Effectiveness Of The Demo-Video Lessons To The Performance Of Grade 5-6 Pupils In Mathematics

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Abstract — This study evaluated the effectiveness of Demo-Video Lessons to the performance of the Grade 5-6 pupils in Mathematics of Himarco Elementary School. The findings of the study were bases for a proposed intervention plan. This study used the quasi-experimental method of research to evaluate the effects of Demo-Video Lessons to the performance of the Grade 5-6 pupils in Mathematics. The results of the study were basis for an Enhancement plan. The researcher utilized Universal Sampling in identifying the respondents of the study. Table 3 shows the test of difference between the pretest and posttest scores performances of the grade 5-6 pupils in Mathematics subject before and after the integration of the Demo-Video Lessons in the delivery of the most essential learning competencies in the third Grading Period. Based on the results in Table 3, it shows that the Grade 5-6 pupils performances in Mathematics in the pretest is 26.82 which is very evident that it is below in terms of the posttest performance result which is equal to 34.74. which resulted to the computed t value of equal to 1.899 and critical t value of 0.251 at 0.05 level of significances. The following results are the bases whether the hypothesis will be rejected or accepted on the certain level of significance.

Based from the results in table 3, the hypothesis which states that there is no significant difference between the pretest and posttest score performances of the grade 5-6 pupils in Mathematics before and after the integration of the Demo-Video Lessons is rejected. The results in table 3 regarding the test of difference of the pretest and posttest score performances in Mathematics of the Grade 5-6 pupils after the integration of the Demo-Video Lessons implied that since the grade 5-6 pupils performances are increasing or improving based on the results given, it is very evident that the integration of the Demo-Video Lessons in the delivery of the different topics in Mathematics is significantly effective and it really helped in improving the performance or skills specially in Mathematics Subject. Exposing the Grade 5-6 pupils which are the respondents of the study to the new learning strategies or method in delivering the lessons aside from the mandated mode of delivery of the most essential learning competencies are very important keys to boost the learners morale and skills to learn new things and not depriving them from discovering new learning techniques is one of the key factors in adopting the world challenges in terms of delivery of education to the future generations. Furthermore, the result of the results on the performances of the Grade 6 pupils are very good because they have gained strong support from their parents or

guardian which could be the reason that learners really pushing themselves to learn new things amidst pandemic.

Keywords — Effectiveness; Demo-Video Lessons; Performance; Grade 5 pupils; Mathematics

I. Introduction

Today, most of the school institution has used different learning strategies to improve the academic performance of the pupils/ students in their different learning pace and to produce a learners that embedded with 21st century skills and globally competitive.

Mathematics is usually viewed as challenging even under normal circumstances (Fritz, Haase & Rasanen, 2019). Unlike reading, math is almost always formally learned at school. Parents are often less well-equipped to help their children with math. Recently, the education system has faced an unprecedented health crisis that has shaken up its foundation.

The COVID-19 pandemic has dramatically impacted the ongoing teaching-learning processes in the Philippine educational system brought on by the growth of distance education, where classes have been conducted remotely, to prevent the spread of the virus (Karalis, 2020). While distance education can be delivered via different methods such as cable TV or CD, asynchronous web-based online instruction was reported as the most adopted delivery method for distance learning (Lowenthal, Wilson, & Parrish 2009; Moore, Dickson-Deane, & Galyen, 2011; Hew et al., 2010). Asynchronous learning does not require the real-time participation of instructor and students, which can be supported through tools such as e-mails, discussion boards, blogs, wikis, or video/audio recordings (Parsad & Lewis, 2008).

Mathematics is one of the basic educational components that require students to be skilled and understand for the various methods used to structure lives. Studying Mathematics builds problem-solving skills. It is a subject that that enable us to develop creativity that emphasizes problem solving. With learning that is used to solving problem solving, students are accustomed to thinking mathematically, namely logically, rationally and critically.

One of the main impacts of pandemic on teachers and students is the loss of instructional time. In my class, students often got low score in Math test due to insufficient knowledge and students' different pace of learning. Their performance in Mathematics were greatly affected by the pandemic. Learning activities cannot be carried out inside the school and synchronous learning is not applicable because of unstable internet connection. Amidst crisis, learning must continue and it can only be if the school and community work hand in hand. Teachers need to plan instruction and use an asynchronous approach that facilitate instruction to maximize student learning.

Providing quality education is a great challenge in this fast changing world. There is a continuous study on effective approach and strategies depending on the type of learner. With this

pandemic, schooling has changed quite a bit. As we continue, even beyond this year, flexibility is very likely going to become an important aspect of each and every one of our courses.

Asynchronous learning needs to allow for some flexible timing, activities, etc. We need to trust our students to take ownership of their learning as well. Giving different options to demonstrate learning, as well as a little more flexibility in timing and due dates, can go a long way for many of our students.

The effectiveness of using Asynchronous learning in teaching Mathematics maybe affected by the economic and educational background of family members. Students also struggle to stay on task and complete work when faced with a large block of time without the teacher.

From the aforementioned concerns, this study is conducted to address the learners need to increase the performance in mathematics.

This study evaluated the effectiveness of Demo-Video Lessons to the performance of the Grade 5-6 pupils in Mathematics of Himarco Elementary School. The findings of the study were bases for a proposed intervention plan.

Specifically, the study sought to answer the following questions:

1. What is the pre-test scores of the Grade 5-6 pupils before the integration of Demo-video Lessons in the delivery of the Most Essential Learning Competencies in Mathematics?
2. What is the posttest scores of the Grade 5-6 pupils before the integration of Demo-Video Lessons in the delivery of the Most Essential Learning Competencies in Mathematics?
3. Is there a significant difference in the pretest and posttest scores of the Grade 5-6 pupils before the integration of Demo-Video Lessons in the delivery of the Most Essential Learning Competencies in Mathematics?
4. What Intervention plan can be proposed based on the findings of the study?

HYPOTHESIS

Ho : There is no significant difference in the pretest and posttest scores of the Grade 5-6 pupils before and after the integration of Demo-Video Lessons in the delivery of the Most Essential Learning Competencies in Mathematics.

II. Methodology

Design. This study used the quasi-experimental method of research to evaluate the effects of Demo-Video Lessons to the performance of the Grade 5-6 pupils in Mathematics. The results of the study were basis for an Enhancement plan. The researcher utilized Universal Sampling in identifying the respondents of the study. Himarco Elementary School is the main locale of the study. The Grade 5 and Grade 6 are the main respondents of the study and the data based on the students' performance ratings such as the scores in the pretest and posttest were utilized. This research is mainly focused to gather data on: The effectiveness of Demo-video lessons to the performance of the Grade 5 and Grade 6 pupils in Mathematics; Proposed Intervention Plan based on the findings of the study.

Sampling. There are 38 total number of respondents of Grade 5 and Grade 6 learners who are included in the study and the primary means of reach is Facebook and cellphones.

Research Procedure. The researcher formulated the following steps or procedures to be guided during the gathering of data. The steps are the following: The researcher send a letter to the Schools Division Superintendent of Leyte Division for approval in conducting the study to the said school, After which, the approved letter coming from the Schools Division Office was given to the Public School District Supervisor (PSDS) of Palompon District. The researcher conducted the pretest before the integration of the Demo-Video Lessons before the delivery of the most essential learning competencies in mathematics. After conducting the pretest, the researcher will now be integrating the Demo-Video Lessons to the different most essential learning competencies (MELCs) in Mathematics for 4 weeks. After 4 weeks of integrating the Demo-Video Lessons to the lesson, the posttest was conducted to validate the learning of the Grade 5-6 pupils. The results were analyzed and interpreted in order to find out if there will be increased on the performance level from the pretest to the posttest. Then after the posttest and pretest were analyzed, the posttest result was treated statistically using the test for mean difference.. Answering and retrieval of the research tool followed. Different tools were given separately and were explained thoroughly. Tallying of results and treatment of data. Analysis and Interpretation of Data. Making of Proposed interventions.

Ethical Issues. The right to conduct the study was strictly adhered through the approval of the principal, approval of the Superintendent of the Division and approval of the Schools Division Research Committee. Orientation of the respondents both the learners and the teachers was done separately.

Treatment of Data. The effectiveness of Demo-Video Lessons to the performance of the Grade 5-6 pupils in Mathematics are the focused of the study and the data collected was treated through a weighted mean and T-test for mean difference to test the significant difference of the vairiables.

III. Results and Discussion

TABLE 1
PRE-TEST PERFORMANCE OF GRADE 5 & 6 PUPILS IN MATH

Score Range	Description	PRETEST	
		Frequency	%
33-40	Excellent	3	8
25-32	Very Good	20	53
17-24	Good	15	39
9-16	Fair	0	0
1-8	Poor	0	0
Total		38	100
Weighted Mean		**26.82**	**Very Good**

Table 1 shows the pre-test performance in Mathematics of the Grade 5-6 pupils before the integration of Demo-Video Lessons in the delivery of the most essential learning competencies particularly on the 3rd grading period. Based on the results in table 1, it can be gleaned that from the Excellent performance level having a score score ranging from 33-40, there were 3 respondents or 8 percent from the 38 total number of respondents who were excellently done their tasks even if the approach or strategy identified by the researcher is not yet introduced by the researcher to the Grade 5-6 pupils as respondents to this study. In the Very Good Level of Performance having a score ranging from 25-32, there were twenty (20) respondents or 53 percent which is and considered to be the dominant score range among from the 6 class interval presented . On the other hand, in the good of performance level having a class interval of 17-24, there are 20 respondents gained on this level with an equivalent percentage of 39 percent. Lastly, in the poor and fair level of performance having a score ranging from 1-8 and 9-16 respectively, there were none or 0 percent from the grade 5-6 pupils.

The results in table 1 which focused on the pretest performance of the Grade 5-6 pupils in Mathematics before the integration of the Demo-Video Lessons in the delivery of the most essential learning competencies particularly on the MELCs in the 3rd Grading period. The pretest result implied that the grade 5-6 learners are having a good time in learning the subject even though the particular lessons were already average to difficult level since the focused on the study when it comes to period is in the 3rd grading period considering that the results the have garnered is already very good performance level having a weighted mean of 26.82 percent that were belong to the class interval based on the table presented is from the score ranging from 25-32. In other words, even in the time where they just started their classes in Mathematics for the school year 2021-2022, there already adopted the different learning strategies introduced to them by their teachers which mean that from those teaching and learning process they experienced for the past

2 quarters, some of the respondents if not majority are already exposed and adjusted the type of learning modality they are in in the delivery of the most essential learning competencies in mathematics. It is evident that the Grade 5-6 learners really gave their best shot to learn the subject even if the environment is not really friendly due to covid restriction. In other words, this time of pandemic it is very evident that there was a strong ties between the teachers, parents and learners which resulted to an a very good level of performance even if the teacher-researcher has not yet introduced the identified strategy or approach to be used in the discussion of the topics for the time referred therein. Another premise to the results, maybe learners are already independent learners when it comes to learning due to the fact that they need to learn without the usual practice of learning where teachers are constantly nurture them specially when times that they need to clear some gray areas for a certain topic/s.

Table 2
POST TEST PERFORMANCE OF GRADE 5 AND 6 PUPILS IN MATH

Score Range	Description	POST TEST	
		Frequency	%
33-40	Excellent	28	74
25-32	Very Good	10	26
17-24	Good	0	0
9-16	Fair	0	0
1-8	Poor	0	0
Total		19	100
Weighted Mean		**34.74**	**Excellent**

Table 2 shows the posttest performance in Mathematics of the Grade 5-6 pupils after one month or more integrating Demo-Video Lessons to the topics specified in the time frame prepared by the teacher-researcher in the delivery of the most essential learning competencies particularly on the 3rd grading period. Based on the results in table 1, it can be gleaned that from the Excellent performance level having a score ranging from 33-40, there were 28 respondents or 74 percent from the 38 total number of respondents who were done their tasks excellently after the demo-video lessons was already introduced to the Grade 5-6 pupils which is considered a new approach or strategy identified by the researcher. In the Very Good Level of Performance having a score ranging from 25-32, there were 10 respondents or 26 percent . On the other hand, in the good of performance level having a class interval of 17-24, together in the poor and fair level of performance having a score ranging from 1-8 and 9-16 respectively, there were none or 0 percent from the grade 5-6 pupils belong to the aforementioned level of performances.

The results in table 1 which focused on the posttest performance of the Grade 5-6 pupils in Mathematics after the integration of the Demo-Video Lessons in the delivery of the most essential learning competencies particularly on the MELCs in the 3rd Grading period implied that the grade 5-6 learners are having an excellent time in learning the subject and already mastered the lessons even if the topics presented by the teacher-researcher were already in the difficult level considering that grade 5-6 learners garnered an excellent performance level having a weighted mean of 34-74 percent. Therefore after the teacher-researcher introduced the new teaching approach in the delivery of the most essential learning competencies really helped then or it adds to their stock knowledge they have learned from the previous approached introduced by the teacher researcher based on the topics delivered. So based on the discussion above, the Grade 6-5 learners are already adopted the new teaching strategy introduced to them by their teachers which mean that from those teaching and learning process they experienced for the last 1 month of the implementation of the new innovation, majority of them are already grasped and adjusted the type of learning modality they are in in the delivery of the most essential learning competencies in mathematics. It is evident that the Grade 5-6 learners really love the new innovation being introduced by their teachers and also they really love to learn from even if the environment is not really friendly due to covid restriction. In other words, this time of pandemic it is very evident that there was really a strong commitment set by all the members of the school system in the delivery of learning competencies between the teachers, parents and learners which resulted to an excellent level of performance even if the teacher-researcher was just introduced the idea for a short period of time just to let the learners experienced new technique.

Table 3
Test of Difference Between the Scores in the Pre-test and Post-test of Grade 5 AND 6 PUPILS IN MATH

Aspects	Test Scores		Computed T	Critical T	Decision	Interpretation
Grade 5 & 6 PUPILS IN MATH	Pre Post	26.82 34.74	1.899	0.251	Reject H_o	Significant

Table 3 shows the test of difference between the pretest and posttest scores performances of the grade 5-6 pupils in Mathematics subject before and after the integration of the Demo-Video Lessons in the delivery of the most essential learning competencies in the third Grading Period. Based on the results in Table 3, it shows that the Grade 5-6 pupils performances in Mathematics in the pretest is 26.82 which is very evident that it is below in terms of the posttest performance result which is equal to 34.74. which resulted to the computed t value of equal to 1.899 and critical t value of 0.251 at 0.05 level of significances. The following results are the bases whether the hypothesis will be rejected or accepted on the certain level of significance.

Based from the results in table 3, the hypothesis which states that there is no significant difference between the pretest and posttest score performances of the grade 5-6 pupils in

Mathematics before and after the integration of the Demo-Video Lessons is rejected. The results in table 3 regarding the test of difference of the pretest and posttest score performances in Mathematics of the Grade 5-6 pupils after the integration of the Demo-Video Lessons implied that since the grade 5-6 pupils performances are increasing or improving based on the results given, it is very evident that the integration of the Demo-Video Lessons in the delivery of the different topics in Mathematics is significantly effective and it really helped in improving the performance or skills specially in Mathematics Subject. Exposing the Grade 5-6 pupils which are the respondents of the study to the new learning strategies or method in delivering the lessons aside from the mandated mode of delivery of the most essential learning competencies are very important keys to boost the learners morale and skills to learn new things and not depriving them from discovering new learning techniques is one of the key factors in adopting the world challenges in terms of delivery of education to the future generations.

IV. Conclusion

Based from the findings of the study, it can be concluded that there is a significant difference between the pre and post-test scores of grade 5-6 pupils in Mathematics. Thus, the integration of the Demo-video lessons in the delivery of the most essential learning competencies in Mathematics is significantly effective in improving the performance of the learners.

V. Recommendations

1. The proposed intervention plan should be used.
2. Administrators or school head should initiate trainings and workshops specially this summer time on how to develop demo-video lessons based on the norms or standards of crafting those learning materials in Mathematics.
3. School Heads should encourage teachers in all subject areas to develop demo-video lessons in their subjects and let them undergo the process of doing the quality assurance in order to let this materials be downloaded to the DepEd Portal to be used for other teacher who are really needing the materials and have no capacity to craft due to lack of trainings and or resources.
4. Based from the results of the study having the excellent and good performances level, teachers should continue to adopt and integrate demo-video lessons to maintain or improve the performance for those learners who are really need help in improving their mathematical skills.
5. In relation to the abovementioned, the researcher is giving the authority to the future researcher to conduct the same study to validate the significant findings of the study.

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