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Utilizing Technology-Aided Instruction as Supplementary Intervention in Enhancing the Skills in Four Fundamental Operations of Grade Four Pupils at Wawa Elementary School

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ABSTRACT

This study presents the positive effects of combining conventional and modern method in teaching. I have used both conventional and innovative teaching with the used of modern technology to ensure that pupils understand lessons and improve their academic performance. The purpose of this study was to improve the academic performance of Grade 4 pupils in Mathematics after pandemic using conventional and modern method in teaching mathematics. Two groups were randomly selected and assigned as experimental group and controlled group. Pretest and posttest were used in determining the pupil's academic performance. The experimental and controlled group both received instruction using conventional approach during pretest. Based on the result of the pretest, pupils' performance is not satisfactory due to some difficulties such as poor competency in four fundamental operations, and they had a bad habit of guessing. In the two groups, the experimental group is the one who needs help to learn well the four fundamental operations. Remedial teaching is one of the solutions given by the researcher. Meanwhile after the pre-test, researcher introduced the modern method using Game-Based Learning known as Quizziz. Both conventional and modern method were used in everyday lesson. Pupils with no internet connection were given hard copy of homework while the other can use the Quizziz educational platform. All the pupils learned, and no one was left behind. As a result, with the use of conventional and modern technology, they showed their interest to learn and pupils engagement in learning increases.

Key Concept: Conventional and Modern Method of Learning

INTRODUCTION

Mathematics is one of the three R's which are very fundamental and basic tools towards learning. Pupils who fail to acquire skills and competence in these basics would probably show lack of interest to pursue the subject. As a result, low concentration, and performance.

According to (Singh, 2004), he argued that the teachers-centered approach in teaching mathematics is proven to have been less effective to impart knowledge to learners. However, through the course of changes in the educational system, various studies have proved that new ways and strategies of teaching mathematics are more effective and efficient. The conventional way of teaching mathematics could be considered as a culprit for the stagnant and underperformance of students in mathematics class. However, contemporary strategies have shown that it is more engaging to students since learners are able to use their resources to innovate and utilize their knowledge incrementally (Johnson, Johnson & Smith (1998) (referred in Ahlfeldt, Mehta, & Sellnow, 2005, p.52). In line with this, a new method of learning allows the learners to think abstractly and critically on their own, it generates new ideas for the learners to think independently by experiencing learning first-hand. The role of technology such as computers, iPad, projectors, speakers, video presentations, and educational software, learners could navigate deeper understanding and explore extensively. Therefore, the use of computer and multimedia software is one of the best methods for teaching and student learning.

As manifested in the pretest result, the mastery level of grade four learners in Wawa Elementary School was 42.38 which is below 75%. Having said this, the researcher is determined to reinvent modification and utilize technology-aided instruction as supplementary to the existing interventions to improve the students' skills in performing the four fundamental operations by incorporating technology in the conventional intervention.

STATEMENT OF THE PROBLEM

The purpose of this study is to enhance the skills in four fundamental operations of Grade 4 Pupils at Wawa Elementary School

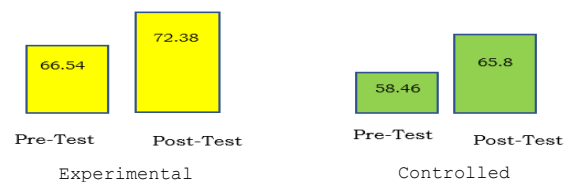
Specifically, this study sought to answer the following:

1. Is there a significant difference between the numeracy level of Grade 4 pupils before and after the intervention?
2. How can the use of technology-aided Instruction as supplementary intervention help in enhancing the skills in four fundamental operations of selected grade

METHODOLOGY

This study used experimental method. The 30 respondents were divided into two groups: Group 1: Experimental Group and Group 2 Controlled Group. Pre-test was given through printed material. Post-test was given to pupils to determine what they have learned. Test scores of both groups was analyzed and compared using the weighted mean scores and mastery level obtained in the pretest and posttest.

Average Test Result of Learners



RESULTS AND DISCUSSIONS

The results show that learners who were taught using traditional and modern method is more interested to learn as reflected in the result of the posttest mastery level of 72.48% which is way higher than the score of the controlled group. Game-based platform such as Quizziz encouraged them to be more active in participating in their online engagements. They are now motivated to study both traditional and modern method of teaching. There is a significant change in their behavior, they are more willing to learn, participative and cooperative. Based on the data obtained and observations made, it can therefore be concluded that using technology-aided instruction as supplementary intervention is indeed relevant and effective in enhancing the skills in four fundamental operations of grade four pupils.

CONCLUSION

The researcher suggests that using traditional and modern methods such as game-based learning can be an effective tool in ensuring engagement and mastery of the desired skill. Since they are confident now and motivated in answering their assessment, they become more participative and focused in accomplishing learning tasks, thus improving their performance as well.

RECOMMENDATIONS

The researchers recommend the use of traditional and game-based learning activities with other subjects such as English and Science to pose interactive and fun learning sessions.

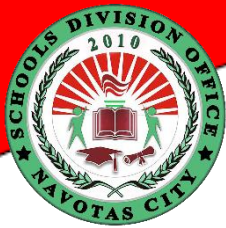
REFLECTION

The use of combination of traditional and modern method with the use of modern technology is very helpful to the learner since I have observed that they become more engaged and active in doing their tasks. Their behavior manifest that they become more confident and motivated in doing activities that may lead to improved academic achievements.

REFERENCE:

Noreen, R., & Rana, A. (2019, August). Activity-based teaching versus traditional method of teaching in mathematics at elementary level. Semantic Scholar | AI-Powered Research Tool. <https://www.semanticscholar.org/paper/Activity-Based-Teaching-versus-Traditional-Method-Noreen-Rana/8bc1b0837614e6a616be50237f307394e76807e1>





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Experimental Group

Controlled Group



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