

TEACHERS' USE OF HOMEWORK AS A CLASSROOM ASSESSMENT TOOL IN ELEMENTARY SCHOOLSBushra Salah-Ud-Din¹, Dr. Zafar Khan², Dr. Malik Amer Atta³**Original Article**

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Abstract

In this article, teachers' perspectives on the use of homework were collected by exploratory sequential mixed method design. The participants of the study were 30 elementary school teachers. A semi-structured interview technique was adopted for the study. Data were analyzed by creating codes and themes. Data was collected on the use of homework to prepare and motivate students for the next lessons. The study analyzed the purposes for which homework is assigned and the types of homework. The study assessed the use of homework to practice and extend newly learned knowledge in the classroom. The study also examined the use of homework to increase test scores and grades of students. The findings of the study showed that in Elementary schools science, Math, and English classes, the usual homework is to read, reread and practice the most important facts covered in the classroom. Students are occasionally assigned tasks to explore the lessons to be taught in the upcoming class or to extend students' in-class learning experiences by outside-of-school learning.

Keywords: Teacher's Perspective, Homework, Students, Learning, Evaluation

Introduction

Homework helps achieve academic goals and it exceeds that to meet non-academic targets. Instructional benefits include determining learning misconceptions and difficulties, improving learning, and evaluating understanding. Homework promotes non-instructional purposes like parental involvement and students' inability to work independently. For diagnostic purposes, teachers may use it at the beginning of a new lesson to identify what students already know, any obstacles to learning, and students learning problems. Identifying students' comprehension levels helps the teachers to have a base to start a new lesson. Students' misunderstandings, mistakes, and learning problems are identified by diagnostic assessment. The function of diagnostic assessment is to supply information about factors of permanent learning difficulties and to develop an adequate remedial plan.

Formative assessment gives details about the students' understanding during instruction. This feedback is effective to enhance teaching and learning (Shermis & DiVesta, 2011). Such feedback can help teachers review and modify their instruction to track students' understanding and advance toward their learning goals (Greenstein, 2010). The formative assessment examines the learning progress and supplies ongoing feedback to the teachers and pupils (Shermis & DiVesta, 2011). Formative assessment allows teachers to alter modes of teaching and if required, some remedial work is assigned (Savage, 2014). It reinforces learning and finds out learning gaps in students' understanding (Savage, 2014). It is a method to enhance and concrete the student's acquired knowledge by practice. In doing formative assessment students have enough time to ponder on the assigned task, thus enabling students to self-directed learning.

Summative data from homework help the teacher to identify if students have comprehended and determine whether or not the teacher can move to the next topic. When starting a class, the teacher can spend little time describing the errors in students' homework that can benefit to prepare students for learning and make them ready to achieve the new learning experiences. Summative evaluation determines the extent to which learning goals are achieved and is used primarily for grading and certification (Lund & Kirk, 2019). Summative assessment is also applied to measure the effectiveness of a program, learning targets, learning outcomes, and students' performance (Levinson, Cookson, & Sadovnik, 2014). It can be used by the teachers in taking high-stakes Testing for students' placement and grading. They typically include achievement tests, placement tests, and ratings of laboratory skills (Khan, 2008).

Extension homework prepares students to explore new lessons taught in the class. Homework can also be assigned as a pre-class activity to prepare them for the upcoming lesson. This permits exposure to the subject material to be learned before attending the class. It also allows to practice and extends the theories, concepts and skills learned in the classroom; and thus spares classroom time for the processing of new knowledge.

Statement of the Problem

Evaluation is used at a macro level to make decisions about students, programs, courses, and educational policies, the study explores the ways teachers utilize homework on the micro level for effective teaching. Teachers use formal tools like tests, demonstrations, and projects for classroom assessment. Homework can also be used for classroom assessment to get feedback from students. This research is designed to give insights into homework-related educational practices, such as use as an in-class activity, time used on checking it, and time allotted to provide feedback. It also aims to investigate whether or not teachers are using its feedback to enhance the teaching and learning process. The study also focuses to develop an understanding of what limitations and problems teachers face in applying homework as an assessment tool.

Objectives of the study

1. Describe teachers' perceptions of using homework in terms of classroom assessment.
2. Explore the relevance of homework with the contemporary assessment practices of teachers.
3. Investigate teachers' use of homework evidence in improving teaching practices.

Research Questions

1. How does homework for diagnostic purposes help teachers to find out students' learning needs in the classroom?
2. How does homework for formative purposes help teachers increase students' learning in the classroom?
3. How does homework for summative purposes help teachers to know the extent to which students have learned?

Significance of the study

This study investigates multiple teaching strategies utilized by the teachers in the classroom; specifically a transformation from traditional tests to the application of homework for classroom assessment; and how teachers utilize the meaningful feedback it provides regarding students' comprehension of course content. Teachers independently discuss, assign, check, and evaluate homework for making decisions about the students learning progress. Since teachers themselves manage homework, they are disposed to relate the feedback from the homework to pilot new teaching

strategies and improve student learning. Homework can be effectively used for the evaluation of previous learning, besides may be applied as a baseline for the next lesson, and also enables to examine of the effectiveness of teaching and learning. In this capacity, it can serve, diagnostic, formative, and summative purposes.

Methodology

This research is a qualitative study in which research data were collected through semi-structured interviews and content analysis was conducted by collecting the views of teachers regarding the use of homework in the class. Participants of the study were 30 elementary school teachers of science, English, and Mathematics, those who were willing to share their experiences.

Table 1: The thematic analysis of homework to prepare and motivate student's toward the upcoming lesson.

Themes	Descriptive codes	Σ
Content	Science subject matter unassociated	11
	Math subject matter interwoven	13
	English subject matter unconnected	12
	English Grammar	15
Teaching	Impromptu methods	11

The above table shows that 11 teachers expressed that science lessons are unassociated. Teachers declared that in science although understanding relevant prior knowledge is helpful when learning a new topic, not always the next topic is really based on the previous topic. Arguing that new topics are not built on students' prior comprehension and experiences, students' prior knowledge is not viewed as a significant aspect to be assessed by 12 English teachers. The number of Mathematics teachers who didn't use homework to have information about students' prior knowledge is 13. In this manner, the majority of teachers don't integrate homework into instruction to assess students' prior knowledge of the upcoming lesson and to prepare them for the upcoming lesson.

This study reveals that most of the teachers don't use homework to assess students' prior knowledge of the upcoming lesson. But, background knowledge has been studied as the key element to affect student learning and enhances their academic performance (Dochy, De Rijdt, & Dyck, 2002; Hailikari, Nevgi, & Lindblom-Ylänne, 2007). Furthermore, higher levels of meaningful prior knowledge are connected to the development of comprehension and higher-order intellectual skills (Nathanson, Paulhus, & Williams, 2004).

Table 2: The thematic analysis of homework to get to know students' learning difficulties and misconceptions in a topic?"

Themes	Codes	Σ
Content	Science factual	12
	English vocabulary, grammar, reading	18
	Math step-by-step process	15
Teaching	Other impromptu techniques	12
	Common sense perspective	20

The main themes emerging from the analysis are mentioned here, while 18 English teachers stated that homework is supportive in identifying students' learning problems and errors in vocabulary, translation, and grammar. Results revealed that in homework teachers emphasize language skills, conventionally, the teaching of vocabulary, grammar, and reading is more widely applied than English comprehension skills and English speaking. It reveals that the teachers are very diffuse and place emphasis primarily on vocabulary, word meanings, and translation. The present study results are in line with the results by (Hossain, 2015). In English courses, students have poor performance in communication skills, including, writing and speaking skills due to lack of supervision and monitoring. Teachers shared their view that translation is harder to learn for students than reading. 15 Math teachers shared views that mathematical procedures are step-by-step systematic processes, so that errors, and misconceptions are clearly identified when checking homework assessments. Mathematics problems require a series of steps. Teachers identify that if students don't follow stepwise fashion, and have errors, this reveals their flaws in the comprehension of new skills. 12 Science teachers share their views that science knowledge is abstract and factual. Students' learning problems are evidently shown in their homework through their errors and clearly reveal that they are not understanding the concepts. When checking home assignments teachers apply their "common sense" or "intuitive" perspective to analyze students learning problems and misconceptions. Checklists and rubrics will generally give more reliable findings (Rice, 2013).

Table 3: The thematic analysis of the use of homework to practice the newly taught skills and processes?

Themes	Codes	Σ
Content	Sci, Eng memorization	16
	Review	9
Learning	Reinforcement	12
	Spend more time	16

The majority of teachers mentioned the purpose of homework is to practice newly learned knowledge and skills. Practice homework was the main type of homework that teachers preferred and other types of homework were rather less utilized. It shows that it makes no difference what subject matter is being taught, teachers perceived that practice enhances learning. Math teachers adopt a strategy of presenting a model lesson on new mathematical skills and then assigning relevant practice homework. English teachers assign practice homework for enhancing the language skills, such as reading, listening, vocabulary, translation, and grammar. However, the reasons for this were diverse. 4 themes were developed in answer to what is the purpose of assigning practice homework. 9 teachers answered to apply practice homework to review the content covered in class. These results confirm the views of Minke, (2017); Gill & Schlossman, (2004) that one of the main academic reasons for giving homework is to review and practice what is being done in the class. The second theme developed is that teachers give practice homework so that students can spend more time to better understand the newly learned knowledge and skills. Practicing is viewed as the conventional form of homework (Minke, 2017; Rosário, Núñez, Vallejo, & Cunha, 2015). Moreover, a third theme developed that teachers apply homework as a useful tool for reinforcement learning. This finding is parallel with the ideas of Campitelli & Gobet (2011): 'Although diverse predictor, like motivation and general intelligence, has effect on the students' achievement, practice is essential to be proficient'. 16 teachers approve the usage of practice homework for memorization of important content.

Memorization from the cognitive perspective is to encode, store, and recall and so is related to practice homework. Bridging the memorization process and the emerged themes, conclude that teachers use practice homework for the memorization of important knowledge and skills. Practice is applied as a strategy by teachers for memorization and comprehension of knowledge. Teachers emphasized that science knowledge is acquired by memorization before comprehension.

Table 4: The thematic analysis of the use of homework to elaborate and advance the material already discussed in class?

Themes	Codes	Σ
Content	Science higher-order thinking	15
	English language barrier	7
	Math problem solving	19
	Limitation	9
Student	Lack of ability	11

The finding of the study reveals that teachers consider that homework by itself is an extension of the in-class activities that are not finished in class. Analysis shows that 15 Science teachers hold the view that they occasionally assign extension homework as the majority of students are capable to do assignments of average difficulty level. Extension homework involves higher-order cognitive processes such as analysis and abstract reasoning (Minke, 2017). In addition, 7 English teachers consider that they occasionally use extension homework, but it has its limitations so that it can't be applied to all topics. Elementary school teachers approve that extension homework can't be applied to new knowledge or skill for which students do not already have their own understanding. These findings are parallel with Simplicio, (2005) idea that extension homework is inadequate in case students have not still developed an understanding of the assigned concepts or skills. Teachers use extension homework to foster higher-order thinking skills but use it from time to time. Results also show that a minimal amount of homework is assigned to promote cognitive processes and homework contributes little to developing high-order study skills.

Table 5: The thematic analysis of whether or not homework determines students' mastery of the lesson/ unit

Themes	Codes	Σ
Content	Science declarative	11
	Math procedural	10
Teaching	English declarative	07
	Other impromptu techniques	09

Before delving into the new lesson, it's necessary to know whether or not students are developing understanding. Naturally, some will be progressing while others will fail. Research results reveal that in both cases, homework provides evidence of the progress of the whole class. The majority of elementary school teachers expressed that when used at the end of teaching homework can demonstrate students' mastery of learning. Also, 18 Science and English teachers approve to apply the practice for mastery of declarative knowledge. In this regard, 10 math teachers agree that they

apply homework to find out whether students have attained mastery of the mathematical knowledge and procedures they have been taught. In order to help student's master knowledge, teachers apply different strategies such as memorization, practice, and comprehension. These findings are parallel with the findings of Van de Bogart (2009): 'a series of activities are necessary for students to retain new concepts.

Table 6: The thematic analysis of homework to increase students' test scores and grades

Themes	Codes	Σ
Content	Sci memorization	7
	Math memorization	8
	Important content scores	9
	Eng memorization	10

A memorization is a crucial tool for learning facts and skills. Several studies indicate the association between practice and memorization. Practice is a memorizing technique (Gropper & Tannock, 2009). 7 of the Science teachers agree that they use homework for memorization of scientific facts, formulas, and concepts. To solve mathematical problems, students must memorize a particular algorithm and then apply the same algorithm to solve problems related problems. Practice is very necessary for Mathematics as it increases proficiency in terms of decreasing errors and time required to solve problems. Results show that 8 Math teachers use homework as a device to memorize and practice the content. Elementary mathematical facts are primarily acquired through memorization and skills are adopted with practice. Elementary mathematics facts have concepts, algorithms, formulas, and their fundamental mathematical operations and procedures. Mathematics skills are arithmetic, mathematical procedures, calculations, analysis, reasoning, and other related skills. Elementary school teachers apply homework for memorization of important facts and topics. These results are also advocated by a few studies in China (Peng, Kuang, & Song, 2013; Li & Huang, 2013), there is possibly a cultural factor to these parallel results. Results of the thematic analysis reveal that 9 teachers think that the major academic purpose of homework is to increase test scores and grades. They also mentioned that little importance is disposed on homework when grading students and also that tests, quizzes, practicals, projects, and other such summative assessments are utilized for grading purposes.

Conclusions

This study supports the findings of existing studies that homework is positively related to the academic achievement of students (Cooper, Robinson, & Patall, 2006; Maltese, Tai, & Fan, 2012), and its significance in the practice of skills and knowledge (Minke, 2017; Rosário, Núñez, Vallejo, & Cunha, 2015). However, the present study also pointed out other uses of homework such as for identifying students learning difficulties, finding students learning strengths, determining students misconceptions, their understanding level, an extension of in-class activities and activity to mastery learning. In research, much less emphasis is placed on these aspects of homework.

On the basis of findings, it is concluded that homework of various forms is to be found which thus represents the different types of homework. Homework can be classified into different types on the basis of the purposes it is assigned. Teachers assign homework for problem-solving, memorizing facts and skills, practice, summarizing learning material, and test preparation. It could be gleaned that

it is not appropriate to resist homework for one type of purpose. To be effective, homework should be considered to attain multiple purposes.

This study identifies the significance of prior knowledge in effective teaching-learning. The findings of this study show that teachers can use apply homework as a prior-knowledge assessment tool. However, prior-knowledge assessment by itself is not sufficient: it is also necessary to provide feedback to students regarding their performance and teachers should use the assessment results in preparing instructional design. The findings of this study show that usually teachers don't apply homework to assess prior knowledge before starting the lesson. Alternatively, they apply brainstorming, questioning, pre-reading, and other impromptu techniques to assess students' prior knowledge. Also, the current study discovered that most elementary teachers apply homework for formative and summative purposes. They stated that homework supplies classroom teachers with feedback about formative purposes such as to have practice work, extending a lesson, and merging remedial actions required for effective learning. Teachers also apply homework for summative purposes, like, to improve comprehension, mastery of learning, and increase test scores.

The study shows that giving homework for students' mastery of content is a central schooling strategy. Results show that elementary and high school teachers usually apply homework as a means to practice and memorize important knowledge so as to learn and master content. Thereby teachers lose the opportunity to deepen students' understanding of content. Science and English teachers apply practice homework as an approach for memorization and association of declarative knowledge. Also, math teachers utilize practice homework as an approach for memorization of sequence and fluency of procedural knowledge. English teachers use practice homework for memorization of vocabulary, words- meanings, translation, and grammar.

In using homework as a classroom assessment tool, the interpretations of students' homework are often made by teachers using common sense or intuitive rather than formal methods. Elementary and high school teachers use the "general sense" perspective to evaluate homework. Teachers use a common sense perspective to evaluate the performance of homework to infer whether the majority of students are understanding, who are not understanding, which point is not clear, etc. However, teachers reported, that they didn't use any standard tool to check the homework performance. Teachers can use checklists and rubrics to have more reliable results.

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