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Video-Based Experiential Learning Approach as an Innovation in Teaching Fraction

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Abstract: *This study focused on the development of the learners on how Video-Based Experiential Approach will help learners to keep the pace of learnings in this pandemic. This study provided various evidence on how innovation can be a great step in developing the learners in learning about fraction. The purpose of this action research is to determine the effectiveness of using Video-based Experiential approach to the learners amidst of this pandemic. Various test and data gathering procedures showed promising data on the success of the implementation of the said reading material where thirty (30) students assessed under the supervision of the chosen three (2) master teachers and Five (2) grade 6 mathematics teachers with the use of Google form to evaluated by the teachers using LRMDS tool. The data that this study generated in terms of the success it shown over the development of the learners were significant in terms of their level of Teaching Fraction. Challenges that were encountered by both teachers and students were highly encountered in correlation with the students' level of this approach. Furthermore, the information gained from this study will benefit Mathematic teachers by yielding information about Video-based Experiential Approach as an Innovation in teaching Fraction.*

Keywords: innovation, reading comprehension, reading fluency, development, vocabulary story photo album

Introduction

We live in the year when the Coronavirus (COVID-19) pandemic struck some humans (Students, Teachers, and also our parents) dealing with a new normal learners learning style. Schools in our country for Basic Education have not totally started face to face classes. The purpose of the Video based Experiential approach in teaching fractions is to teach students on how to Contribute experiences and think about their Reflections connecting on solving fractions by watching video as learning modality of the student. Despite happenings in the past years and now, we want to find an innovative approach on how video presentation will help students to cope up in solving fractions.

There are those who argue that curriculum change and mathematical school texts adapt to new education needs, students, internationally, continue to have difficulties when handling fractions, they emphasize on multiple representations, use of experiential activities and activities carried out on electronic platforms (Avgerinos & Vlachos, 2018). Future teachers need to observe, interpret and analyze teaching during the initial teacher education period. The use of videoed teaching and learning in teacher education promotes reflection, and analyzing videos of teaching is helpful in learning effective classroom practices that prospective teacher mostly do not have the chance to observe during fieldwork experiences. The analysis of videos of teaching can be seen as a way to enhance the development of prospective teachers' professional vision, which, in turn, improves instruction (Osmanoglu, 2015).Indicated that interventions consisting of evidence-based instructional components (e.g., concrete and visual representations; explicit, systematic instruction; range and sequence of examples; heuristic strategies; and use of real-world problems) led to improved performance on measures with fraction concepts and skills (Shin & Bryant 2015). Most of the students who incorrectly modelled the operations with fractions before the implementation, have been able to use the correct model for the operations with fractions after the-implementation fraction.it has been found that most students' express positive opinion.
the lesson. This will also be helpful to the teachers to discuss lessons in a video recorded way in this time of pandemic. Using Video Lesson Presentation to easily communicate to the learners and also attract them to your Teaching Style.

DepEd Order 32, s.2020 Basic Education Learning Continuity Plan in the time of COVID-19 (BE-LCP) Learning Support Aides (LSAs) are qualified individuals who will work together in collaboration with teachers and contribute to the provision of learning opportunities that promote achievement and progression of learners. It requires the complementary and broader roles of parents, guardians and other household partners, and members of the community to support the learning process of the students at home, hence, the need for additional manpower in schools. It is for this reason that DepEd shall be engaging the services of Learning Support Aides. According to Secretary Briones, "As education must continue amidst pandemic, our teachers tackle the additional tasks, challenges, new expectations in the new normal, thus, the need for the learning support aides is crucial". The service that the teacher in school used to provide support to addressing the student is not able to manage independent support, especially to the student who has disabilities and special needs.

Many students struggling with fractions must understand them before learning higher-level math. This is the new way of learning in the present like we are facing today. Today is virtual learning program all the students are not allowed to go to the school because of the pandemic and the way of teaching or learning for the elementary students was the modular and our plan to do as a pre-service teacher we think that this idea was a perfect for the students to follow or to repeat a topic based on a video presentation. This way of teaching can help a children's students to recall all the topic that they need to know better. We can also use the pattern to teach all the children's students in a proper way and to more likely understand the module that we gave to them

We will ask some of our known teachers who teach mathematics fraction in elementary grades if we can attend their class on that day and we will observe how the students react and perform during the activities. And after we make these actions, we will know how we can revise, enhance and modify our research. This setting is important because we can plan and see if our teaching strategy will work if we implement it if we teach fraction or if it can be helpful for the teachers who struggle to teach fraction and are looking for some techniques or strategy they can use

For the overall research problem was thinking of a positive solution to a problem like there a lot of students that have no internet connection and the solution was to share or buy a load for the internet connection to attend the online learning or online class. And there are other problems to do a solution like what i have earlier there some student have a slow learner we need to provide more basically or detailed to understand the topic of the fraction symbol and also the main topic the we discuss we can make a multiple teaching to continue the learning or make a physical exercise or a virtual exercise for the students to know if the students was learn from us or if a students has a lower grade we can make to tell or ask a student what king of topic that have not know to let the students make a confidence of his own to ask if they now know and that's the overall purpose of the research which is Video based experiential learning approach as an innovation in teaching fraction.

Action Research Problem

This study aimed to determine the effectiveness of the video-based experiential learning approach as an innovation in teaching fractions.

Specifically, this research sought to answer the following questions:

1. What is the level of acceptability of the developed video-based experiential learning instructional tools in teaching fraction as assessed by master teachers and subject teachers based on the LRMDS evaluation tools in printed materials in terms of:

    1.1. Content,

    1.2. Format,

    1.3. Presentation and Organization, and

    1.4. Accuracy and Up-to-datedness

2. Is there a significant difference in the assessment of the two groups of respondents on the level of acceptability of the developed video-based experiential learning instructional tools in teaching fraction?
3. What is the learners level of skills in the fraction using the video-based experiential learning approach in terms of:

    3.1 fractions using concrete materials that represent the area model.

    3.2 fractions using concrete materials that represent the measurement model.

    3.3 fractions using concrete materials that represent the model of the set?

4. How effective is the developed video-based experiential learning approach instructional tools in improving the conceptual understanding in teaching fraction as revealed by their pretest and posttest mean scores?
5. Is there a no significant difference between the pretest and posttest mean scores?
6. What lesson exemplar in teaching fractions may be developed based on the findings of the study?

7. What lesson exemplar in English 6 may be developed based on the findings of the study?

METHODS

This Study utilized pretest-posttest true-control group design to determine the effectiveness of Using Video Based Experiential Approach as Innovation in teaching Fraction. Using Learning skills in Fraction how student easily understand fraction in discussion and how different types of skill in fraction innovate the past learnings of the student in fraction. According to Samosa (2020) the Treatment group needs to be measured before and after the utilization of the strategy or program implementation.

The respondents of this study were thirty (30) students, two (2) master teachers, and two (2) grade 6 teachers that are teaching Mathematics Fraction grade 6 in Our lady of Lourdes Academy (OLLA). The respondents were purposively selected.

Survey questionnaire was given to the selected teachers to evaluate the learning materials created by the researchers that will be utilized to the thirty (30) students. The survey questionnaire is evaluated by content, format, presentation and organization, and accuracy and up-to-datedness following

df	t-test	t-test critical value	Probability level	Decision	Interpretation
29	-7.47	2.00	P > 0.05	Ho is rejected	Highly Significant

the LRMDS evaluation tool. The learning materials that was to be utilized among the learners is what the teachers will use to assess the reading skills of the grade 6 students. The study uses purposive sampling technique in order to determine if there are similar traits or characteristics among the participants while engaging on the proposed video material.

In order for the succession, the researchers used innovation as a tool to develop and implement the Video based Experiential approach to leaners. This Approach is use to be utilized in order for the learners to develop their performances and activities using Video-based Experiential approach.

In conducting the study, the researchers carried out a request letter noted by the school principal and research coordinator that is sent to the school division superintendent for the approval and permits to undertake the study to the chosen school. Once approved, the researchers can now distribute the informed consent form to all the learners' parents/guardians. Another letter is to be given to the principal of the chosen school for the permission to conduct the study.

To protect the privacy of the respondents, the researchers will consider taking proper consent from all the respondents of the study. The date that will be collected will be treated with confidentiality and validity of the conduct of this study. The researchers will ensure to have a proper communication and cooperation with the participants and ensure the safety of the documents. All information shall not be exposed with/o the proper consent of the owner.

Terms of analyzing the achievement of the learners on the reading activity based on the assessment and evaluation of the teachers on the experiment group using the t-test of the independent means. After the pretest, next step is the intervention to be given to the experimental group. Once the intervention has been implemented, a posttest will be administered to see if there is a significant difference between the pre-test and posttest results of the experimental group. The weighted mean was utilized. The critical value and computed t value, as well as p – value and an alpha level of 0.05, were statistically considered to determine the academic achievement of the learner respondents.

Results and Discussions

Table 1: Level of acceptability of the developed vocabulary story photo album as an innovative reading material assessed by Master Teachers/Grade 3 Teachers

Vocabulary Story Photo Album	Teachers	
	WM	Verbal Interpretation
Content	3.68	Highly Very Satisfactory
Format	3.33	Very Satisfactory
Presentation and Organization	3.43	Very Satisfactory
Accuracy and Up-to-dateness	3.49	Very Satisfactory
Overall	**3.48**	**Very Satisfactory**

Legend: Very highly Satisfactory 3.50 – 4.00), Very Satisfactory (2.50 – 3.49), Satisfactory (1.50 – 2.49), Not Satisfactory (1.00 – 1.49).

The tabulated data revealed the level of acceptability of the developed Video-based experiential learning instructional tools in teaching fraction as assessed by master teachers and subject teachers and grade 6 teachers. The data showed that the master teachers and grade 6 teachers' assessment on the acceptability of the vocabulary story photo album was very satisfactory that was based on the computed weighted mean of 3.48. More so, the teachers' asses the content of video as materials X = 3.68; Format X= 3.33; Presentation and organization X = 3.43; Accuracy and up-to-datedness X= 3.49 which all denoted as very satisfactory based on LRDMS evaluation tools for video materials.

This implies that the reading material passed the LRMDS evaluation assessed by master teachers and grade 6 teachers as the content of the introduced Video-based as material applicable to the grade 6 students with the format and presentation and organization that is suitable for their current skill level with accuracy and up-to-datedness that is a reliable source of knowledge for the young students in this pandemic situation.

Table 2: Level of the learners reading skills on vocabulary story photo album

Variables	Pretest Mean Score	Posttest Mean Score	Gain Score
Concrete materials that represent the area model	89	92	90
Concrete materials that represent the measurement model.	61	67	64
Concrete materials that represent the model of the set	65	71	68

The date that is being presented of table 2 shows the learners' performance after the utilization of the Video-based experiential learning instructional tools in teaching fraction to improve the learners solving fraction skill. Considering the data provided by the table, it indicates that before the utilization of the Video based Experiential, the learners pretest mean score are as follow; Concrete materials that represent the area model is 89, Concrete materials that represent the measurement model is 61 and Concrete materials that represent the model of the set is 65, then their posttest mean score on Concrete materials that represent the area model 92, Concrete materials that represent the measurement model is 67 and Concrete materials that represent the model of the set is 71 Hence the learners' gain score is 90% on Concrete materials that represent the area model ,64% gain score on Concrete materials that represent the measurement model and 68% on Concrete materials that represent the model of the set. it is there by concluded that the Video based Experiential Approach as an innovative to improve the learners solving fraction skill had a positive impact on the learner's improvement in Solving fraction, as evidenced by the significantly greater mean in the posttest than the pretest.

Table 3: Significant difference on the pretest and posttest mean scores of the learners on the implementation of the Video-based experiential learning instructional tools in teaching fraction

Upon computing the data, it shows that the t-test value is -7.47 which exceeds to the t-test critical value of 2.00 at the degree of freedom of 29. The result of the scores is significant at 0.05 which implies that the null hypothesis is rejected. Thus, there is a significant difference in the pretest and posttest score of the learners assessed by teachers using the Video-based experiential learning as an innovation teaching fraction to improve the learners solving fraction skill.

Table 4: Challenges encountered by teachers on the implementation of the vocabulary story photo album

Challenges encountered by teachers on implementing Video-based Experiential Approach in Teaching Fraction	WM	Verbal interpretation
Consistency of Signal	**3.65**	Very Highly Encountered
Applying the activities through watching videos	**2.77**	highly Encountered
Lack of instructional guide in video.	**2.62**	Highly Encountered
Overall	**3.01**	**Highly Encountered**

Legend: Very highly Encountered (3.50 – 4.00), Highly Encountered (2.50 – 3.49), Encountered (1.50 – 2.49), Not Encountered (1.00 – 1.49).

The data above showed the challenges that were encountered by the teachers on the implementation of the Video-based Experiential learning among the participated students. The date revealed that the learners' shows a highly encountered challenge on using the Video-based Experiential learning approach based on the overall computed weighted mean of 3.01. As described on the following domains the means scores of the following challenges as follows; Consistency of Signal (X=3.65), Applying the activities through watching videos (X= 2.77), Lack of instructional guide in video (X= 2.62). The challenges that the teachers encountered are related to the question given to the learners and based on the data above that some learners have problems when it comes using Video-based Experiential approach.

Conclusion

CONCLUSION

The following Results of and discussion on the Video Based Experiential Approach as innovation in teaching Fraction (VBEA) in improving least mastered Competencies in Mathematics VI drawn Several conclusions.

1. As shown by the significantly different mean in the pretest and posttest, the innovation in VBEA had effective and positive impact on the learners.
2. The Learners exposed to the VBEA in teaching fraction in subject of mathematics are the different in pretest and posttest.
3. With the used of VBEA student engages all of his senses in a learning experience, in doing VBEA. Video learning is ideal for VBEA approach because it incorporates visuals (moving, text, sound, and audio improvements, allowing the student to interact more fully and so learn and retain more information).
4. Application is a natural result. Learners are able to assimilate knowledge and doing applying real life situation more quickly and efficiently.
5. With the use of VBEA on teaching fraction in mathematics will help them to recap lesson anytime.

Recommendation

Based on the findings of the study and the conclusion drawn from the results, the following are recommended:

1. Further research is needed on possible connections between Video Based Experiential Approach as an Innovation in teaching fraction and how teachers can be use this approach as teaching materials amidst in Covid-19 pandemic.
2. The utilization of video as a technology-based tool resulted in a more engaging and enjoyable method of learning fractions.
3. Furthermore, using Video to study fractions removed the ambiguity surrounding the concepts and vocabulary related with fractions and added excitement and enjoyment to mathematics learning. The utilization of Video-based Experiential created an environment that the student can apply learning in fractions.
4. In addition, the utilization of Video based as Instructional material encouraged students to interact and participate socially in mathematics sessions. Learners are motivated to participate actively in mathematics lectures that are entertaining and fascinating, according to the findings of this study.
5. Researchers also revealed that the students who took part in the study liked using videos and applying more effectively, helps them understand fractions in arithmetic.
6. Learner performance in mathematics may increase as a result of understanding and will cause to have additional points in mathematics subject

REFERENCES

[1] Aslihan Osmanoglu, (2015) Prospective Teachers' Teaching Experience: Teacher Learning through the use of video

[2] DepEd Order No.32 s, 2020. Basic Education Learning Continuity Plan in the time of COVID-19(BE-LCP)

[3] Evgenios Avgerinos & Roza Vlachou, (2018) Towards Reducing the Difficulties of Students in Fractions: Instructional Practices and Theoretical Context Volume

[4] Fatma Gizem Karaoglan Yilmaz,Burçin Gökkurt Özdemir & Zehra Yasar (2018) Using Digital Stories to reduce Misconceptions and mistake about fractions: An Action Study.

[5] Georgeana Bobos-Kristof, Ph.D.(2015)Teaching fractions through a Measurement Approach to prospective elementary teachers: A design experiment in a Math Methods course.

[6] Kolb, Alice Y. and Kolb, David A. (2017) "Experiential Learning Theory as a Guide for Experiential Educators in Higher Education," Experiential Learning & Teaching in Higher Education.

[7] Mutmainah; Rukayah; Indriayu, Mintasih(2021)Effectiveness of Experiential Learning-Based Teaching Material in Mathematics-International Journal of Evaluation and Research in Education.

[8] Ramury, Feli and Hartono, Yusuf and Ilma, Ratu (2015) SUPPORTING STUDENT UNDERSTANDING OF EQUIVALENT FRACTION CONCEPT USING LEGO WITH AREA MODEL.

[9] Samosa, R.C (2020). Undesrtanding the End – to – End Praxis of Quantitative Research: From Proposal to Paper Presenattion. Book of Life Publishing.

[10] Shin, M., & Bryant, D. P. (2015). Fraction interventions for students struggling to learn mathematics: A research synthesis. Remedial and Special Education