

**INCREASING HOMEWORK COMPLETION IN MATHEMATICS AMONG JSS 3
STUDENTS OF NOBLE INTERNATIONAL SCHOOL BY USING INTERVENTION
STRATEGIES**

UNIVERSITY OF JOS

FACULTY OF EDUCATION

EDUCATIONAL PSYCHOLOGY

EYPY 805 (PRACTICUM)

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MAY 201

LOOK #1

STATEMENT OF THE PROBLEM

JSS three students of Nobles Model International School displayed low level of homework completion. Teacher's homework observation log and students' survey indicate this problem existed in the classroom. Whenever these students were given homework by the teacher taking them mathematics to do at home, the rate of completion is very poor. This had been an area of continual frustration and concern to the teacher. This prompted the school head teacher to continually remind and advise the students on the need to complete their homework whenever they are given. Additionally, the teacher besides counseling the students resorted to subjecting the students to mild physical punishments such as spanking the students and/or asking the students to kneel down and raise up their hands. These measures adopted by the school head teacher and the subject teacher did not address the situation.

One of the most obvious reasons teachers use homework is because it improves students' understanding and their retention rate of the material covered. Hence, students need homework in order to review and practice the concepts that are taught in class. Findings have shown that the amount of time spent on homework is positively related to the academic achievement of students. Not only is there a positive relationship between homework and high academic achievement, but homework can increase the students' ability to rely and make use of their abilities, and also manage their time well. Homework also helps students develop life skills that they will need further on in life. Homework encourages students to become responsible for their work and promotes self-growth. Both of these qualities will benefit students outside of school as well. Furthermore, homework also prepares students to tackle tasks they have never encountered (Coutts, 2004). In view of the above, if steps that will lead to improvement in the rate of homework completion are not taken, the academic achievement of these students will be negatively affected.

LITERATURE REVIEW

There are three basic good reasons why a teacher might assign students to work on school tasks at home: for independent practice of new skills, for tasks that require extended time, and to increase home-school partnerships (Truscott, 1998). Some less direct benefits of homework include, but are not limited to improvement of study skills by teaching students how to work individually and how they learn best, it teaches students that learning can occur outside of the classroom, and it positively involves parents by encouraging parents to become active in their child's education (McPherson, 2005).

Other authors argue that homework is used to evaluate the learners' knowledge of the subject matter (Metlife, 2008). In other words, teachers use it to determine whether learners have understood a lesson and have mastered the required skills; they use homework to regularly monitor the learners' progress. Homework provides learners with opportunities to identify and learn to use resources like the library, the internet, reference books, and other resources (Brewster & Fager, 2000). In the process, learners become familiar with the idea that learning also takes place outside the classroom. Homework must be manageable, it must be appropriate to a learner's ability and maturity. Marzano, Pickering, and Pollock (2001) pointed out that homework should also be assigned in reasonable amounts and that the instructional level must match the learners' skills as well as the grade level.

Even though there are many positive benefits to homework, previous research literature indicates that there are negative aspects as well. The most obvious negative effect homework can cause is the amount of stress homework can cause a student and their parent (McPherson, 2005). If a student struggles inside the classroom, the likelihood that the student will struggle with tasks outside the classroom is high as well. If the parent does not understand the work their child is completing, the parent can also experience stress because they are not able to effectively help their child. Depending on the type of homework a teacher may hand out, some students may not be able

to complete it because they do not have the resources at home to do so. This can result in the student not completing their work or cheating in order to complete it (Skaggs, 2007).

There are other potential negative effects of homework as well. Homework can limit the time the child has to be involved in other activities such as sports, extracurricular activities, and spending time with their family. Too much homework can also lead to a lack of interest in the subject being covered. When some students are overwhelmed with the amount of work they receive, they can shut down and not complete any of the work. In some cases, parent involvement can be a negative as well. Parents may confuse their child by teaching them how to complete an assignment in a different manner than what the teacher might have taught.

THINK

BASELINE DATA

The researcher gathered the students' baseline data by using the teacher's homework observation log to determine the percentage of students who completed their homework each time homework were given in the pre-intervention period. The teacher's homework observation log reported that 60% of students had their homework completed during that time. This information supported the fact that homework completion was a problem in this class.

GOAL OF THE INTERVENTION

The goal of the intervention is to increase the rate of homework completion in mathematics among JSS 3 students of Noble International School Anguwan Rukuba, Jos North Local Government of Plateau State to 75%. That is to say at least 75% of the students in the class do their assignment whenever they are given.

FACTORS CONTRIBUTING TO PROBLEM

Interviews with students who failed to complete their homework were conducted to identify factors contributing to the problem of poor homework completion. It was found that there are three primary reasons why they failed to submit the assignment. First, students seldom do their homework on the basis of engaging in too many tasks at home. There is also no one to guide them at home to remain in the school after the school has closed to do their assignment. Literature review found that the socioeconomic status of a student can impact a student's need to complete their work. In lower income families, the student is often left alone because their parent(s) are working and are not at home to check on them (Amerine, Pender & Schuler, 2009). Students hardly get guidance at home to do their homework if their parents or sibling are seldom available.

The second reason why some students choose not to complete it because they simply do not understand the material. If they do not understand the material in class, they cannot complete the work outside of class (Hinchey, 1996). If students do not understand the task or cannot read what they are assigned to do they will most likely not complete their work and as such they will not be able to submit their home work to their teacher.

The third reason is lack of learning materials to complete the homework at home. According to Yeow (2002), students from lower-income homes may have more difficulty completing their assignments. This may be due to a lack of resources the student has to access in order to complete their work.

ACTION PLAN

As stated earlier, the goal of this study is to increase the rate of homework completion among JSS 3 students of Noble International School to 75%. To realize this goal of this action research study, the Action Plan consists of three parts: in class homework guidance, after-school homework help, and provision of learning resources.

For the in-class homework guidance, the researcher in conjunction with the subject teacher guided the students on how to do homework whenever it is given to them. That is, immediately the students have copied the homework, the teacher explained certain concepts that are too technical to the students. The teacher will identify areas of great difficulty that may pose a serious challenge to the students and verbally tell the students what they need to do to overcome them. Additionally, the teacher will tell the students the materials needed to do the homework. This measure might help students who do not complete assignment for lack of understanding of it to do their homework whenever they are given.

The after-school homework help consists of 20 minutes after closure of school for assignment assistance and provision of textbooks and other mathematical materials to assist students in their homework. Students were given the option of remaining in the school after closure for 20 minutes to do the assignment. They will be told to seek for help among themselves and from the subject teacher who leaves for home an hour after the school closes. Since students will have the opportunity to ask questions of their teacher and peers, as well as having time to begin their homework in the school, the rate of homework completion should increase. This measure should help students who do not complete their assignment because they are overtasks at home and also students who fail to complete their assignment because there is no one at home to guide them. When implemented, this step might lead to increase in the rate of homework completion and in turn might result to the actualization of the goal of the study.

The researcher suggested to the head-teacher to make provision of relevant textbooks and other materials to be kept in her custody for the after-school homework assistance. The researcher told the students to make use of the textbooks/materials provided by the school to do their assignment where necessary. The idea behind this step is to enable students who do not complete their home work for lack of textbook and other materials to have access to one. Since students who do not have textbooks and other materials such as math set will be able to access information

and make use of materials provided by the school, this measure might increase the rate of homework completion and thereby lead to the realization of the goal of the study.

ACT

PROCEDURE FOR INTERVENTION

All JSS3 students of Noble International School 2018/2019 academic session participated in the homework intervention. There are 16 students in the class comprising 10 female and six male. The students' age ranges from 13 to 15. They are all Christians and mostly residents of Anguwan Rukuba.

The three parts of the homework intervention all took place from November 12, 2018 to November 30, 2018. The classroom teacher and researcher were responsible for in-class homework guidance, which lasted about 5 minutes every day as soon as the homework assignment was given. Students who completed their homework in the after-school homework time did that in their classrooms, which lasted for 20 minutes. They sought for clarification from the teacher in his office. Textbooks and other materials were collected and returned to the office. The resources used in this intervention were textbooks, mathematical set, calculator.

PROCEDURE FOR EVALUATION

There were two sources of data to evaluate the effectiveness of the intervention: teacher's homework observation log and student questionnaire. Both were administered before the intervention and after intervention to evaluate whether the homework intervention was effective in improving the rate of homework completion.

The teacher's homework observation log is a record which shows who has and who has not returned their homework. It has three columns containing day/date of assignment, student's name, and a column indicating whether or no assignment has been submitted. It is used to determine the percentage of completed and non-completed homework (see Appendix A). To ascertain the percentage of completed homework, the researcher counted the number of students

who submitted their assignment and divided it by the total number of students in the class and the result multiplied by 100. The average percentage for the period before intervention was taken. This was also applied to number of uncompleted assignments to arrive at the percentage. After the intervention, the same method was applied to see the rate of completion and non-completion of homework assignment.

The student questionnaire contains a series of questions designed to generate student feedback on questions concerning homework. This survey included four questions. The questions on the questionnaire are how often do you complete and submit your assignment? How often do you understand the demand of homework? Please rate your homework into one of the four categories. Do you think homework is important to your education? Question one and two have the same response style of Never, Sometimes, Often, and Always. Question three has a response style of Too easy, Neither easy nor hard, and Too hard. Question four has a respond style of Yes/No (see Appendix B).

Questionnaires were distributed to the students in the class during break time to find out the initial feelings about homework. All 16 participants completed the questionnaire. The questionnaires were distributed through face to face method of administration. The face to face method of administration ensures guidance and clarification in case of any misunderstanding as well as ensuring adequate retrieval of the questionnaires. The participants were required to respond to the questionnaires and to return them to the researcher to ensure no questionnaire is missing. The questionnaires were administered by the subject teacher. The questionnaires were retrieved immediately the students finished responding to them. The students responded to another questionnaire after the intervention by adopting the same approach to see whether their views concerning homework have changed.

Baseline data from teacher`s homework observation log book on non-completion of homework to confirm the problem occurred over three days from November 2 to 5 2018.

Distribution and collection of pre-intervention student questionnaire occurred on November 6. Distribution and collection of post-intervention student questionnaire occurred on December 3, 2018. Analysis of teacher's observation log to ascertain the effect of treatment also occurred over three days from December 5 to 7 2018.

LOOK #2: EVALUATION

The purpose of the student questionnaire was to determine how students' views on homework completion changed since the implementation of the intervention strategies.

Table 1. How often do you complete and submit your homework?

	Pre-Intervention	Post-Intervention
Never	0%	0%
Sometimes	45%	25%
Often	40%	57%
Always	15%	18%

Table 1 indicates the information in regards to the students' feelings about homework before and after intervention. After reviewing the post-intervention data, the researchers noticed an increase in how important the students viewed homework. There is an increase in the number of students who answered they complete and submit their assignment Often from 40% to 57%.

Table 2. How often do you understand the demands of homework?

	Pre-Intervention	Post-Intervention
Never	5%	0%
Sometimes	45%	25%
Often	35%	55%

Always	15%	20%
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Table 2 indicates the students' feelings about homework. The responses showed a decreased in the percentage of students who answered they understand the demand of assignments Sometimes from 45% to 25% and an increase in the percentage of students who answered Often from 35% to 55% after the intervention.

Table 3. Please rate your homework into one of the four categories.

	Pre-Intervention	Post-Intervention
Too Easy	20%	15%
Neither Easy nor Hard	75%	80%
Too Hard	5%	5%

Table 3 indicates the students' feelings about homework. Table 3 shows there is a slight decrease in the percentage of students who felt that the assignments were too easy after the intervention. The percentage responses of students felt assignments were too hard remained the same pre and post intervention.

Table 4. Do you feel that homework is important to your education?

	Pre-Intervention	Post-Intervention
Yes	85%	88%
No	15%	12%

Table 4 indicates the students' feelings about homework. The students responded to how they felt homework is important to education. There was not much change in their beliefs about the importance of homework to education before and after intervention.

The analysis of the teacher's homework completion log is presented in Table 5.

Table 5. Teacher's homework completion log.

	Pre-Intervention	Post-Intervention
Homework Completed	60%	78%
Homework not Completed	40%	22%

The researcher used the teacher's homework observation log to determine the percentage of students who completed their homework each time homework was given post intervention period. Table 5 shows an increase in the completion rate of homework from 60% (pre-intervention rate) to 78% (post-intervention rate).

In summary, the percentage of students who felt they understand the demand of homework after the intervention increased after the intervention, as shown in Table 1. Students reported understanding the demands of their homework assignments better after the intervention, as shown in Table 2. The percentage of students who felt that homework is neither difficult nor easy slightly increased from the pre intervention results to the post-intervention results as seen in Table 3.

Importantly, the analysis of the teacher's homework observation log after the intervention shows that the percentage of students who completed their homework increased to 78%. This is 18% increase from the pre-intervention rate of 60%. In view of the post intervention data, the interventions employed by the researcher to increase the completion rate of homework were generally successful. The goal of the researcher was at least 75% of the students submitting their

homework. The completion rate after the intervention is 3% greater than 75%. Thus, the intervention was determined to be successful.

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APPENDIX B

Student Questionnaire

This questionnaire is designed to seek for your views on homework completion. Your responses will be anonymous. Do not write your name or phone number. Please circle your responses.

1. How often do you complete and submit in your homework?
 - a. Never
 - b. Sometimes
 - c. Often
 - d. Always

2. How often do you understand the demand of homework?
 - a. Never
 - b. Sometimes
 - c. Often
 - d. Always

3. Please rate your homework into one of the four categories.
 - a. My homework is too easy for me.
 - b. My homework is neither easy nor hard.
 - c. My homework is too hard for me to complete.

4. 1. Do you feel that homework is important to your education?
 - a. Yes
 - b. No

Thank you for your time and cooperation.