

**CHARACTERISTICS OF EARLY ELEMENTARY HOMEWORK:
MONTESSORI AND TRADITIONAL**

By

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ABSTRACT

This research investigated similarities and differences in early elementary homework in the Montessori and traditional school contexts. Characteristics of and parent satisfaction with assignments were reviewed. Parents of children attending private Montessori ($n=88$) and private traditional schools ($n=196$) were surveyed.

Parents' perceptions that homework was helping their child learn and homework was just right for their child's abilities was moderately correlated to traditional schools' overall homework satisfaction. For parents of children who attend Montessori schools, satisfaction with the amount of time their child spends doing homework was moderately correlated to overall homework satisfaction. Choices allowed in the homework context were not correlated to overall homework satisfaction.

No difference in homework between the pedagogies was found in the time children spent doing homework or parental involvement in homework, and children who attend Montessori schools were permitted to choose topics of essays and other homework on average twice as often as traditionally schooled children. Children who attend traditional schools were permitted to choose books for reading homework more often than Montessori-educated students. The five parent satisfaction measurements showed that parents of Montessori educated students were on average 5% more satisfied with their children's homework.

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CHAPTER I

INTRODUCTION

Although homework in the very early elementary years is generally *not* tied to achievement (Cooper, 2001), most children in the first, second, and third grades are assigned work to do at home. These tasks are the introduction to years of work at home, which in the middle school and high school *are* linked to achievement (Cooper, 2001). Buell argues in *Closing the Book on Homework* that homework is burdensome to children and takes away from leisure activities (Buell, 2004). In contrast, others see homework teaching young elementary students good habits that help them as they enter middle school and high school (Corno & Xu, 2004).

Homework is also the primary way many families learn what their children are studying in school (Gill & Schlossman, 2003). In addition to being a window from the classroom to parents, homework is also an activity impacted by parents. For example, a parent's attitude toward homework predicts their child's attitude (Pomeranz, Wang, Ng, 2005). In this way and others (e.g., eliminating distractions and providing an appropriate setting for homework), parents affect their child's success at homework assignments. In summary, parental controls, facilitation, and attitudes are important to their children's success at school (Pomerantz, et al., 2005).

This study investigates parent satisfaction with characteristics of the homework assigned to their first, second, or third grade children.

This study also examines characteristics of homework assigned by schools with different pedagogies, Montessori and traditional. A Montessori philosophy allows children to move around the classroom and choose works to complete, within a teacher-determined framework (e.g., two math and three reading works required per day). The teacher seldom instructs the class all at once, and emphasis is on matching each child's interests and abilities with suitable tasks. Montessori lower elementary classes combine first, second, and third grade students into the same class, and provide many materials and sensorial experiences to make work concrete in the introductory years (Seldin, 2005). Conversely, traditional schools generally have one grade per classroom, and students are mainly taught as a class.

Purpose of the Study

In many schools, teachers are mandated to assign homework by the administration or school district. Thus the challenge for the teacher is often not whether to assign homework, but what content and how much. This study seeks to help answer these questions by examining characteristics of and parent satisfaction with homework assigned to students in grades one through three in both traditional and Montessori schools.

For both Montessori and traditional approaches, the study:

- a. Examines the amount of time, on average, children spend doing homework.

- b. Assesses parent satisfaction that the amount of time spent is appropriate for their child.
- c. Compares types of homework assigned, specifically looking for the content and methodology of the assignments.
- d. Assesses parent satisfaction that the content of the homework is academically appropriate for their child.
- e. Establishes whether tasks are completed independently or with parent involvement.
- f. Assesses parent satisfaction with their level of involvement in their child's homework.
- g. Assesses parent overall satisfaction with their child's homework.

Problem Statement

Does early elementary homework assigned by private, Catholic Montessori and traditional schools in the Cincinnati area differ in characteristics and parent satisfaction?

Objective and Hypotheses

The objectives of the study are to ascertain whether the educational philosophy of the school impacts:

- 1) The characteristics of homework assigned.
- 2) Parent satisfaction with homework.

There are three hypotheses:

- a. The time spent on homework will be roughly equivalent regardless of the school's teaching method.

- b. Homework assigned by Montessori schools allows students more discretion on the homework content versus traditional schools.
- c. Parents of Montessori educated children are more involved with their child's homework compared to parents of children educated in traditional schools.

Significance of the Problem

Homework has been a topic of considerable controversy in 20th century American education, largely because it is a linchpin in the relationship between home and school (Gill & Schlossman, 2003, p. 846).

Homework is both a personal and societal issue. As such, it encompasses political thought and fluctuations ranging from pressure for less homework and annoyance that the school is controlling the home during the early part of the 20th century, to the resurgence of homework after World War II (Gill et al., 2003). The pendulum swung back to less homework in the 1970s and again to more homework in the 1980s and 1990s (Gill et al., 2003). Gill and Schlossman (2003) conclude that current understanding values homework and parental involvement with schooling.

But homework to a particular household is often a complex, personal topic to the point that, "When mothers failed to maintain their positive affect on days they assisted with homework, their heightened negative affect on such days was predictive of children's poor motivational and emotional functioning six months later" (Pomerantz, Wang, Ng, 2005, p. 425). Thus parent attitude and response to homework is an important element for a child's learning.

The points of significance of this research are:

- It is an exploration into Montessori homework, where an extensive literature review has found there is not a large body of scholarly research on the topic.
- The findings may be useful to schools and teachers as they decide how much homework to assign and what content to include. For example, if children making choices within homework assignments results in increased parent satisfaction, then teachers may want to incorporate that into future assignments.
- Improvements to the homework approach could also help schools keep parents committed to being part of the learning team.
- Lastly, students may benefit through the combined commitment of teachers and parents to support quality homework in appropriate amounts.

Basic Assumptions

- 1) Parents answered the survey truthfully.
- 2) The survey assumes the four Catholic schools (two Montessori and two traditional), all private schools, to have a population of families with similar socio-economic status.

Limitations

- The survey provides responses from the fall of 2005.
- External validity is limited by sampling private, Catholic schools in a large mid-western city.

Definition of Terms

Choice – The student is permitted some control over homework assignments, such as topics of essays or books to read.

Homework – Teacher assigned work to be submitted at a later date, generally performed at home, but can be done during a study hall, on a bus, at a friend's house.

Montessori schools - Schools based on teaching methods developed by Dr. Maria Montessori (1870-1952). Children learn in multi-aged classrooms, and are free to move around and choose work within teacher-determined guidelines. Students work independently or in a group. Textbooks are generally not used.

Traditional schools – Schools where children are in single grade classrooms and generally include teacher directed learning. Textbooks are typically used.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Leaving the exogenous and classroom factors aside, this study examines three assignment characteristics shown on Cooper's 1989 Model of Factors

Influencing the Effect of Homework (Appendix A):

- 1) The amount of homework.
- 2) The degree of student choice.
- 3) The amount of parent involvement.

In addition, parent satisfaction with these characteristics is measured. The homework literature primarily concerns traditional schools, so, to balance the investigation, research regarding Montessori homework is reviewed.

Homework Characteristics – Amount

The most obvious characteristic of homework is the time it takes students to complete assignments. The debate over how much time children should spend doing homework caused one city, Shrewsbury, Massachusetts, to do a two-year study regarding homework, including surveying parents, teachers and students (Fairbanks, Clark, & Barry, 2005). At the end of the study, the city school administration decided

that homework would be assigned in grades one through three, Monday through Thursday only, and would take 15 minutes per evening in the first grade, 20 minutes per evening in the second grade, and 30 minutes per evening in the third grade (Fairbanks et. al., 2005).

Although there are some researchers calling for the abolishment of homework (Buell, 2004), most researchers support its use even for the youngest elementary students (Corno, Xu, 2004; Cooper, 2001). Even with this support for homework, many recommend the amount of homework assigned be moderate. Both the National Parent Teacher Association (PTA) and the National Education Association (as cited in Cooper, 2001) suggest homework not exceed 20-30 minutes per day through grade two, and 30-60 minutes per day in grades three through six. In addition, National Assessment of Educational Progress (NAEP) data show that young children are being assigned a moderate amount:

The only age group for which there has been a substantial net increase in homework over the last two decades is the youngest schoolchildren, aged 6-8, who saw homework increase from the negligible amount of 52 minutes weekly in 1981 to the moderate amount of 128 minutes weekly in 1997 (Hofferth & Sandberg, 2000 as cited in Gill and Schlossman, 2004, p. 180).

Although Cooper (2001) has found some relationship between the amount of homework done in grades two and four with achievement in school, Farrow, Tymms, and Henderson (1999) found the opposite. In a study of children in the UK, the researchers found that students with the best test scores on achievement tests were those who completed homework once per month (Farrow et al., 1999). More frequent homework was associated with lower scores in the study.

Homework Characteristics – Choice

Cordove and Lepper (1996) performed an experiment regarding the impact of choice with fourth and fifth grade children. Using a computerized format, four groups of children performed the same math challenge with a fantasy element (space adventure or treasure hunt). Two groups were permitted to personalize the fantasy element, such as using a child's name as the "Space Commander", and their friends' names as crew. The other two groups were not given this flexibility. In addition, two of the groups (one with personalization, one without) were allowed to make choices ancillary to the task, such as selecting the icon that would represent them in the game. These children were also asked to name their space ship and to choose an icon for another character.

The study results showed that seemingly minor choices affected the children's intrinsic motivation positively and the children allowed choices scored significantly higher than the no-choice group on a paper and pencil math post-test (Cordove et al., 1996). Lastly, the researchers examined perceived competence and level of aspiration measures. Asked how good they were at the math challenge, the students who were allowed choice perceived their skills significantly higher than the no-choice group. When asked what level of difficulty the participants would use for a future game, those students who were allowed control over some choices requested a more challenging version of the game (Cordove et al., 1996).

Choice as a characteristic of homework is available to any teacher or school, but may be more associated with the Montessori pedagogy than the traditional approach.

Regarding the six-year-old student, Montessori (1948) declared, “He must have absolute freedom of choice, and then he requires nothing but repeated experiences which will become increasingly marked by interest and serious attention, during his acquisition of some desired knowledge” (p. 5). In addition to schools encouraging children to make choices, parents also may provide choices about when to do homework and other factors influencing homework completion.

Parent Impact on Homework

Cooper, Jackson, Nye, and Lindsay (2001) examined second and fourth graders and their parents and teachers to test a model of the influence of homework on classroom performance. The authors surveyed 28 teachers and 214 parent/child sets. The study states that the completion of a homework assignment “involves the complex interaction of more influences than any other pedagogical technique” (Cooper et al., 2001, p. 181). Structural equation modeling was used to test multiple variables in sequential relation to each other. By doing this, the study found that a student’s grades were predicted by how much homework the student completed (even after the use of homework for grades was controlled). Grades were also predicted by student ability and the amount of parent facilitation. This study was limited by a 35% response rate, however, which was skewed toward Caucasian students who were not eligible for school lunches.

This study’s results are of interest since they bring to light the impact of positive parent facilitation on homework. “Positive parent involvement in homework was the strongest predictor of grades” (Cooper et al., 2001, p. 197). Also these researchers found that while children’s attitude toward homework at this young age did not relate

to their grades, the children's attitude was positively related to parent attitudes toward homework (Cooper et al., 2001). This becomes important in later grades, as student attitudes toward homework are related to achievement (Cooper, Lindsay, Nye, & Greathouse, 1998).

In daily interviews with mothers about their involvement during their children's homework, Pomerantz, Wang, and Ng (2005) found that these mothers assisted their children less as the children progressed through school. They also found mothers' negative affect was heightened on days they provided more homework assistance (Pomerantz et al., 2005). The authors conclude this negative affect relates to parent perception of the child as helpless in completing homework on those days. However they found that mothers' positive affect, measured by questions relating to fun and love, did not vary as a function of whether the child had homework or needed assistance (Pomerantz et al., 2005). This positive affect "buffered children's motivational and emotional functioning against mothers' negative affect as well as children's helplessness" (Pomerantz et al., 2005, p. 414). This study demonstrates the importance of parents in the homework context. If the parents did not moderate their negative affect, the children demonstrated less mastery and increased helplessness when tested six months later (Pomerantz et al., 2005).

Another branch of science has also examined the importance of parents and other adults for children's well-being. Positive psychology, which encourages the building of strengths, capacities, and capabilities in individuals, suggests that, to help children, resources and attention must be paid to the adults who create the environments within which the children develop.

The resources available to the adults who control those contexts are critically important for children's ultimate development. It has been argued that to truly help children, service providers must paradoxically focus efforts and energies on the adults (e.g., parents and teachers) in their lives (Sheridan, Warnes, Cowan, Schemm, Clarke, 2004, p. 7).

By investigating both the characteristics of the homework assigned and parent satisfaction with those characteristics, this study explores what is optimal for families of young elementary students.

The National Center for Education Statistics (2002-2003) performed a survey of parent and family involvement in education (Vaden-Kiernan, McManus, Chapman, 2005). Of interest, the survey found that 83% of the parents ($n=51,388$) said their child's school provided information about how to help with homework (Vaden-Kiernan et al., 2005). Of these, parents of younger children received more direction from the school, with 90%+ of first through third grade parents agreeing that they received direction (Vaden-Kiernan et al., 2005).

The survey also asked parents how satisfied they were with information provided by schools about how to help with homework. The percentage of parents responding that their child's school did "very well" at this was 42% of parents of K-12 students, and 60% of parents of first grade students. Satisfaction with homework instruction to parents decreases as the child advances to higher grades, such that by third grade only 45% agree that their school did very well at providing information about how to help with homework (Vaden-Kiernan et al., 2005). Additional information is given about parental help with homework and how much time students spend on homework.

When asked whether the amount of homework is "about right", 83% of parents of

first grade students agreed that it was, while 81% of parents of second and third grade students agreed (Vaden-Kiernan et al., 2005).

One way children learn what they can and cannot do is from their parents' beliefs. Bempechat (2004) studied achievement motivation through which students attribute success and failure to effort (or lack of it) or to external factors, such as luck or task difficulty. According to Bempechat (2004) attributions are linked to emotions, which predict future achievement behavior. These beliefs about learning can be manipulated through careful interventions by parents and teachers (Bempechat, 2004). Phillips found in a study of high achieving elementary students that:

Although all were exemplary students, some had surprisingly low perceptions of their abilities. Their parents, Phillips discovered, had rather low opinions of their children's skills. These children's beliefs about their abilities were predicted more reliably from their parent's evaluations than by their own (excellent) objective record of achievement (Phillips, 1987, as cited in Bempechat, 2004, p. 191).

Although parents are important to the homework process, research does not suggest parents take the responsibility for doing homework away from the child or get involved to the extent that the parent is doing the homework (Corno & Xu, 2004). A case study was done with six families of third graders and their parents (Xu & Corno, 1998). This study examined parental and child efforts in the following areas:

- arranging the environment,
- managing time,
- monitoring the child's attention,
- monitoring motivation, and
- monitoring emotion.

The researchers found that, although the sample only included professional families with two parents in the home, homework was a challenge and restricted participation in other activities (Xu et al., 1998). They further found that third grade

children in the study were still learning the self-regulation necessary to do homework. They suggest teachers design purposeful homework and understand the difficulties homework creates for families (Xu et al., 1998). This study was limited by its size, dealing with only six families, although it did provide an in-depth look through videotaping the families while homework was in progress.

Teaching Pedagogy: The Montessori Method

Maria Montessori (1870 – 1952) was the first female physician in Italy in 1896 (Standing, 1957). After working with impoverished children she developed her educational philosophy, which revolves around a prepared environment, and work matched with a child's sensitive periods for learning order, language, and other topics (Standing, 1957). She also emphasized autonomy and allowing children to make their own choices.

Montessori teachers are trained at certain universities and can be certified by the American Montessori Society (AMS) or the Association Montessori Internationale (AMI). A Lower Elementary (age 6-9) Montessori classroom contains materials designed by Dr. Montessori, such as the math bead cabinet and a moveable alphabet with letters that can be spread out on a mat to make words. Generally there are no textbooks in these Lower Elementary classes. This leaves a teacher to his or her own devices regarding homework.

At the same time student autonomy and choice are emphasized in the classroom, children are expected to learn the subjects and information from the state curricula. The Montessori curriculum and materials assist students learning the necessary academics, but the method is very demanding of its teachers. The teacher must be

observing, working with students, assessing students, maintaining the prepared environment, and developing and updating a complete homework policy. According to Seldin (2005) Montessori homework “involves meaningful, interesting assignments that expand on the topics that the children are pursuing in class. Many assignments invite parents and children to work together” (p. 22). He further states that Montessori homework can be organized into three groups:

- 1) *Things to be experienced* such as reading a book, visiting a museum, or seeing a play.
- 2) *Things to learn* stated in terms of skills and knowledge, such as “see if you can learn these problems well enough that you can teach the skill to a younger student.”
- 3) *Things to be submitted*, such as a play, essay, story, experiment, or model. (Seldin, 2005, p. 22)

Conclusion

Homework is a generally accepted educational practice, found in almost every school. Given parent influence over children’s homework environment and schedule, and the power of parent attitude toward homework over their children’s perceptions of their abilities, this research explores parent perceptions of homework. The study also investigates whether there is a difference between characteristics of traditional and Montessori school homework.

CHAPTER III

METHODOLOGY

Purpose of the Study

The purpose of this study is to investigate the differences in characteristics of homework between Montessori and traditional schools. The research also investigates parent satisfaction with homework assignments. Parents of children in the early elementary grades are surveyed.

Setting and Population

The population for this investigation includes parents of first through third grade children at four Catholic schools in the Cincinnati area ($N=424$). A census was taken of all the parents of children in those grades at the target schools. Two of the schools are Montessori schools ($N=125$), and two of the schools use a traditional teaching method ($N=299$). These schools were chosen to minimize the variance of socio-economic status.

Data Collection

A survey was sent home through each school's communication system. The packet included a 12-question survey (Appendix B), an introductory letter, a self-addressed, stamped envelope, and a small candy-cane as an incentive. Surveys were not identified to specific children, thus non-responders were not tracked.

The surveys were delivered to the schools on Monday, November 28, 2005. The school administrations had agreed to send them home in the children's backpacks that week. The cover letter addressed to parents asked that the survey be returned in the envelope provided by December 6, 2005.

Survey

Demographic information such as gender, marital status, and highest level of education was collected, in addition to the child's grade. Following that the topic questions covered three areas:

- three questions regarding amount of homework and satisfaction with it,
- two questions regarding child's control over homework, and
- three questions regarding parental involvement in homework.

Also included were questions regarding the homework being appropriate to the child's abilities, satisfaction that the assignments are assisting the child's learning, and overall satisfaction with homework. Finally, content areas were listed for the parent to mark if the child received that type of homework on an average evening (silent reading, math, worksheets, reading aloud to an adult, writing science, social studies/history, and other).

Data Compilation and Analysis

Data are analyzed as follows:

- 1) Raw data percentages of agreement with each question. This is done by school type – Montessori or traditional.
- 2) The questions are analyzed in groups using the 5-point Likert scale, where three separate areas are examined: i) time spent on homework, ii) choice allowed in homework, and iii) parent involvement in homework.
- 3) Mean responses and standard deviations are examined.
- 4) A Pearson Product-Moment Correlation between school method and responses is investigated.

Summary

The instrument used was sent through four schools to children's parents. The data provided are of a descriptive nature, and a relationship between school pedagogy and characteristics of homework is explored. The results can be generalized to the target population.

CHAPTER IV

RESULTS

Demographics and Response Rate

To explore early elementary homework requirements with valid data, the target population was restricted to four Catholic schools in Cincinnati, Ohio. In this way, intervening variables were kept to a minimum, and the population was fairly homogeneous. The findings (see Appendix D for complete data set) indicated that this was the case in terms of parent education, with the vast majority of respondents (83%) having a bachelors degree or higher, and an even greater majority being mothers in a two-parent household (87%).

An indication of the extent to which parents were involved in their child's schooling was expressed by the uniformly high response rate. An overall response rate of 67% ($N=424$, $n=284$) breaks down to 71% of Montessori parents responding ($n=88$), and 66% of traditional school parents responding ($n=196$). When Montessori and traditional responses are combined, the total response rate was an even 67% for each grade level (see Table 1 on next page).

Table 1

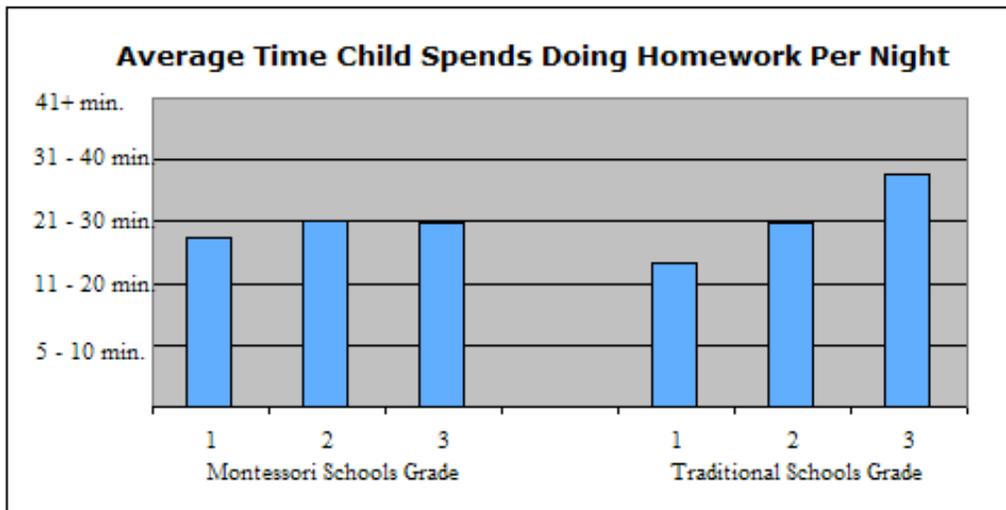
		Response Rate Analytics			
		Grade			Total
		1	2	3	
Montessori School A	Total Students	18	19	15	52
	# of responses	12	14	10	36
	Response Rate	67%	74%	67%	69%
Montessori School B	Total Students	25	28	19	72
	# of responses	16	18	18	52
	Response Rate	64%	64%	95%	72%
Total Montessori	Total Students	43	47	34	124
	# of responses	28	32	28	88
	Response Rate	65%	68%	82%	71%
Traditional School A	Total Students	58	53	53	164
	# of responses	32	39	33	104
	Response Rate	55%	74%	62%	63%
Traditional School A	Total Students	49	44	42	135
	# of responses	40	26	26	92
	Response Rate	82%	59%	62%	68%
Total Traditional	Total Students	107	97	95	299
	# of responses	72	65	59	196
	Response Rate	67%	67%	62%	66%
Grand Total	Total Students	150	144	129	423
	# of responses	100	97	87	284
	Response Rate	67%	67%	67%	67%

The exploration of homework characteristics follows, beginning with a description of the three hypotheses and their results, then parent satisfaction results, and finally an exploration of the topic areas of homework assigned by schools. After examining the time spent doing homework, the instrument used a 5-point Likert scale, with 1 being “strongly disagree” and 5 being “strongly agree”. In this way, the higher the number reported the more parents indicated agreement.

Time Spent Doing Homework

The survey respondents reported that children in both Montessori and traditional schools do homework for 21-30 minutes on average 3-4 evenings per week. The amount of homework differed by grade level, however, particularly in the traditional schools, where children in first grade spent less time doing homework than children in second grade, and third graders spent the most time doing homework (Figure 1).

Figure 1



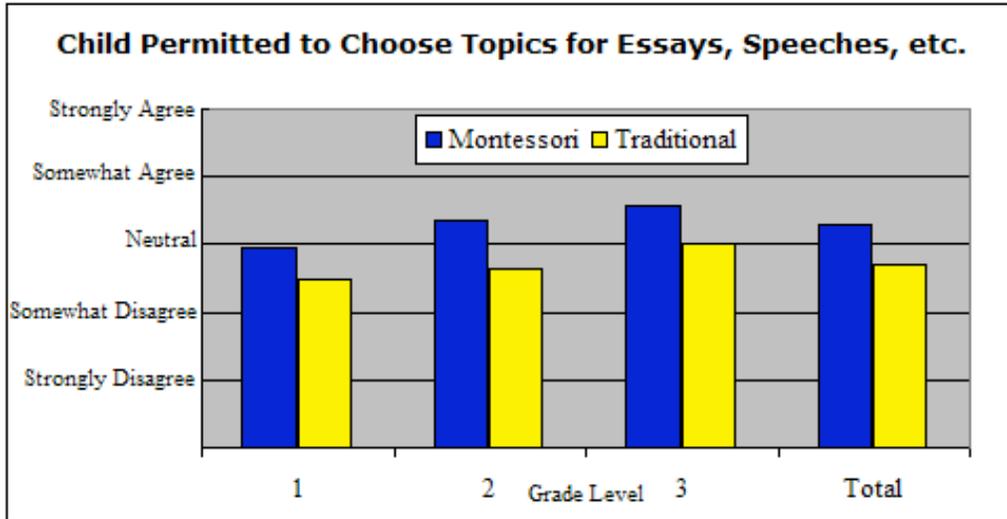
The Montessori school mean was 2.9, or just under 21-30 minutes per night, and the traditional school mean was 3.0 (21-30 minutes per night).

Choice of Content

Choice in the homework process was measured by two questions. The first asked about the child being permitted to choose topics for essays, speeches, poems or other projects. The second asked about the child being allowed to choose books for reading homework. In the first case, Montessori parents indicated their children were allowed to choose topics over twice as often as parents of traditionally schooled children (Figure 2). In the second case, the great majority of the early elementary students,

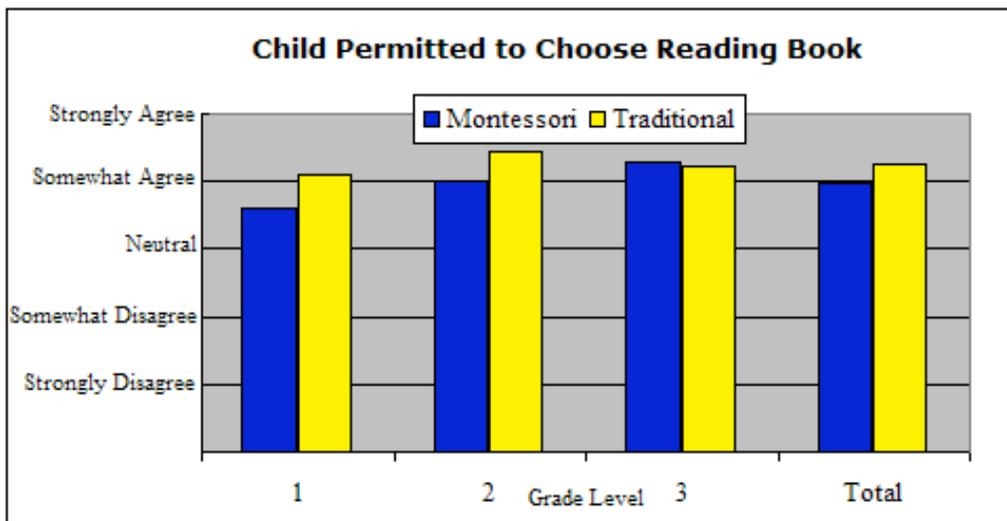
regardless of school pedagogy, were allowed to choose books to read for homework (Figure 3).

Figure 2



The overall Montessori school mean for this question was 3.3 ($SD=1.3$), with 53% saying they somewhat or strongly agree. The overall traditional school mean for this question was 2.7 ($SD=1.1$), with 24% saying they somewhat or strongly agree.

Figure 3



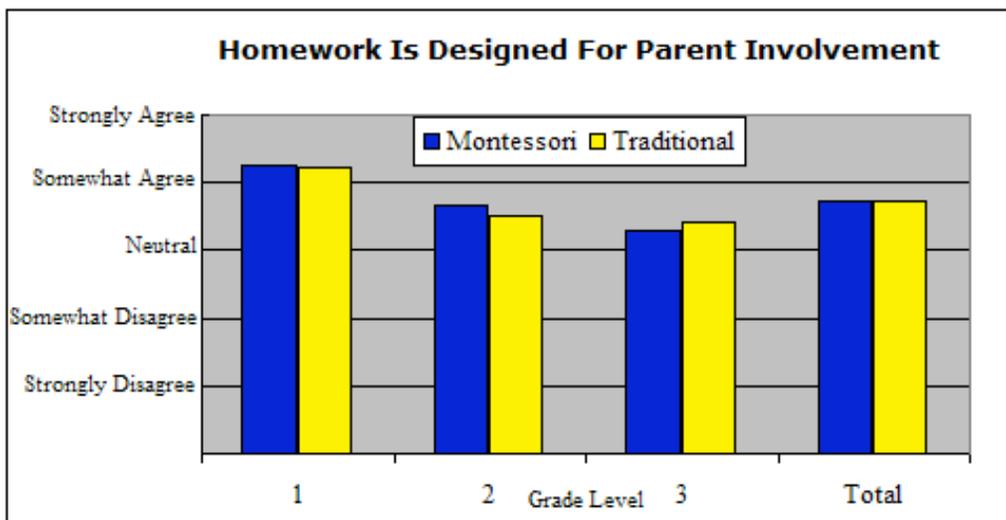
The overall Montessori school mean for this question was 4.0 ($SD=1.3$), with 72% indicating they somewhat or strongly agree. The overall traditional school mean for this question was 4.3 ($SD=1.2$) with 83% indicating they somewhat or strongly agree.

Parent Involvement in Homework

Parental involvement was also measured by two questions. The first asked whether homework was designed to be done independently by the student, and the second asked if students actually do their homework independently.

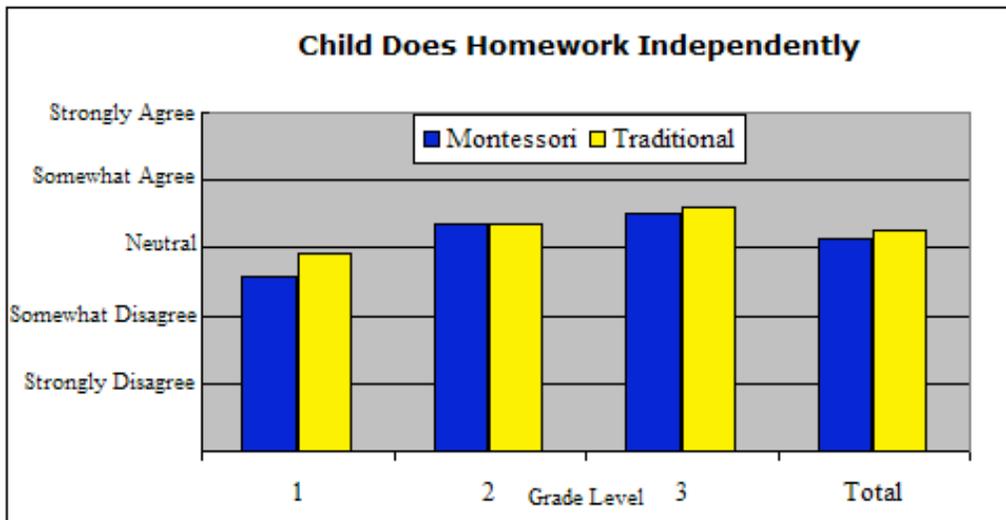
Parents indicated that homework in these early elementary years is designed for parental involvement, and at the same time the mean for both pedagogies did indicate slightly that the children do their homework independently. The survey respondents indicated that children's independence with homework is related to their grade. Children in first grade had more parental involvement than children in second grade, and children in third had the least parental assistance. This was evident through responses to both questions (Figure 4 and Figure 5).

Figure 4



The overall Montessori school and traditional school mean for this question was 3.7 ($SD=1.1$ Montessori, $SD=1.0$ traditional). To this question, 66% of both Montessori school and traditional school parents indicated somewhat or strong agreement.

Figure 5



The responses to this question were very similar, with the Montessori school mean to this question at 3.2 with 52% indicating they somewhat or strongly agreed.

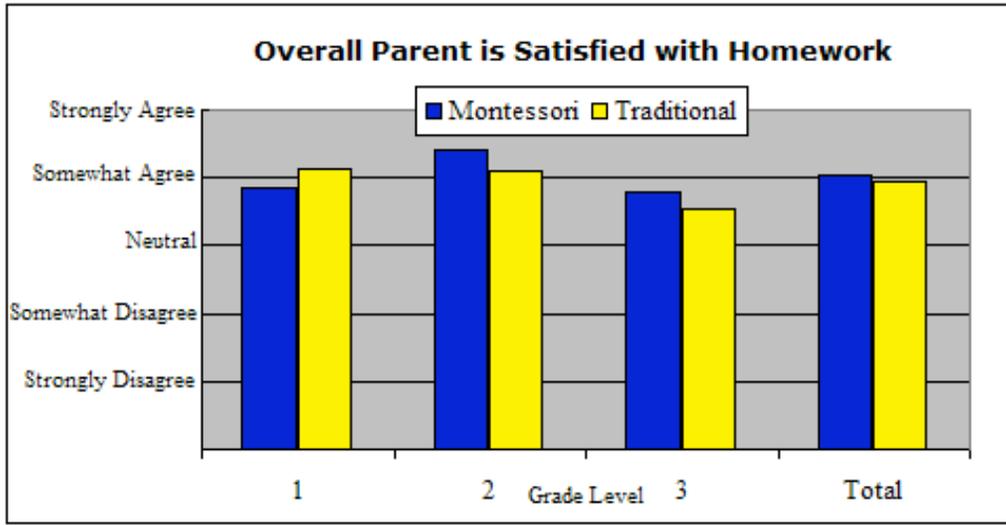
Traditional school parents strongly or somewhat agreed 55% of the time, and their mean was 3.3. The standard deviation for both pedagogies was 1.3.

Overall Parent Satisfaction

Overall, parents reported being very satisfied with their child’s homework.

Parents whose children attend traditional schools showed a downward trend, in which parents of younger children were more satisfied overall with homework than parents of older children. This trend was not evident in the Montessori schools where parents of second grade children were the most satisfied (Figure 6).

Figure 6

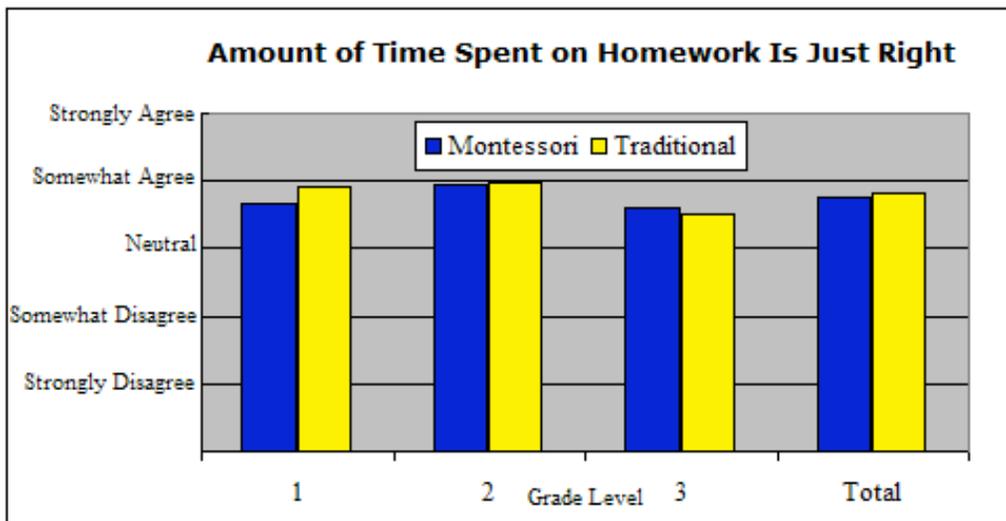


Montessori school parents indicated a 4.0 mean ($SD=1.0$) to this question, with 80% saying they strongly or somewhat agreed that overall they were satisfied with their child’s homework (see Figure 6). Traditional school parents had a 3.9 mean ($SD=1.1$), with 72% saying they strongly or somewhat agreed.

Parent Satisfaction with Homework Characteristics

The first characteristic considered the time a child spends on homework.

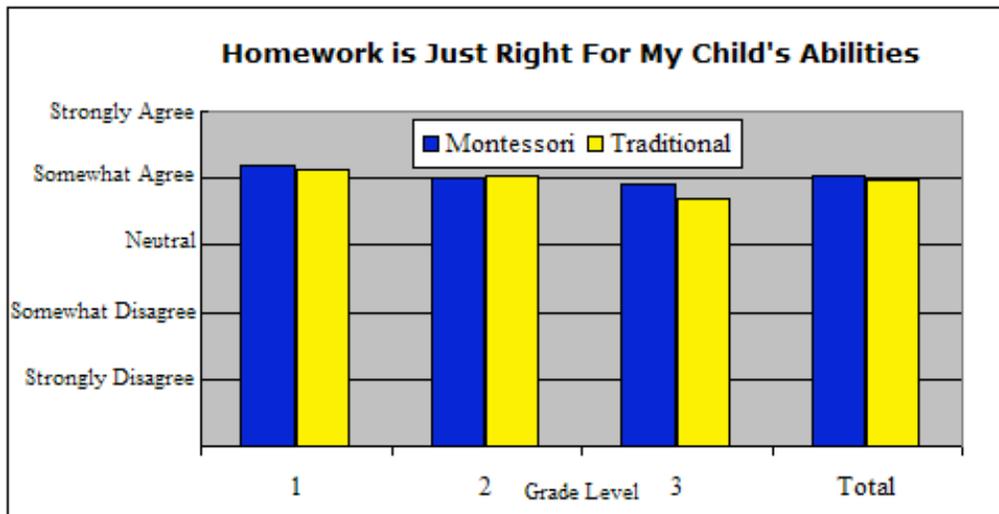
Figure 7



Parents from both pedagogies were equally pleased with the time students spent on their assignments ($M=3.8$). The Montessori and traditional schools' mean were 3.8 ($SD=1.2$, $SD=1.1$) with 69% and 70% of parents somewhat or strongly agreeing, respectively,

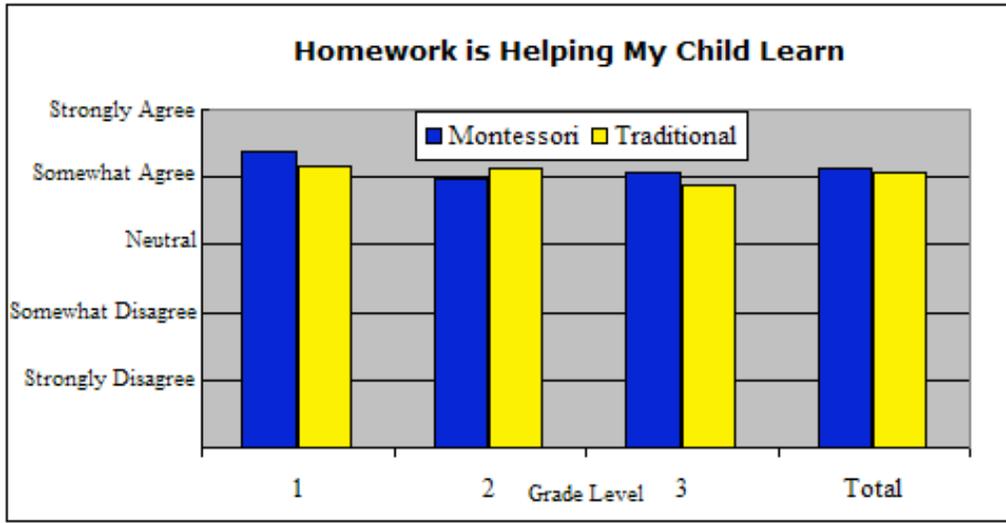
The second assessment included two questions regarding the content of homework. The first explored whether the assignments matched the student's abilities, and the second assessed whether parents perceive the assignments help their child learn. Parents on average responded that they somewhat agree that homework matched their child's abilities, and that the homework assigned was helping their child learn (Figure 8 and Figure 9).

Figure 8



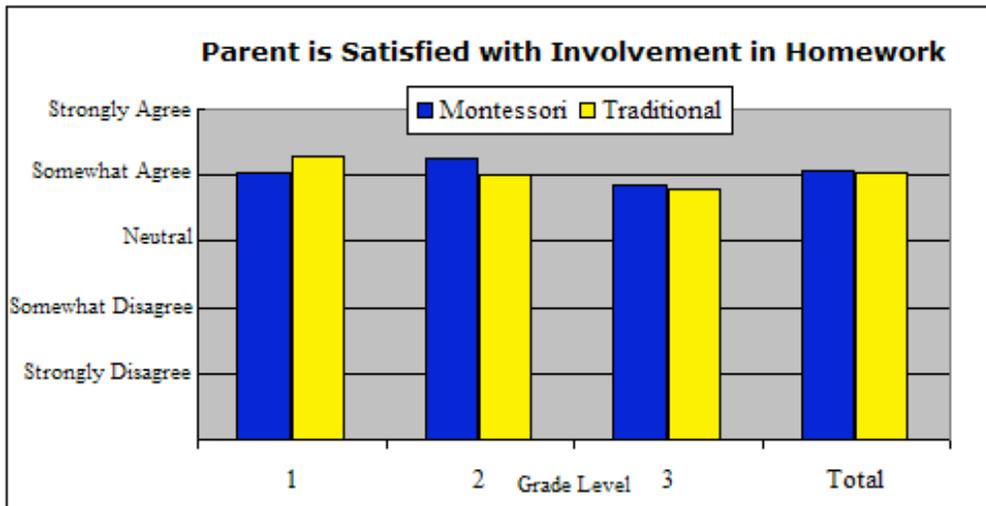
The Montessori schools' mean to this question was 4.0 ($SD=1.1$), with 82% saying they somewhat or strongly agreed, while the traditional schools' mean was 4.0 ($SD=1.1$) with 74% saying they somewhat or strongly agreed.

Figure 9



The Montessori schools' mean was 4.2 ($SD=1.1$), with 84% saying they somewhat or strongly agreed, while the traditional school mean was 4.1 ($SD=1.0$), with 77% traditional schools' parents saying they somewhat or strongly agreed (Figure 9).

Figure 10



Thirdly, parents' satisfaction with their level of involvement with their child's homework was explored (Figure 10). The Montessori and traditional schools' means

were 4.1 ($SD=1.1$, $SD=1.0$) with 80% and 77% saying they strongly or somewhat agreed, respectively.

In Table 2, the satisfaction percentages are given.

Table 2

Parent Satisfaction With Homework: Data Distribution					
	<u>Overall Satisfaction</u>	<u>Homework Amount</u>	<u>Right for Abilities</u>	<u>Helps Learning</u>	<u>Parent Involvement</u>
Montessori Schools					
Strongly Agree	40%	30%	39%	44%	40%
Agree	<u>40%</u>	<u>40%</u>	<u>43%</u>	<u>40%</u>	<u>40%</u>
Top 2 Scores	80%	69%	82%	84%	80%
Neutral	6%	13%	5%	5%	10%
Disagree	14%	14%	9%	5%	7%
Strongly Disagree	1%	5%	5%	6%	3%
No Response	0%	0%	0%	1%	0%
Traditional Schools					
Strongly Agree	35%	32%	40%	40%	38%
Agree	<u>37%</u>	<u>39%</u>	<u>34%</u>	<u>37%</u>	<u>38%</u>
Top 2 Scores	72%	70%	74%	77%	77%
Neutral	11%	12%	9%	11%	11%
Disagree	12%	13%	13%	9%	11%
Strongly Disagree	2%	4%	3%	2%	0%
No Response	3%	1%	1%	2%	1%
Total					
Strongly Agree	36%	31%	40%	42%	39%
Agree	<u>38%</u>	<u>39%</u>	<u>37%</u>	<u>38%</u>	<u>39%</u>
Top 2 Scores	74%	70%	77%	79%	77%
Neutral	10%	12%	7%	9%	11%
Disagree	13%	13%	12%	8%	10%
Strongly Disagree	1%	4%	4%	3%	1%
No Response	2%	0%	1%	1%	1%

On average, parents of Montessori students reported satisfaction (Top 2 scores) with homework that is approximately 5% above that of the traditional school parents.

Topic Areas Assigned by Schools

At the end of the survey, a checklist for homework content asked parents to mark which types of homework were assigned on an average day. The areas included math, silent reading, reading aloud to an adult, worksheets, writing, science, social studies, and other. The most commonly assigned homework is math, with almost all Montessori school students and 80% of the traditionally school students required to

do math each evening homework is assigned. About 60% of all the lower elementary students are required to do silent reading, and 60% of Montessori school students and 50% of traditionally educated students are required to do some writing assignments. Half the Montessori school students and 80% of the traditionally school students are required to read aloud to an adult.

Worksheets are required more of students in traditional schools, with 80% of them assigned worksheets, and 50% of children in Montessori schools assigned worksheets. Lastly, parents of students in traditional schools classified their child's homework as science or social studies 10% and 20% of the time, respectively, while almost none of the Montessori students were assigned these topics.

Correlation with Overall Satisfaction with Homework

A Pearson Product-Moment correlation was run for each topic question as a predictor of parent overall satisfaction with their child's homework (see Appendix C). The first finding of interest was that more choices in homework were not correlated with overall parent satisfaction. There was, however, a moderate positive correlation for the overall satisfaction with homework of parents of children in Montessori schools with the amount of time the child spends doing homework. In addition, parents of children in traditional schools overall satisfaction with homework was moderately correlated with satisfaction that homework was helping their child learn, and moderately correlated with parents' perceptions that the homework assigned was just right for the child's abilities. Lastly, there was no correlation between the autonomy of homework completion and parent overall satisfaction.

CHAPTER V

SUMMARY OF FINDINGS

Summary of Research Findings

To explore first through third grade students' homework, parents of students in four private, Catholic schools were surveyed, with 67% of the target population responding. Three hypotheses and their results begin the summary, followed by parent satisfaction with homework results. Next, assigned topic areas will be examined. Lastly, conclusions and recommendations for future research and practice will be explored.

Time Spent Doing Homework

The null hypothesis that there is no difference between traditional school and Montessori school children regarding time spent on homework was found tenable. As anticipated, no difference was seen between the pedagogies with regard to the number of nights per week children do homework. Most (70%) parents said their child does assignments 3-4 nights per week. The majority of children (67%) spend 11-30 minutes on the evenings they do homework. In the traditional schools, however, more of a progression is shown, with first graders doing the least, second graders a bit more, and third graders spending the most time doing homework (see

Figure 1). The Montessori school second and third grade students, on the other hand, spent about the same amount of time on homework.

Choice

Children who attend Montessori schools are permitted to choose topics for essays, speeches, poems, or other projects more than twice as often as students who attend traditional schools (52% vs. 24%). This was expected, as the child's freedom of choice is an important component of the Montessori method. The hypothesis that children educated in the Montessori environment receive more choices was thus supported by data.

The survey question which asked parents whether their children were allowed to choose their reading books was confirmed by a large majority of parents. Seventy-two percent of the Montessori school parents and eighty percent of the traditional school parents said they somewhat or strongly agreed that their child was allowed to choose books to read. This indicates that reading choice was a common educational practice and does not support the hypothesis that Montessori schooled children have more choice of books.

Parental Involvement

Although the hypothesis suggested that parents of Montessori school students would have more involvement in their child's homework, no difference was found. Homework was designed to include parental involvement in identical amounts regardless of pedagogy ($M=3.7$). Consistent with Pomerantz et al. (2005), there was a downward trend, with first graders having homework designed for parental involvement most often, and third graders having it the least.

Parent Satisfaction With Homework

Across the parent satisfaction vectors studied, all four schools involved in the study were rated as having high parent satisfaction. In many of these areas, over 75% of the parents said they strongly or somewhat agreed that they were satisfied (see Table 2, page 28). Parents of Montessori students were, on average, 5% more satisfied with homework assignments than parents of traditionally schooled students (Table 2). The largest differences were in the “Homework is right for my child’s abilities” question, in which 82% of the Montessori sample, and 74% of the traditional sample said they somewhat or strongly agree. In addition, “Homework helps my child learn” was somewhat or strongly agreed to by 84% of the Montessori sample, and 77% of the traditional sample.

The correlations for overall parent satisfaction with homework show that parents of Montessori students are more content when the amount of time the child spends on homework is “just right”. Sixty-nine percent of these parents strongly or somewhat agreed that the time their child spends doing homework was “just right”, and there was a moderate relationship between this choice and overall homework satisfaction (41%).

Parents of traditionally schooled children were more satisfied when homework assigned was “just right for my child’s abilities” and homework was “helping my child learn”. The correlation for both is positively moderate (31% and 34%, respectively). Parents of children in traditional schools were less satisfied with these

criteria than parents of children in Montessori schools (see Figures 8 and 9, pages 26-27).

Topic Areas Assigned by Schools

As shown in the previous chapter, the most commonly assigned homework was math, followed by silent reading and writing assignments. Half of the Montessori students and 80% of the traditionally schooled students were required to read aloud to an adult. These data are interesting, but caution must be used when interpreting them because the way parents mark the topics might differ in many regards. For example, if a teacher issues homework weekly, or assigns a different topic each weeknight, the data may not be consistent from parent to parent.

Conclusions

Elementary students and their parents confront the homework issue in a personal way. Families have to fit it into their schedules, and parent attitude toward this topic has a large effect on how their children see homework (Pomerantz, et al., 2005, Cooper, et al., 1998). The findings suggest that parents in the communities surveyed are not unhappy with this predicament. Eighty percent of Montessori parents surveyed, and 72% of parents of students in traditional schools somewhat or strongly agree that they are satisfied overall with their child's homework.

In addition, almost half of these parents (48% Montessori, 45% traditional) are involved with their child's homework. These two responses together suggest these families are working with their children's schools to promote academic progress.

One interesting finding regarding the parent satisfaction scores is that, with one exception, the parents of third graders are the least satisfied. Pedagogy aside, as the

child advances in school and the academic requirements become more demanding, that challenge appears to be translating to families through homework in most cases. This trend is consistent with a National Center for Education Statistics survey. This survey asked whether the amount of homework was “about right” and 83% of kindergarten and first graders’ parents agreed that it was, while 81% of second and third graders’ parents, and 74% of 4th-5th graders’ parents agreed. (Vaden-Kiernan, McManus, Chapman, 2005).

The finding that Montessori parents are more satisfied than traditional parents that their child’s homework matches their child’s abilities and helps their child learn is of interest (see Table 2, page 28). The Montessori method emphasizes educating individual children as opposed to large groups, and in this context it makes sense that the homework assigned would be targeted to the individual child. By assigning more personalized homework, Montessori teachers can better affect each child’s learning. Taken together these two responses may demonstrate a relationship between pedagogy and overall satisfaction with homework.

Recommendations for Future Research

Although higher choice permitted in the sample Montessori schools was not correlated with overall homework satisfaction, it would be useful to follow Cordove and Lepper’s (1996) results and explore whether this higher choice leads to increased intrinsic motivation. Cordove and Lepper (1996) also found that students allowed more choices scored significantly higher than the no-choice group on tests. Does the increased choice permitted in Montessori schools lead to higher achievement?

Investigating Montessori and traditional homework in other settings could also expand the results of this study. A city where public Montessori schools are available would be ideal, because both populations could be students in urban public schools. In different populations Montessori and traditional schools may vary in parent satisfaction and involvement, homework assigned, and other characteristics.

In addition, Montessori and traditional school assignments may differ in older, more academically challenging grades more than it does in the younger, beginning elementary years. Further explorations could describe the similarities and differences.

Lastly, an exploration of teacher perceptions and challenges with homework would be valuable. A combination study sampling teachers and parents could explore classroom to home communication regarding homework. Included could be an investigation into strategies teachers might use to educate parents about how to help with homework. This is highly recommended because although 83% of parents (n=51,388) in the National Center for Education Survey said their child's school provided information about how to help with homework, only 42% of these parents stated that their child's school did "very well" at providing adequate information for this purpose (Vaden-Kiernan, McManus, Chapman, 2005).

Recommendations for Practice

The finding that time spent on Montessori homework in second and third grade is approximately equal may give Montessori teachers an opportunity to develop more challenging homework for their older students. In this way, teachers would be

encouraging learning in students who are both more capable and also will soon be entering more demanding middle elementary grades.

Another finding which could affect the practice of assigning homework is the importance of parent attitudes and facilitation. The research suggests that although the assignments are the child's responsibility, a teacher who can educate parents about the importance of their facilitation may help the student both in completing the assignments and in their attitudes toward their homework. Because parent attitude toward homework predicts the young child's attitude, the child's educational needs may be assisted by teacher and parent cooperation.

Finally, the current study found that overall parental satisfaction with homework had a moderate positive correlation (see Appendix C) with three areas:

- The time the child spends doing homework is “just right”.
- The homework assigned is helping the child learn.
- The homework assigned is just right for the child's abilities.

These findings suggest that schools encourage reciprocal communication with parents as an ongoing process. In this way, teachers will both have the opportunity to hear parents' perceptions of homework, and also to educate parents just how homework is appropriate for their child's skills and assisting their child's academic growth.

APPENDIX A
Cooper's (1989) Table

TABLE 1 A Model of Factors Influencing the Effect of Homework

Exogenous Factors	Assignment Characteristics	Initial Classroom Factors	Home-Community Factors	Classroom Follow-Up
Student characteristics:	Amount	Provision of materials	Competitors for student time	Feedback
• Ability	Purpose	Facilitators:	Home environment:	• Written comments
• Motivation	Skill area utilized	• Suggested approaches	• Space	• Grading Incentives
• Student habits	Degree of individualization	• Links to curriculum	• Light	
Subject matter		• Other rationales	• Quiet	Testing of related content
Grade level			• Materials	Use in class discussion
	Degree of student choice		Others' involvement:	
	Completion deadlines		• Parents	
	Social context		• Siblings	
			• Other students	

Parent Homework Survey

APPENDIX B

Demographic Questions

What is your gender?

- Female
 Male

What is your marital status?

- Married
 Single

What is your highest level of education:

- high school graduate
 some college
 associates degree
 bachelor degree
 graduate degree or more

My child attends a:

- Montessori school
 Traditional school

My child is in grade:

- 1
 2
 3

Topic Questions

The following questions are asking your opinion regarding your child's homework. Please answer using your best estimate of the average for your child during this school year.

On average, my child does homework

- 0 nights per week
 1 – 2 nights per week
 3 – 4 nights per week
 5 or more nights per week

On nights my child does homework, the average time my child spends doing homework is

- 5 – 10 minutes
 11 – 20 minutes
 21 – 30 minutes
 31 – 40 minutes
 41+ minutes

To what extent do you agree with the following statements:

The amount of time my child spends on homework is just right.

- strongly disagree
 somewhat disagree
 neutral
 somewhat agree
 strongly agree

My child's homework permits my child to choose topics for essays, speeches, poems, or other projects.

- strongly disagree
 somewhat disagree
 neutral
 somewhat agree
 strongly agree

If my child's homework includes reading, my child can choose the book.

- strongly disagree
 somewhat disagree
 neutral
 somewhat agree
 strongly agree

PLEASE TURN OVER...

Parent Homework Survey

The homework my child is assigned is just right for my child's abilities.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

I am satisfied that the homework assigned is helping my child learn.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

My child's homework is designed to be done with a parent's involvement.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

My child does his/her homework independently.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

I am satisfied with the amount of involvement I have with my child when he/she is doing homework.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

Overall I am satisfied with the homework assigned to my child.

- strongly disagree
- somewhat disagree
- neutral
- somewhat agree
- strongly agree

Homework Content

Please check the types of homework which your child is assigned on an average day (check all that apply).

- Math
- Silent Reading
- Reading aloud to an adult
- Worksheets
- Writing
- Science
- Social Studies/History
- Other _____

Thank you for taking this survey.
Please mail in the envelope
provided.

Pearson Product-Moment Correlations and Coefficients of Determination

	The amount of time my child spends on homework is just right	My child's homework permits my child to choose topics for essays, etc.	It my child's homework includes reading, my child can choose the book.	The homework assigned is just right for my child's abilities	I am satisfied that he homework assigned is helping my child learn	My child's homework is designed to be done with a parent's involvement	My child does his/her homework independently	I am satisfied with the amount of involvement I have with my child's homework
Overall Satisfaction Correlation	0.54	0.18	0.00	0.56	0.58	0.10	0.15	0.49
Correlation co-efficient	29%	3%	0%	31%	34%	1%	2%	24%
<u>Montessori Schools Only</u>								
Overall Satisfaction Correlation	0.64	0.29	0.01	0.49	0.42	(0.13)	0.35	0.45
Correlation co-efficient	41%	8%	0%	24%	17%	2%	12%	20%
<u>Traditional Schools</u>								
Overall Satisfaction Correlation	0.50	0.12	0.00	0.59	0.66	0.23	0.06	0.51
Correlation co-efficient	25%	1%	0%	34%	44%	5%	0%	26%

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