

Real Homework Tasks: A Pilot Study of Types, Values, and Resource Requirements

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Introduction

As the standards and accountability movements have gained momentum and political favor in recent years, a renewed interest in instructional practices intended to promote greater success on standardized tests has been evidenced. One such instructional practice, homework, while certainly not a recent practice, receives both support and criticism and continues to generate passionate discussion among local school policy makers, teachers, and parents. Merits and concerns regarding the assignment of homework have garnered attention in mainstream publications (e.g., *Time*, Wallis, 2006) in large part due to widespread public attention to readable sources, including Kohn's (2006a) *The Homework Myth* and Bennett and Kalish's (2006) *The Case Against Homework: How Homework Is Hurting Our Children and What We Can Do About It*. While arguments associated with homework have been presented and debated throughout the 20th century and have continued into the 21st century (Gill & Schlossman, 2000; Cooper, Robinson & Patall, 2006), the practice of assigning homework across all grade levels (K-12) continues to be widely accepted and generally *expected* by administrators, teachers, parents and students. In fact, the practice of assigning homework has come to be regarded as an indicator of high standards and a rigorous curriculum, and has taken on "symbolic value" (Kohn, 2006b).

While arguments for and against the practice of assigning homework persist, homework continues to be assigned on a regular, almost daily basis in most classrooms. Basic homework guidelines have been suggested by

researchers and encouraged by school districts for teachers. The guidelines provide teachers with options for appropriate homework assignments based on research. For example, the Northwest Regional Educational Laboratory in 2005 organized homework into four categories by type:

1. Memorization of basic rules, algorithms, or laws so the skill becomes rote.
2. Increase in skill speed, used for improving students' abilities to apply skills in more complex problem solving.
3. Deepening understanding of a concept – providing students time to read further, elaborating on a new idea and expanding understanding.
4. Preparation for the following day's learning, such as an advance organizer or cue to increase readiness for new information.

(Developed by Northwest Regional Educational Laboratory (NWREL) 2005)

The Elmbrook School District in Wisconsin offers an alternative example of homework guidelines that are supported by a school district. In Elmbrook's *Grading & Reporting Task Force 2005-06* report (2006), three types of homework assignments are identified as appropriate for district teachers:

- *Practice Assignments* which review, reinforce, and allow for independent practice,
- *Preparation Assignments* which serve to prepare students for upcoming lessons, and
- *Integration Assignments* which allow students to apply recently acquired learning to new tasks and may include longer-term projects (e.g. science fair projects or term papers).

In addition to types of homework suggested by the NWREL and Elmbrook guidelines, teachers are generally encouraged to consider, plan, prepare, and implement homework assignments with regard to the expected value of their educational outcomes. In this vein, Marzano and Pickering (2007) have developed homework guidelines for teachers. Based on their research, homework can enhance student achievement when it is *purposeful*, has *legitimate purpose*, and is *at the appropriate level of difficulty* (Marzano & Pickering, 2007, p. 79).

Another alternative method for considering the educational value of homework has recently been proposed (Kramer, 2008). The method raises questions along three dimensions considered necessary for homework to be effective for student learning. The dimensions assess individual homework assignments to determine that they are reasonable, relevant and reinforcing:

reasonable.

Is the assignment appropriate and realistic for the developmental level of the student? Can it realistically be completed in the time frame provided? Can the assignment realistically be completed by the student independently?

relevant.

Is the subject matter relevant and purposeful to concepts covered in the classroom? Does the student understand the purpose for the assignment, and can readily connect it to course objectives/standards?

reinforcing.

Does the assignment provide opportunities for the student to enhance his/her understanding of concept(s) taught in class? Will the assignment allow the student to

practice and apply skills, possibly taking the skills to a higher level of understanding and problem-solving?

In addition to type and value a third dimension for consideration in examining the educational usefulness of homework is the extent to which homes can provide any essential resources necessary for students to complete their assigned work. Kohn (2006a) alludes to this when he observes that in some homes, parents are better equipped than others to provide assistance. Parents are one kind of resource, but there are others that can also make a difference – a place to work, materials, references, technology, etc.

While much of the research on the issue of the merits of homework in schools deals with factors such as increased academic achievement - as measured by standardized tests, or on differences between the effects evidenced at lower grade levels with effects at the secondary level (Cooper et al., 2006), or on amounts of time spent on homework (Cooper, 1994), and on parental involvement - including underrepresentation of non-white families in homework research (Science Daily, 1998), the current study focuses on samples of actual and authentic homework assigned in K-12 classrooms to determine the *type* (what is assigned), the *value* (reasonable, relevant, and/or reinforcing), and the *resource requirements* of actual homework assignments.

Method

The current study utilizes a descriptive, qualitative approach and uses document analysis (Best & Kahn, 1998) to examine the nature and apparent purposes of homework assigned by an identified group of 68 experienced and capable teachers in schools in Southeastern Wisconsin. It uses the Elmbrook (2006) guidelines to categorize types of homework assigned by the teachers included in the study. It follows the Marzano & Pickering (2007) conception of the educational value of

individual homework assignments. It begins by assessing the degree to which individual homework assignments require the home to provide resources. Using these types, values, and resource requirements, the current study has several purposes:

1. It begins exploration of the types and relative frequencies of homework assignments that these teachers actually make.
2. It seeks to assess whether existing taxonomies of homework types (e.g. homework for *practice / preparation / integration* or homework values (e.g., *reasonable / relevant / reinforcing*) are functional and informative for categorizing those homework assignments.
3. It looks for evidence that homework assignments are, by design, either valuable or not valuable for student learning.
4. It analyzes homework assignments to assess what home resources (e.g., materials, parent expertise, time, space, technology) are required for successful completion of the work.
5. It considers the potential for certain homework types to reinforce existing gaps in student achievement that result from differences in home resources.

Initial data collection began in the second semester of the 2007-08 school year and continued during the second semester of the 2008-09 school year. The teachers involved in the study included 48 cooperating teachers who were appointed in Spring 2008 and Spring 2009 to supervise student teachers from Carroll University, a small, private, comprehensive institution with a medium-sized Wisconsin teacher education program. The cooperating teachers taught in a variety of grade levels PreK-12 and content areas. They had 5 to 15 years of teaching experience, with at least three

years of teaching in their current placements. Additional data were obtained from a focus group interview with twelve practicing teachers (PreK-12) as well as individual interviews with 8 classroom teachers.

Actual homework tasks assigned by cooperating teachers were collected by their respective student teachers over a four-week period occurring in Spring 2008 and again in Spring 2009. Student teachers were instructed to keep track of all homework assigned by their cooperating teachers and to place a copy of each homework activity involving worksheets, handouts, study guides, etc., in a folder for submission at the end of the data collection period. Assignments that were conveyed either visually or orally by teachers were recorded on a form designed for that purpose and included in the same folder. All assignments were dated and coded with the grade level/subject area taught by the cooperating teacher. When only 13 student teachers were able to complete the data collection in Spring 2008, a decision was made to do a preliminary data analysis, treating the early data collection and analysis as a pilot for a more extensive and detailed data collection in Spring 2009.

Data analyses (Spring 2008 and Spring 2009) began with sorting homework assignments into types using the three Elmbrook (2006) dimensions of *practice*, *preparation* and *integration*. After tasks were sorted into their respective types, each task was examined for its perceived educational value. Sorters were two professors in the Carroll University Teacher Education Program. One sorter had more than 20 years experience in K-12 teaching and administration and five years of experience in work with teacher education and student teachers. The second sorter had more than 15 years of experience in work with teacher education and student teachers and five years of K-12 teaching experience.

Sorters judged whether each homework task was reasonable and relevant and reinforcing. Tasks were

educationally valuable if they met all three of these criteria. They were not valuable if any of the three criteria was not affirmed. In addition, each task was analyzed for its resource requirements to determine what students would need at home in order to complete the assigned homework. Resources included adult support, appropriate workplace, task materials (office and/or art supplies), technology, and reference materials.

In each of the three analyses of homework - for *type*, for *value*, and for *resource requirements* - the two sorters collaborated to reach consensus as to the meanings of the corresponding dimensions. Subsequently, the sorters worked independently in each analysis. Sorters agreed in more than 95% of the *type* sorts, in more than 70% of the *value* sorts, and in more than 95% of the *resources requirements* for the respective homework tasks. For all three analyses, the sorters collaborated to resolve sorting disparities and to reach consensus on the ultimate sorting decisions evidenced in the results of the current study.

Results

Homework tasks assigned by 48 classroom teachers were analyzed for their type, value, and resource requirements. The results of the data analyses are included in Appendix A. Data analyses began with sorting homework assignments into types using the three Elmbrook (2006) dimensions of *practice*, *preparation* and *integration*. Appendix A provides an example of how the homework tasks were arranged by grade level and subject. The tasks retain their original names in the table.

Following the analysis of type of homework, calculations were analyzed separately for types in elementary (Pre-K through Six) and types in secondary grades (Seven through Twelve). Several conclusions are possible in this analysis of types. First, in the elementary grades, 96 % of the homework assigned was in the category of *practice*, 41% in the

area of *preparation* and 16% as *integration* assignments. In the secondary grades, 92% fell into the category of *practice*, 41% *preparation* and 29% involved *integration* (See Table 1). Reflection on the *type* results suggests that it is reasonable that elementary school teachers would be more concerned with concrete kinds of homework tasks involving drill, practice, reinforcement of ideas, given the of cognitive development of their students. Similarly, students in the middle and high school years are more likely to be able to engage independently in occasional integration tasks that require more fully developed cognitive operational skills. It is noteworthy, nevertheless, that a central focus of homework tasks across grade levels is *practice*.

Table 1. Homework Type

Grade Level	<i>Practice</i>	<i>Preparation</i>	<i>Integration</i>
K4 – 6 (n=24)	96%	41%	16%
7-12 (n=24)	92%	41%	29%

It is worth noting that there was a variety of tasks included in the category of *practice*. Inspection of those tasks suggests that useful information could be masked by the generality of the term *practice*.

It is reassuring that the great majority of observed teacher assignments at the secondary level appear to meet all three criteria for educational value: relevant, reinforcing and reasonable. It must be noted that the simple sorting protocol used here could miss valuable information, since many homework tasks may (or may not) have educational value that is not apparent on inspection; thus the reason for expanded data collection through teacher interviews and focus group.

A focus group interview was conducted with 12 classroom teachers, Pre-K – 12. Seven of the 12 teachers indicated the use of homework as a tool of *practice*. This

correlates with the findings of the cooperating teacher data. Only one teacher noted the use of homework for *preparation* while four teachers described assignments that could be categorized as *integration*. One high school math teacher stated, "I have a flexible homework situation. I allow students to self evaluate strengths and weaknesses and complete problems for practice and test preparation." Three teachers (K-2 music, K-5 Art and high school Social Studies) did not assign any homework.

Additionally, eight teachers were individually interviewed regarding their homework assignments including their purposes and expectations for homework. Six of the eight educators regularly assigned homework for *practice* and skill reinforcement. Of the eight teachers interviewed, one noted the use of homework for *preparation* and this same teacher also described a long term *integration* example (See Table 2).

Table 2. Teacher Interview Data by Type

Grade Level/Content	<i>Practice</i>	<i>Preparation</i>	<i>Integration</i>	<i>No Homework</i>
2 nd Grade	X			
2 nd Grade/Bilingual	X			
K - 4 Special Education	X			
4-6 Special Education	X			
HS Spanish	X	X	X	
HS Physics	X			
HS Applied Physics				X
HS Special Education				X
12 th Grade Alternative				X

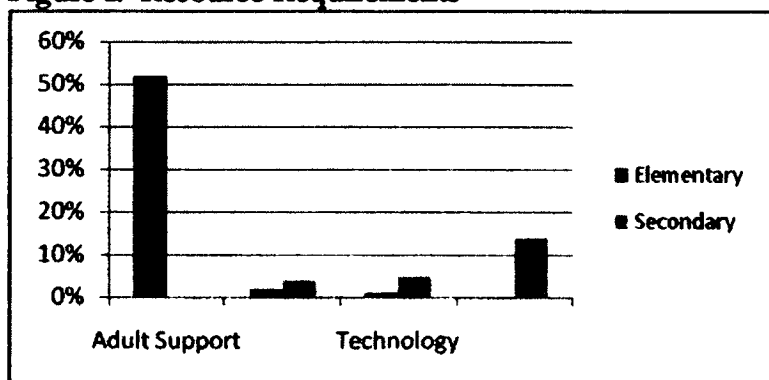
The findings from the teacher interviews are in alignment with the data collected from cooperating teachers. Practice appears to be the primary type of homework assigned across grade levels and content areas. One teacher explained that she sees homework as a means "...to review the skills that they would benefit from practicing the same day a concept was taught."

After tasks were sorted into their respective *types*, each task was examined for its perceived educational *value*. Sorters judged whether each homework task was reasonable and relevant and reinforcing. Tasks were educationally valuable if they met all three of these criteria. They were not considered valuable if any of the three criteria was not affirmed. In elementary grades, 33% of homework tasks could be assessed for *value* simply through inspection. Of those that could be assessed, 25% could be viewed to have appropriate educational value for subject and grade level. In the secondary grades, 55% of tasks could be assessed for value, and 96% of those tasks appeared to have appropriate educational value for subject and grade level. It is notable that more than half of all homework assignments examined had sufficient evidence to be assessed for value.

All data collected from cooperating teachers were analyzed for their resource requirements to see what students would need at home in order to complete the assigned homework. It was assumed that all of the tasks required common resources of time, work place, and basic materials such as textbooks and pens/pencils/paper. A caution is included here, though, that it is a mistake to assume that basic resources are universally available to K-12 students. Resource requirements were recorded as homework assignments were analyzed by the sorters. The resources that were considered in examining these homework tasks included an explicit need for adult support, materials beyond those we

have listed as basic, technology, or reference materials. Of the 750 tasks that were assigned, 22% required some explicit level of adult support. Only 6% of tasks required other additional resources. In the secondary grades, no adult support appeared to be expected for any of the homework tasks. Technological items such as computers, calculators, or digital cameras were required in 6% of tasks, and reference material, either in print or on line, were required for 14% of assigned tasks (See Figure 1).

Figure 1. Resource Requirements



Discussion

The current study is preliminary and intended to analyze types and purposes of homework assignments made by teachers included in the study. Analyses as to what those assignments were broadly intended to accomplish and whether they were in fact educationally productive were conducted by the researchers. Initial analyses suggest that less than half of all assignments reviewed in this study contained enough elements to determine educational value.

Kohn (2006a) suggests that the requirement of homework can be explicitly discriminatory because children from different social strata can have very different access to

basic resources for doing homework. Similarly, children can be expected to have more variable access to less common resources. The survey research above shows that it appears that the sampled elementary teachers made fewer assignments requiring 'extra' resources than did sampled secondary teachers. A serious question arises as to whether **any** requirement of home resources, (including adult support) can be equitable. We find this aspect of homework analysis worthy of continued and extended study. We propose that future focus groups and interviews will be conducted with educators Pre-K-twelve to determine teacher expectations and assumptions regarding resources available outside of school.

There are a number of possible limitations to the findings of the current study, since it represents a fairly simple pilot study in a rich and complex area. Some of the current limitations offer suggestions for further research. Differences between grade-level homework assignments are grossly examined here, dividing assignments into those assigned in elementary grades separately from those assigned in secondary grades. Further study might productively seek evidence of variability, or lack of it, across grade levels and across teachers, *within* the elementary or secondary grades. Further study could then examine *who* ascribes/interprets the purposes of homework assignments and how their ascriptions/ interpretations differ: Parents? Teachers? Pupils? Sorters/Researchers? Continued research could then examine connections between interpretations of homework and measures of pupil learning.

The authors intend to follow some of these suggested paths as well as to conduct a study with an emphasis on equity: What kinds of resources are required for completion of certain types of homework? Which, if any, homework tasks call for resources that make assigning homework a discriminatory practice?

References

- Bennett, S., & Kalish, N. (2006). *The case against homework: How homework is hurting our children and what we can do about it*. New York: Crown.
- Best, J.W., and Kahn, J.V. (1998). *Research in education*. Boston: Allyn and Bacon.
- Cooper, H. (1994). Homework research and policy: A review of the literature. University of Minnesota CAREI, 2(2). Retrieved January 31, 2008 from <http://cehd.umn.edu/carei/reports/Rpractice/Summer94/homework.html>.
- Cooper, H., Robinson, J., & Patall, E. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research*, 76(1), 1-62.
- Cooper, H. (2007). *The battle over homework* (3rd ed.). Thousand Oaks, CA: Corwin Press.
- Elmbrook Schools. (2005-2006). *Grading & Reporting Task Force. Appendix A*. Elmbrook, WI.
- Gill, B., & Schlossman, S. (2000). The lost cause of homework reform. *American Journal of Education*, 109, 27-62.
- Kohn, A. (2006a). *The homework myth: Why our kids get too much of a bad thing*. Cambridge, MA: Da Capo Press.
- Kohn, A. (2006b). The tougher standards fad hits home. *Rethinking Schools*, Fall 2006, Retrieved May 22, 2008, from http://www.rethinkingschools.org/archive/21_01/to ug211.shtml
- Marzano, R., & Pickering, D. (2007). Special topic: The case for and against homework. *Educational Leadership*, 64 (6), 74-79.

- Northwest Regional Educational Laboratory.
(2005). *Homework and practice. Focus on effectiveness.*
Retrieved January 31, 2008 from
<http://www.netc.org/focus/strategies/home.php>
- Science Daily. (March 4, 1998). Yes Johnny, doing your
homework is important. Retrieved January 31, 2008,
from
<http://www.sciencedaily.com/releases/1998/03/980304073520.htm>
- Wallis, C. (2006). Viewpoint: The myth about homework.
Time, 168(10), 57.

Appendix A - Sample - Homework Data: Second Grade Spring 2009

Teacher	Practice	Preparation	Integration	Educational Value	Resources needed
A	Reading assignment: Make connections using post-it notes (provided)			Y	
A	Reading assignment: Identify three words that they are unsure of			Y	
A	Read: Pirates Don't Wear Pink Sunglasses w/ follow-up question			Y	
A	Math: Challenge sheet (optional)			CD	Crayons (optional)
A	Math activity: Tapestry squares with addition			Y	Crayons
A	Reading with an adult (story and comprehension questions provided)			Y	Adult

A		Elaboration activities to accompany	Y	
B	Math Packet worksheets (completed daily) with		Y	Family Scissors
B	Spelling-Tic Tac Toe game (3)		Y	Moni or Dad Computer Ball
B	Math Test Study Guide Packet (2)		Y	Adult
B	Science Study Guide		Y	Adult
B	Social Studies Study Guide		Y	Adult Map