. The purpose of homework is to provide students an opportunity to practice, reinforce and apply previously taught skills, and is directly tied to classroom instruction. Assignments should have a clear purpose and be designed for completion within a reasonable time frame. Completing homework is the responsibility of the students. Parents can play a supportive role through monitoring, encouraging students' efforts and providing a conductive learning environment. Although teachers are not required to assign homework, when it is assigned, students will participate in homework that is meaning, purposeful and appropriate, as determined by the teaching staff.

This policy provides the five school sites within the district with a very loose guideline for assigning homework. From conversations with various teachers and administrators, grade level teams are told to decide what homework will look like for their specific grade. At the specific school this study was conducted at, grade level teams are asked to be consistent with how they assign homework in case of siblings or cousins in the same grade. This means that homework does not have to be consistent at different grade levels but does need to be the same between classes in the same grade.

Teachers are given very few additional guidelines for assigning homework. When interviewing teachers for this study, the majority of them responded to the survey that they were familiar and that they agreed with the Green School District homework policy. When asked to be more specific in interviews about their understanding of the homework policy, most teachers stated that they knew about "the homework timeline". In reviewing the school district's homework policy, there is no homework timeline in the policy. The teachers were referring to a previous policy in which different grade levels had a specific amount of time for homework. For example, a $3^{\text {rd }}$ grader would be expected to complete 30 minutes of homework per night while a $5^{\text {th }}$ grader would be asked to complete 50 minutes of homework per night. Younger grades such as Kindergarten and $1^{\text {st }}$ grade would be expected to complete 10 minutes of homework per night with the homework minutes increasing 10 minutes each year as students moved to higher grades. Most teachers seem to agree with this policy stating that it helped make sure that homework was assigned for a reasonable amount of time and prevented students from having too much work to do after school. Although it is unclear why this timeline was removed from the Green School District's homework policy, one teacher stated that she believed this was taken out of the district's homework policy to allow different sites some freedom in how they assign homework. The lack of a
homework timeline in the current Green School District's homework policy is a little concerning since the National PTA recommends these guidelines for students as it is developmentally appropriate for their grade level. The timeline is designed for a student to finish the amount of assigned independently. If homework is not being completed independently, it cannot be completed in the time allotted according to the homework timeline.

## Issues with Homework

For this study, both parents and teachers were invited to complete a short survey. On both surveys there was the following statements in which participants were asked if they agree, somewhat agree, somewhat disagree or disagree with the following statements: "I am familiar with the Green School District homework policy." and "I agree with the Green School District homework policy." A total of 127 parents responded to the survey. More than half the parents stated that they were somewhat familiar or not familiar with the policy. Of those parents, $27 \%$ of them said that they agreed with the homework policy while the rest said they somewhat agreed with it or did not agree with it. The survey even led a parent to email stating that they were not aware that the Green School District even had a homework policy. This directed the researcher to do some research and discover that the homework policy was not available on the district's website requiring her to contact the district directly to receive a copy of the policy. Due to a lack of accessibility of the homework policy, it is not surprising that over half the parents who responded to this survey responded by saying that they are not familiar with the homework policy.

Although the district is allowing different school sites and teachers more freedom on how they assign homework, the school has not made a policy specifically for their site. Instead, teachers at the same grade level are asked to be consistent in assigning homework. In interviews, teachers had mixed feeling about the homework policy being loose. Some teachers appreciated not being
told what they needed to assign and what homework needed to look like for their students while others were concerned about homework being optional. In her interview, Ms. Scott, stated that homework is really disjointed within the school and that the school site and district do not have a "really clear streamline about how homework builds upon itself from grade level to grade level." This supports the idea that in order for students to be successful in upper grades, they need to already be in the habit of completing homework. This habit starts in early grades and builds upon itself as students are asked to complete more complex homework.

Since the Green School District allows for different sites to have different homework policies in some grades, homework is completely optional and students are not required to complete it. In other grades, teachers ask that students complete the homework but it is not tracked for accuracy, only completion and there are no consequences if students do not turn in their homework. Additionally, some grades require students to complete their homework and are disciplined with either a note home or time during recess or lunch to complete it if the homework is not turned in. This policy of tracking completion but not accuracy punishes students with poor executive functioning skills as they are not being graded on their knowledge of a subject but their ability to turn it in. The disjointed homework expectations at each grade level cause both parents and students to be unclear of what is expected of them as they move to the next grade. Ms. Scott went on to mention that sometimes parents are surprised when their children get to upper grades and are expected to complete homework regularly and that their students are encouraged to complete their homework independently. She is also aware of the demands of middle school and the amount of homework teachers are assigning. She went on to say she is "not sure we are teaching them (students) the right skills if we aren't being consistent about it."

Not only are different grade levels not being consistent with their homework, parents and teachers are not on the same page when it comes to homework. Over half of parents who responded to the survey for this study reported that they do not believe homework should be assigned daily in elementary schools and that it should not be recorded. On the other hand, the teachers surveyed were split evenly whether or not they believed homework should be assigned and recorded daily in elementary school. This shows that there is a difference in opinions about the importance of homework in elementary schools. Without a consistent policy from the school, parents and teachers will continue to be on separate pages about the expectations of homework.

## Conclusion

At the start of this study, the driving questions were: How can homework be used to teach executive functioning at an elementary school level? What executive functioning skills are necessary to independently complete homework? How do teachers currently teach executive functioning skills to their students? And how do parents currently teach executive functioning skills to their children?

The skills that were identified during the course of this study as being necessary for students to have in order to complete homework were independence, organization, time management and creating a routine. Although both teachers and parents stated that they work on these skills in the classroom or at home, parents believe the school needs to do more to teach these skills while teachers believe that teaching these skills needs to be a partnership between the school and home. This difference in expectations shows that there is a breakdown of communication between the school and the home about what skills parents need to reinforce at home to help their students successful build executive functioning skills which ultimately leads to students completing their homework independently.

As the data from this chapter shows, homework is breaking down at all levels due to the absence of a clear homework policy from the district which has created inconsistencies with homework at each grade level. Not only are there inconsistencies between grade levels but miscommunication between parents and teachers and different views on the purpose of homework. Because of this, homework cannot be used to teach students executive functioning skills until a clear, cohesive and consistent homework policy is implemented at the Green School District. Until executive functioning skills are taught in the classroom and at home, homework cannot be used to reinforce those skills.

## Chapter 5 Discussion

## Implications for the Literature

There is a lot of conflicting research around homework and its importance for students in elementary school. According to the National PTA and the Brookings Institution, homework can negatively affect a student's time with their family, time spent on extra-curricular activities and can impact a student's feelings and attitudes about school. On the other hand, there are supporters of homework who argue that homework is beneficial. In his book The Battle Over Homework, Cooper (2015) argues that homework has a positive effect on students in their ability to retain information and other critical skills, improves students attitudes towards schools, builds better study habits and helps students learn self-direction, organization and independent problem solving.

This study demonstrates that teachers and parents believe that homework is important for long term academic success by helping students build important executive functioning skills such as independence, organization, planning and routine building. This study has shown that teachers and parents agree that homework is important for learning executive functioning skills. Although some studies have argued that homework may not be as important for long term academic success, homework is important to set up skills such as organization, time management, planning and building routines. These skills are not just used in school and for completing homework but they are important for daily life tasks. By helping students build these skills early in their schooling, they will be more successful as the demand of homework increases with each grade level.

## Implications for Practice \& Policy

Based on the research done for this study, the Green School District needs to make a decision about homework for the District. The findings show that by leaving their homework policy loose to allow for interpretation by the five schools sites in the district and by allowing the
different schools in the district to make their own homework policies, the schools do not have a consistent homework policy between their sites. Not only is the policy not consistent between sites, it is not consistent between grade levels at each site. Consistency between the different grade levels would allow teachers to will help students build executive functioning skills. If students and parents know the expectations from the start, students will be able to build independence, planning and organization skills as well as create good study habits and routines at home. In addition to having a consistent homework policy, the teachers need to look into differentiating homework for their students. Differentiation will help support students who struggle to complete homework independently due to it being above their level. Through differentiation, teachers will be able to make homework more manageable for students and help students develop their executive functioning skills.

The findings also show that homework should be done independently by the students to promote equity as not all families have the time or resources to help their child with homework. Although parents should help monitor their child during homework time, parents should not be responsible for teaching their child how to do their homework. As the research shows, homework helps create executive functioning skills such as routine building, planning, and independence which will help homework become equitable for all families.

## Limitations of the Study

As with all studies there are limitations to this study that must be acknowledged. First of all, this study took place in a suburb of Northern California were the population is primarily white, middle to upper-middle class families. Expanding on this research to other school sites within the Green School District, other schools in California or within the United States with different demographics could produce completely different findings.

Additionally, the researcher is the Special Education teacher at the specific school site that this study took place. Due to being a Special Education teacher and not a General Education teacher, the researcher had less connections with parents whose children do not have an Individualized Education Plan or IEP. Parents whose children do not have a specific learning disability might have a opinions on homework.

## Directions for Future Research

Future research can continue to examine a connection between homework and executive functioning by redesigning how homework is assigned in a general education classroom. Differentiated homework could be assigned to students in the classroom and students would be interviewed to see their thoughts about this new type of homework. Did these students feel more successful being able to complete their homework independently? Did they continue to struggle to complete their homework? Parents could also be interviewed to see if they noticed a change in their child's attitude towards homework and if the parent felt as though their child needed less help. Additionally, further research could be done to look at how to teach executive functioning skills in relation to homework. Assignments could be designed to build the skills that are imperative to completing homework independently such as planning and organization.

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Appendix A

## Teacher Interview Questions

1. What is your personal philosophy about homework?
2. What is the homework policy in your classroom?
3. How do you feel about the district policy on homework?
4. What are your homework goals for your students?
5. Do students need help from their parents to complete homework for you class?
6. How do you track the completion and accuracy of homework?
7. What do you think is successful about your homework policy?
8. What do you think is not working well?
9. What are your experiences with homework with parents and students? What are some examples of positive experiences and negative ones?
10. Do you believe homework is beneficial for your students' long-term academic success? How?
11. About how many students do you think struggle with executive functioning in your class?
12. How do you teach executive functioning to your students?
13. How would you teach executive functioning to your students?
14. Whose responsibility do you think it is to teach these skills?
15. What are some executive functioning skills that are required to complete homework?
16. Who teaches executive functioning skills that are required for completing homework?
17. Do you think there is a connection between homework completion and a student's executive functioning skills?
18. Is there anything else I should know about the role of homework in your classroom?

Appendix B

## Parent Interview Questions

1. How do you feel about the homework policy in your child's current classroom?
2. Have there been other teacher's homework policies that you have preferred? Why have you preferred it?
3. What does homework look like at your house?
a. Does your child complete homework independently or do they need direct support from you, a family member or a tutor?
b. How much time is your child doing homework by themselves?
c. Does your child have a homework routine? If so, what is it? What would you like it to look like?
d. Do you have the time to help your child with their homework?
4. What is your emotional reaction to the ask and work of competing homework with your child?
5. What is your reaction to needing to apart of homework? Is it generally a good or a bad experience in your house? What are some examples?
6. What is your child's mood and mode for completing homework?
7. Is your child rewarded for completing homework? If so, how?
8. Do you believe homework is beneficial for your child's long-term academic success? Why or why not?
9. Do you believe that elementary schools are setting students up for success in later grades and is that due to the amount of homework assigned? Why or why not?
10. What are the skills a child needs to be able to do homework independently?
11. How do you think schools could teach these skills to students using homework?
12. Do you know what the term executive functioning is? How do you define it?
13. Whose responsibility do you think it is to teach these skills?
14. Do you believe that schools are teaching your child executive functioning skills?
15. Is there anything else you would like to tell me about your views on homework and executive functioning?

## Appendix C

## Teacher Survey

1. Homework should be assigned daily in elementary schools.
2. Homework should be recorded in elementary schools.
3. I am familiar with the Green School District homework policy.
4. I agree with the Green School District homework policy.
5. I explicitly teach my students executive functioning skills.
6. I think it is my responsibility, as a teacher, to teach executive functioning skills.
7. I think it is the parents/families responsibility to teach executive functioning skills.
8. I think elementary schools set students up for success in upper grades with the amount of homework they assign in elementary school.
9. I believe homework is important for long term academic success.

Appendix D

## Parent Survey

1. Homework should be assigned daily in elementary schools.
2. Homework should be recorded in elementary schools.
3. I am familiar with the Green School District homework policy.
4. I agree with the Green School District homework policy.
5. I think elementary schools set students up for success in upper grades with the amount of homework they assign in elementary school.
6. I believe homework is important for long term academic success.
7. My child completes his/her homework independently.
8. I understand the term executive functioning.
9. My child struggles with organization, time management and planning ahead.
10. I work on these skills at home.
11. I think my child's school could do more to teach my child executive functioning skills.

Appendix E

January 16, 2019
Rachel Zalles
50 Acacia Avenue
San Rafael, CA 94901
Dear Rachel,

On behalf of the Dominican University of California Institutional Review Board for the Protection of Human Participants, I am pleased to inform you that your proposal entitled Reexamining Homework to Teach Executive Functioning in Elementary Schools (IRBPHP application \#10736) has been approved.

In your final report or paper please indicate that your project was approved by the IRBPHP and indicate the identification number.

I wish you well in your very interesting research effort.
Sincerely,


Randall Hall, PhD
Chair, IRBPHP

