

WORST DAY TO ASSIGN HOMEWORK: A STUDY OF MISSING ASSIGNMENTS AND
DUE DATES IN ONE RURAL MISSOURI HIGH SCHOOL

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ABSTRACT

This study was designed to examine whether the day of the week an assignment is due has an effect on the rate at which it is completed on time. If teacher intent is to decrease the number of missing assignments, is there a worst day of the week to have homework due? Is there a best day? The participants studied during the spring 2011 semester were 104 rural high school students in grades nine through twelve. Numbers of missing assignments for each day were analyzed using descriptive data and a Chi Square analysis of significance. The results indicate that the day of the week an assignment is due has a significant effect upon the rate of completion. The day with the most missed assignments was Monday. The day with the fewest missing assignments was Wednesday. In this rural school, teachers who assign homework that is due on a Wednesday will likely see fewer missing assignments, which may lead to greater student achievement.

Introduction

This study examines the relationship between missing assignments and the day of the week on which they were due. Data was collected using a software program, Grade Watch, which tracks missing assignments. Results were calculated using missing assignments during spring semester of 2011 in grades 9-12 at Worth County R-III High School. The rural school has a high school enrollment of 107, a K-12 enrollment of 335, and is located in northwest Missouri, serving the entire county of Worth.

Background, issues, and concerns

High school students occasionally fail to complete their assigned homework. When they do not complete their homework, students are less than fully prepared for class. If they miss the review of a new concept or the practice of new skills, then learning is not achieved. Student schedules can be consistent, including schedules for work, practice, and weekend activities. Teachers at Worth County R-III High School may benefit from knowing which day of the week they are more likely to have students not complete their work. Teachers could avoid assigning homework to be due that day or make modifications to the assignment to ensure a higher percentage of completion.

Practice under Investigation

This study aims to identify the homework completion practices of high school students in order to influence the behavior of teachers when assigning homework.

School policy to be informed by study

Individual teachers set the classroom homework policy. In many cases homework is expected to be completed at the beginning of the next class period. In other cases, a long term project is assigned and has a later due date.

Conceptual Underpinning

Students may complete or not complete their homework for a variety of reasons. Perhaps they have parents who rigorously monitor their progress, or they may have an intrinsic need to please the teacher, or a drive to achieve high marks. Students may not complete their homework because they do not understand the task, are too busy, too tired, or perhaps homework is a low priority in their home.

Student completion of homework is moderately linked to better achievement in junior high/middle school and substantially linked in high school (Cooper, 2001, p.36). If high school teachers can maximize the completion of homework, student achievement may increase. If we believe that homework is important for student achievement, then finding a way to ensure completion of the assignments is an important step teachers can take toward that goal.

Statement of the problem

During the spring semester of 2011, the one hundred four students in grades nine through twelve at Worth County R-III High School failed to complete 2,995 assignments by the assigned due date. If one assumes an average of three daily homework assignments, a rough estimate of the total number of assignments due for the semester would be 32,400 (one hundred four

students times three daily assignments times ninety school days in the semester). In this case the missing assignments (2995) constitute 9.2% of all assignments. However, if an average of two assignments per day is used, the total assignments would be 21,600, of which the missing 2,995 assignments come to 13.9%. Using either calculation, a sizeable portion of students is not prepared for class, which may impact their understanding of current and future lessons, affecting their achievement.

Purpose of the study

This study is designed to determine which day of the week teachers should avoid when choosing due dates in order to optimize return of completed assignments, leading to anticipated improvements in learning, grades, test scores, and overall achievement.

Research questions

RQ1: Is there a worst day of the week to assign homework?

RQ2: Is there a best day of the week to assign homework?

Null hypothesis

The day of the week on which homework is due has no significant effect upon the rate of completion.

Anticipated benefits of the study

If results indicate that a particular day of the week is associated with low completion rate, then the instructor may be able to alter assignment due dates to optimize student completion of homework, leading to greater success in the course.

Definition of Terms

Homework - tasks assigned to students by school teachers that are intended to be carried out during non-school hours (Cooper, 1989, p.7)

Summary

When teachers assign homework and students do not complete it learning may be lost. In order to understand why homework goes undone, we should start by identifying patterns such as due dates. This knowledge may help us understand our students better and guide our homework policies to increase student learning.

Review of Literature

When should teachers assign homework? In the United States there has been an ongoing debate over homework. Some think students need more daily homework, while others think students have too much homework.

The journal *The Economist* paints a picture of how lazy American students are and specifically addresses the amount of homework American students do. “The lagging performance of the country’s school pupils, particularly its poor and minority children has wreaked more devastation on the economy than the current recession” (Lexington, 2009, p.40). The average American student has only one hour of homework per night, a fact which stuns Chinese and Japanese people. The authors describe Americans as being in denial about the state of the world economy. “They still find it hard to believe that all those Chinese students, beavering away at their books, will steal their children’s jobs.” (Lexington, 2009, p.40).

Another view of homework is held by vocal parents who are frustrated with what they see as an overabundance of homework infringing on the extra-curricular lives of their children, leaving them to choose between doing homework or participating in activities such as piano lessons, soccer, or scouts. Too much homework can also harm family time. In a 1998 study, almost half of parents reported having serious arguments over homework (Lacina-Gifford, & Gifford, 2004). Parents and students need down time and are tired of the homework loads. Parents thought students needed other experiences in the evenings, such as clubs, sports, or social interaction.

Homework has been blamed not only for limiting after-school activities and causing family problems, but also of widening the achievement gap. In the book *The End of Homework*

the authors Kralovec and Buell argue that “homework reinforces social inequities” (2000, p.40). Due to the number of dual-income and single-parent families, poor American families no longer have time to help their children with homework. “The time and the cultural and educational and resources required are just not there” (Kralovec & Buell, 2000, p.8). On the same lines, *The American Teacher* explains how socioeconomic differences affect homework. “Advantaged students have more resources at home, such as computers, and receive more help with their homework” (Glass, 2009, p.7).

Homework truly has both positive and negative effects. Retention of facts and deeper understanding of the subject matter are primary positive effects. Others include improved critical thinking, concept formation, and information processing; curriculum enrichment; learning during leisure time; improved attitude toward school; better study habits; and improvements in self-direction, self-discipline, time organization, inquisitiveness, independent and problem solving. Another benefit of homework is increased parental involvement in the student’s school life (Cooper, 2001).

Not every aspect of homework is so positive however. Primary negative effects of homework include loss of interest in academics, physical and emotional fatigue, and denial of access to leisure time or community activities. Other negative effects are pressure to complete assignments and do them well; conflicting instructional techniques; copying from other students; receiving help beyond tutoring from parents or others; and increased differences between low and high income homes (Cooper, 2001).

Research on this topic is divided, so whether students are overly burdened with homework or not may be a matter of opinion. However, in a 2010 survey only thirty-nine

percent of high school freshmen completed their homework frequently (Wilson, & Rhodes, 2010). This highlights the problem with both arguments. Whether American teachers are assigning too little or too much homework, the fact remains that many students are simply not doing the work. But why does this happen?

There are many reasons that students may not do their homework. Some students do not know how to do it, or at least not well enough to get satisfaction from it. Others may not do homework because of lack of time in the evenings due to jobs, babysitting, or activities. Some may not plan their time well enough, or may express their despair by not completing their work. Despair can occur from poor home circumstances, school circumstances, or poor teaching and learning conditions. Struggling students may protect their self-esteem by claiming they do not care about the work, rather than trying to do it and failing (Darling-Hammond, & Ifill-Lynch, 2006).

Wilson & Rhodes (2010) applied numbers to this phenomenon when they surveyed students and found reasons why students do not complete their homework. Among the results were forty-four percent who did not understand it, thirty-six percent who got home late from extra-curricular activities, and twenty-seven percent who just did not feel like doing their homework.

Students do not always have homework in each subject every night; however one subject stood out from the others. Across subjects, math is the subject that takes the longest time to complete, followed by English. Nearly half of students surveyed, (47%) had math homework on a daily basis, or five days a week. Most students (65%) reported that it “generally took them about thirty minutes to complete each assignment, but the overall amount of time to complete all

of their homework was about 1.5 hours per night” (Wilson, & Rhodes, 2010, p.4). That indicates an average of three subjects was assigned per night, with more or less on a given night.

Cameron & Bartel (2009) surveyed teachers and found that sixty percent of teachers do not coordinate with other teachers when assigning homework. Wilson & Rhodes (2010) found that eighty-seven percent of students thought that teachers assigned too much homework on the same night. Seventy-seven percent of students said they would do more homework if teachers in various subjects would assign it on different nights. Apparently many students are at least sometimes overworked with homework. Interestingly, one half of teachers say *creating* homework adds somewhat to their workload, and two-thirds of teachers say *assessing* homework adds significantly to their workload (Cameron, & Bartel, 2009). When it comes to homework, we are all busy.

While it is generally agreed that homework has both positive and negative effects, the main question lies in achievement. Does homework actually benefit students, i.e. should we keep making the students do it? Again the results are mixed, but whether one favors more or less homework most researchers agree on one main point: Older students receive more benefits from doing homework than younger students do (Glass, 2009).

Elementary students are not as well suited for homework since they have limited attention spans and have not learned proper study skills, so their homework does not lead directly to improvement in achievement (Cooper, 2001). However, just because the academic results do not appear until middle school and high school does not mean homework should be avoided in elementary school. At some point students need to develop study skills. “Children aren’t born knowing how to study” (McLaughlin, 2010, p.6), which is an obvious fact, but an important one

nonetheless. It is also important to remember that special education students also need study skills, but will require parental help to show benefits from homework more so than regular education students (Glass, 2009).

Skinner notes that elementary students who do homework have only a two percent achievement advantage over those who do not do homework, but that advantage jumps to ten percent for middle school and nineteen percent for high school. This effect is seen not only on grade cards, but in standardized test scores which can be very important to a student's educational future (Skinner, 2004). High school is where homework has the most impact. "Although common sense dictates that there is a point of diminishing returns, the more homework that high school students do, the higher their achievement levels" (Cooper, 2001, p.37)

So how much homework should teachers assign? Most research finds that for middle school, one hour per night is optimal, whereas high school students benefit most from 1.5 to 2.5 hours per night (Glass, 2009). However, just because teachers assign the homework, it does not follow that every student will successfully complete it. So what else can teachers do to ensure that the homework gets done?

Researchers have found that eighty-six percent of students are more likely to do homework if they get started on it in class (Wilson, & Rhodes, 2010). Their other recommendations include:

- Make sure that students understand how to do the work and understand the directions
- Make sure the homework is relevant to the lesson.
- Return homework the next day with feedback.

- Provide students with options for homework assignments.
- Schedule subject-specific homework on certain days.
- Be mindful of how much clock time assigned homework might require to be completed from the student's perspective.
- Provide a variety of types of assignments for students.

Darling-Hammond and Ifill-Lynch (2006) offer additional suggestions for teachers to consider:

- Assign work that is worthy of the effort - Does it make sense? Is it necessary?
- Are tasks authentic and engaging? - Project based or inquiry-based are good options.
- Make the work doable. - Get it started under teacher supervision at school.
- Create space and time for homework - Are study halls and intervention times being used?
- Make work public. - It is important to show models of work that meets the standards.
- Collaboration is the key - Educators need opportunities to work together.

The bottom line for individual districts and teachers is there is no perfect answer.

“Educators should combine research-based generalizations, research from related areas, and their own professional judgment based on firsthand experience to develop specific practices and make adjustments as necessary” (Marzano, 2007, p.78). What works in one school or classroom with a particular group of students may not work in another setting. “Teachers should develop... ‘a local knowledge base’ ...and the most effective practices by observing changes in the achievement of the students in their schools with whom they work every day” (Marzano, 2007, p.78).

Research Methods

Research design

A non-experimental design was used to study the days of the week related to missing assignments. Information was gathered from the school's software program, Grade Watch, which tracks missing assignments. Because in this study the claim is that the day an assignment is due has some effect on the completion of the assignment, the day of the week is the independent variable and the number of missing assignments is the dependent variable.

Study group description

The students in the study were 107 high school students in grades nine through twelve, including 55 girls and 52 boys. The district's free/reduced lunch rate is 50.9% in a population that is 99.4% white. Overall, 14.6% of students in the district have Individual Education Plans. This study was conducted after the semester ended. There was no student knowledge of the study.

Data collection and Instrumentation

Worth County R-III High School utilizes a homework tracking computer program written by one of its teachers. The program, entitled Grade Watch, is a way for teachers to report which students did not complete their homework by the due date. In the Grade Watch system student names are pre-loaded so when teachers use the program they only enter a description of the assignment, the due date, and click on the names of students who are missing the homework.

During intervention time, supervising teachers have a complete and current list of students who need to report to study hall, as well as a list of which assignments they need to work on. Even after the assignments are complete the data is saved on the server and accessible through reports. For this study, a report was created for second semester (Jan-May 2011) and organized by date in Microsoft's spreadsheet software program, Excel.

Statistical Analysis Methods

Data were collected and organized. Summary statistics and graphs were created using Microsoft Excel. A Chi Square analysis was conducted to determine significance.

Findings

Research question 1: Is there a worst day of the week to assign homework? As shown in Table 1 and Figure 1 (below), because it has the most missing assignments, Monday is ranked fifth. In addition, four of the five days fall within one standard deviation of the mean. Only Monday, which has a standard deviation of 1.56, falls outside of this range.

Research Question 2: Is there a best day of the week to assign homework? As Table 1 and Figure 1 show, the day of the week with the fewest missed assignments is Wednesday, followed by Thursday and Tuesday, ranked first, second, and third, respectively.

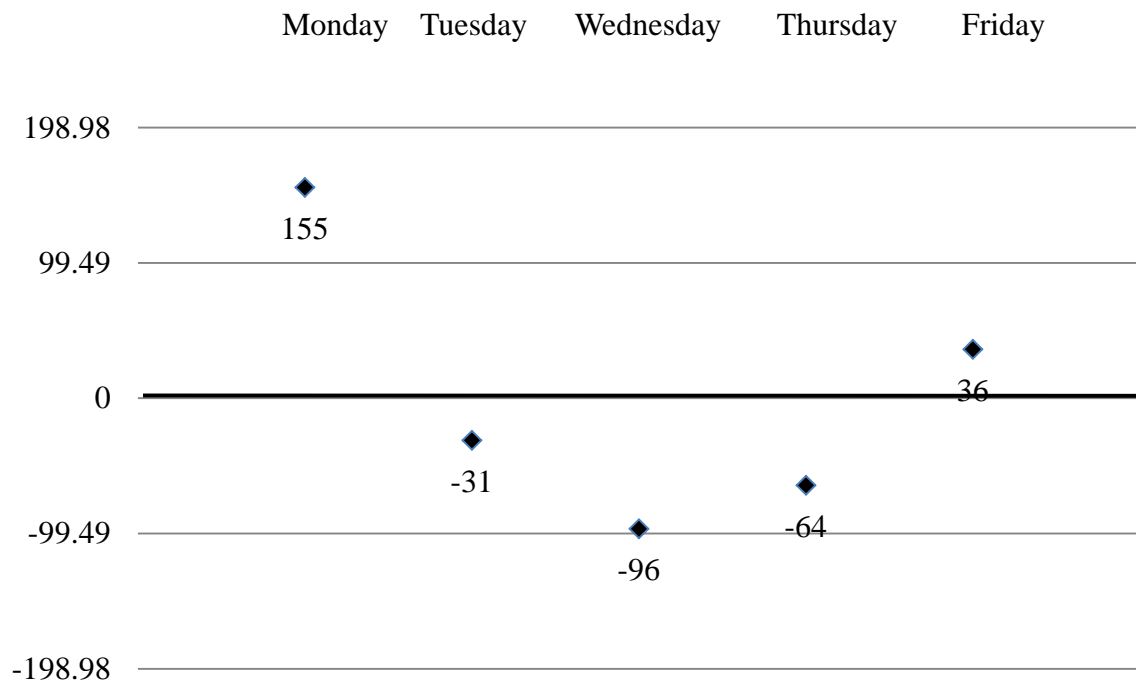
Table 1
Missing Assignments by Day of Week

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Missing assignments	754	568	503	535	635	2993
Percent of total	25.2%	18.9%	16.8%	17.9%	21.2%	100.0%
Rank (best to worst)	5	3	1	2	4	
SD	1.56	-0.31	-0.96	-0.64	0.36	

notes: mean = 599 standard deviation = 99.49

Figure 1

Missing Assignments by Day of Week



note: standard deviation = 99.49

Table 2
Chi Square Analysis of Significance

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
observed (o)	754	568	503	535	635	2995
expected (e)	599	599	599	599	599	2995
deviation (o-e)	155	-31	-96	-64	36	
deviation ² (d ²)	24025	961	9216	4096	1296	
d ² /e	40.11	1.60	15.39	6.84	2.16	66.10
$X^2 = 66.10$						
p=0.001						
notes: alpha < 0.05; df = 4						

The null hypothesis states that the day of the week on which homework is due has no significant effect upon the rate of completion. In a Chi Square analysis if p is less than 0.05 then the null hypothesis can be rejected. In Table 2 (above) this study found p to be 0.001, thus rejecting the null hypothesis. Therefore, the day of the week on which homework is due has a significant effect upon the rate of completion.

Conclusions and Recommendations

There is a worst day of the week to have homework due, namely Monday. The best due day for homework is Wednesday. Since mid-week due dates, i.e. Tuesday through Thursday and especially Wednesday, had the fewest missed assignments, teachers may be able to decrease the numbers of missing assignments by intentionally selecting due dates to encourage homework completion.

Teachers will likely improve the rate of return on homework if they avoid homework due on Monday. The results of this study seem to contradict logical reasoning. Students would seem to have more time over the weekend to complete their assignments. This raises other questions, such as what are students doing on the weekends? Is a two day break from school so long that students forget about their weekday obligations?

Teachers' best route is to assign homework that is due on Wednesday, Thursday, and Tuesday. They should give students time in class to start the assignment and make sure directions are understood. Collaboration among teachers and establishing subject-specific homework days may assist students who are overly burdened with multiple subjects at once.

Teachers should remember that research tells us what good homework looks like. Good homework is doable. It is relevant to the lesson and worthy of student effort. It makes sense and is authentic and engaging. A variety of homework formats should be used, including inquiry or project-based homework. Offering options for homework assignments also increases completion rates. After the homework is done, teachers can increase the relevance of the assignment by returning it promptly with feedback and displaying work that meets teacher standards.

Some students do all homework, while others do almost none. If the student population were dissected and categorized by how many times they failed to turn in homework on time, the results may be different. We may see that a different day of the week is the worst for due dates in segments of the population. We may also see that day of the week has little effect on some students and perhaps even more of an effect on others.

The time of year may also have had an impact. First semester may show different results due to different extra-curricular schedules or less student apathy. Larger schools or urban schools may find results to be different than those in this small rural setting.

Detailed analysis of which activities cause homework to be left undone would likely improve understanding of student motives for missing assignments, i.e. jobs, fatigue, family, need for tutoring or clarification, etc. This type of future study would involve a thorough investigation of student behaviors and attitudes.

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