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Effects of 3-Dimension (Virtual) Exhibit in the academic performance of Selected Grade 7 Arts students

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ABSTRACT

This study aimed to determine the effects of 3-Dimension (Virtual) Exhibit in the academic performance of Selected Grade 7 students. The use of 3-Dimension (Virtual) Exhibit is quite new in the Philippines, primarily because teachers use the readily available modules in the books, but according to Edgar Dale “the use of other senses can influence the student’s retention” thus the use of 3-Dimension (Virtual) Exhibit can increase the student retention. The researchers use the Experimental method to determine the effectiveness in the retention of students. The researchers use two groups, the 1st Group serves as the experimental group and the 2nd group serves as the Controlled group. Both groups take the pre-test, every lesson has 5 item questions, after conducting the pre-test the groups undergone experimentation, the experimental group uses the 3-dimension Exhibit from the website of the National Museum of the Philippines that is open for all, to teach the artworks in different regions, while the controlled group uses the readily available modules, after that post-test was conducted. Based on the findings the use of the 3-Dimension (Virtual) Exhibit has a great effect on remembering the important artworks, it also shows that students are more active and participative in class.

CONTENT AND RATIONALE

According to Dale’s cone of Experience Theory the accumulation of learning when the students watch still pictures can only have a 30% of remembering the lesson, thus when the students see and hear the lesson the accumulation of learning is much high giving a 50% of retention, which includes viewing an exhibit and watching video clips. (Edgar Dale, 1960), thus visual and auditory learning can give the students a high percentage of retention in the lesson. The main focus of the researcher is to develop a new strategy in delivering more effectively the lesson. The main focus of the research is to determine the effect of using 3-Dimension (Virtual) Exhibit in teaching, Understanding and Realizing the Arts and crafts of CALABARZON.

Arts and crafts in CALABARZON are widely known not only in the Luzon area but in the whole Country, Most of the National Artist like Vicente Manansala and Botong Francisco, their artworks became the hallmark and became the guiding light for many local and international artist. Thus their work must be presented and to be seen by younger generations.

Many Provinces in CALABARZON has a high appreciation in Arts, example in the municipality of Paete in Laguna. This municipality became the center or the Home of wooden sculpture in the Philippines, almost all well-known sculpture came from this Municipality. Another form of artistry in this Region is from Angono, Rizal, this town near in Laguna the Bay is well known for two important facts, 1st it is the Art Capital of the Philippines, many families in this town have their own Art Gallery and their roads and signage is full of design, next it is well known for its Higitantes festival celebrated every August, this event is rooted from a very rich tradition that pass from the younger once.

It is needed that examples are seen, according to research the least effective learning involves Read a Text, Listen to a Lecture and Watch still picture, while viewing an exhibit and watch demonstration can improved their retention. (Edgar Dale, 1960). Those examples are just an ample of art works this Region, Thus showing to the students this beautiful events, artworks and crafts in a plain picture gives the students a minor things about this and causing them to be bored, showing them in a more realistic form can inspire them to explore more the wonders of this Region thus improving more the retention in this lesson.

INNOVATION, INTERVENTION AND STRATEGY

The research would like to determine the effects of Visual Exhibit on the academic performance of selected grade 7 students in Vicente Madrigal National High School for the 1st Quarter, the topic is Arts and Crafts from Calabarzon, this is based from the observation of the researcher, many examples cannot visualized by the students thus causing them to get lower retention. The main goal of this study is to help the students to visualized the lesson by showing them the important art works, sceneries and crafts using visual tours, this may lead to higher retention rate and improving the scores of the students.

The use of 3-Dimension (Virtual) Exhibit or 3-Dimension (Virtual) Exhibit is quiet new in the country, there are few resources that uses this idea to teach in school, sometimes it is usually use for advertisement to show the consumer the beauty of a place, it is also sometimes use as media to showcase investors one place using only their smartphones and laptops.

The 3-Dimension (Virtual) Exhibit is a simulation of an existing location, usually composed of a sequence of videos or still images, the phrase 3-Dimension (Virtual) Exhibit is often used to describe a variety of videos and photographic based media. (Dalgarno Et, al.).

In United States, virtual realities or blended realities is being use for youth Education Program and university activities, it showed that using this interventions students has a high successful implementation on their perspective activities. (Cologne and Hiles, 2007).

In the study of Haag and Reiher in 2014 the use of 3 Dimension virtual environment has a great potential to engage the learners to explore, construct and engaged in the subjects, given this activity it creates more familiarity in the field of Chemistry and Mathematics.

While in the study of Pilgrim and Pilgrim the effect of virtual reality in the reading comprehension, they said the intervention of virtual reality improves the reading comprehension of the students. (Pilgrim and Pilgrim, 2016).

Those study shown relationship to the study, it also shown that virtual reality has a great impact on the students over all retention and improving the test scores.

ACTION RESEARCH QUESTIONS

Specifically, it will answers to the following questions:

1. What is the level of academic achievement before and after the introduction of 3-Dimension (Virtual) Exhibit in section Rosal and Dahlia Students with respect to the following topics?
 - a. Arts in Laguna;
 - b. Arts in Rizal;
 - c. Arts in Quezon.
2. Is there any significant difference on the level of academic achievement before and after the introduction of 3-Dimension (Virtual) Exhibit in section Rosal and Dahlia Students with respect to the following topics?
 - a. Arts in Laguna;
 - b. Arts in Rizal;
 - c. Arts in Quezon.
3. Is there any significant difference on the level of academic achievement of section Rosal and Dahlia Students after the introduction of 3-Dimension (Virtual) Exhibit with respect to the following topics?
 - a. Arts in Laguna;
 - b. Arts in Rizal;
 - c. Arts in Quezon.

ACTION RESEARCH METHODS

a) Participants and / or other Sources of Data and Information

The study will focus on the effects of 3-Dimension (Virtual) Exhibit available in the internet for the enchantment of academic performance of the grade 7 arts students of Vicente Madrigal National High School, in 1st grading period for the topic of Arts and Crafts of CALABARZON. The major source of data in the study will be the scores of the students in their pre-test and post-test based from the summative assessments. These pre-test and post-test are in the form of multiple-choice type questions that will be used to assess students' individual performance. The content of the pre-test and post-test are questions which are based on the least mastered skills on the summative assessment in selected Grade 7 learners in Music.

A table of specification will be constructed and served as the basis in the items to be made. The developed questions will be administered to selected grade 7 students for the item analysis of the questions. Revisions based on the results of the item analysis and on the recommendation of the experts who validated the test will be made.

b) Data Gathering Methods

The respondent of the study are composed of 140 selected Grade 7 students. The students came from Sections of Rosal and Dahlia. Section Rosal serve as the controlled group, and section Dahlia serves as experimental Group.

The control group will be given a set of different learning materials (e.g. printed example of paintings and art works) that is derived from the reference books.

The experimental group will use the 3-Dimension (Virtual) Exhibit instead of the printed materials, the materials used in this study is readily available in the internet specifically from the national museum website.

After the introduction of lesson and learning materials, post-test will be initiated to determine the effects of 3-Dimension (Virtual) Exhibit.

c) Data analysis Plan

The data will be analysed using the following statistical tools:

1. To determine the level of performance of the control group and experimental group as revealed by their pre-test and post-test results with respect to the topics after the introduction of 3-Dimension (Virtual) Exhibit, mean and standard deviation will be used.
2. To determine if there is a significant difference on the level of performance of the control group and experimental group with respect to the result of their pre-test and post-test, dependent t-test will be used.
3. To determine if there is a significant difference on the level of performance of the control group and experimental group on the effects of 3-Dimension (Virtual) Exhibit as revealed by their post-test results with respect to the different topics, independent t-test will be used.

DISCUSSION OF RESULTS AND REFLECTIONS

This chapter presents the analysis and presentation of data based on the problem of the study.

Table 1. Performance of the Students as Reflected by the Pre-test and Post-test of the Control and Experimental group with Respect to the Different Topics.

Table 1 presents the mean and standard deviation on the performance level of experimental and control group with respect to the different Arts and Crafts of CALABARZON.

Topics in Solutions	No of items	Control			Experimental		
		Pretest	Posttest	VI	Pretest	Posttest	VI
		Mean			Mean		
1. Arts in Laguna	5	3.23	4.17	I	3.37	4.68	I
2. Arts in Rizal	5	3.41	3.48	I	3.67	4.71	I
3. Arts in Quezon	5	4.03	4.06	I	3.57	4.31	I

Legend : I – Increased D - Decreased

The table shows that the pre-test results on the different lessons in Arts and Crafts in CALABARZON specifically Arts in Laguna, Rizal and Quezon. The control group have mean values of 3.23, 3.41 and 4.03, respectively while the experimental group have mean of 3.37, 3.67 and 3.57, while the post-test have a result from controlled group of 4.17, 3.41 and 4.03, in experimental group the result is 4.68, 4.71 and 4.31.

Both of the control and experimental groups increased their performance level from the three topics of the different lessons in Arts and Crafts in CALABARZON specifically Arts in Laguna, Rizal and Quezon.

Significant Difference on the Performance of the Learners as Reflected by the Pretest Posttest Result of the Control Group as Revealed by the Different Topics

Table 2. Significant Difference on the Performance of the Learners as Reflected by the Pretest Result of the Control Group as Revealed by the Different Topics

Lessons & Topics	Control Group	Mean	Sd.	T	df	Sig.	Ho	VI
1. Arts in Laguna	Pretest	3.23	0.98	0.000	114	S	R	S
	Posttest	4.17	0.60					
2. Arts in Quezon	Pretest	3.41	0.96	0.000	137	S	R	S
	Posttest	3.48	0.97					
3. Arts in Rizal	Pretest	4.03	0.93	0.817	108	NS	FR	NS
	Posttest	4.06	0.52					

Legend: R – Reject FR – Fail to Reject S – Significant NS – Not Significant

From the table it can be gleaned that the results from Control group, in the Arts of Laguna and Quezon that the post-test is higher than the pre-test which shows a Significant difference thus rejecting the null hypothesis, while the Arts in Rizal has no significant difference thus the null hypothesis has failed to reject.

Table 3. Significant Difference on the Performance of the Learners as Reflected by the Post Test Result of the Experimental Group as Revealed by the Different Topics.

Lessons & Topics	Control Group	Mean	Sd.	T	df	Sig.	Ho	VI
1. Arts in Laguna	Pretest	3.37	0.98	0.000	103	S	R	S
	Posttest	4.68	0.51					
2. Arts in Quezon	Pretest	3.67	0.87	0.000	114	S	R	S
	Posttest	4.71	0.53					
3. Arts in Rizal	Pretest	3.57	1.06	0.000	128	S	R	S
	Posttest	4.31	0.80					

Legend: R – Reject FR – Fail to Reject S – Significant NS – Not Significant

From the table it can be gleaned that the results from Experimental group that the arts of Laguna, Quezon, and Rizal, the post-test is higher than the pre-test showing a Significant difference thus rejecting the null hypothesis, this suggests that the use of Virtual 3-dimensional tour to the students can have a higher retention rate from the lesson.

Table 4. Significant Difference on the Performance of the Learners as Reflected by the Posttest Result of the Control Group vs the Experimental Group as Revealed by the Different Topics.

Lessons & Topics	Group	Mean	Sd.	T	df	Sig.	Ho	VI
1. Arts in Laguna	Control	4.17	0.60	0.000	135	S	R	S
	Experimental	4.68	0.51					
2. Arts in Quezon	Control	3.48	0.97	0.000	106	S	R	S
	Experimental	4.71	0.53					
3. Arts in Rizal	Control	4.06	0.52	0.03	118	S	R	S
	Experimental	4.31	0.80					

Legend: R – Reject FR – Fail to Reject S – Significant NS – Not Significant

From the table it can be gleaned that the Control and Experimental Group, has a significant difference in all the topic from Arts and Crafts of CALABARZON, thus the Experimental group has a higher retention rate, this result is supported by Dale, in his research it is mentioned that the use of all senses has the ability to increase the retention rate of the students.

CONCLUSION

Based from the results obtained, it suggests that the use of 3-Dimension (Virtual) Exhibit in the academic performance of Selected Grade 7 Arts students for 1st grading period (The Arts and crafts of CALABARZON) for the selected topics, has a significant effect on the retention and performance of the students.

RECOMMENDATION

1. The use of 3-Dimension (Virtual) Exhibit in other lessons in Arts.
2. The use of 3-Dimension (Virtual) Exhibit in other lessons in MAPEH.
3. Another research on the validation of the performance of the learners using some techniques must be initiated by the researcher for future research.

REFLECTIONS

MAPEH Teachers should share their own experiences, both positive and negative in the search for more meaningful student engagement and learning. We should recognize that many other MAPEH Teachers have shared their experiences in other venues, provide a collection of links to essays, blog posts, and book chapters that we have found inspirational. All MAPEH Teachers should use a range of teaching techniques combined in different ways, giving quality education to our learners.

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ACTION PLAN

Components	Key Improvements	Strategies	Resources Required	Persons Involved	Time Frame	Expected output
Teachers' Development	Trained teachers in utilization of the virtual tour in the class	Conduct LAC session to MAPEH teachers in the development of enhancement materials and improve their teaching strategies.	Resource speakers Experts Key Teachers Enhancement Materials	Resource speakers Researcher	July 2019	Developed skills in utilization of the virtual tour in the class
Students' Development	Improved students performance in Arts	Conduct the use of virtual tour in class	Researcher MAPEH Teachers Materials in teaching	Researcher MAPEH Teachers	September 2019	The mastery level of learners in Arts will be improved

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