

Effectiveness of Using Teacher-Made Interactive Multimedia Materials in Teaching Geography To Tourism Students

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Abstract—Effective teaching and learning requires a teacher to teach the students with instructional materials and to use practical activities to make learning more vivid, logical, realistic and pragmatic.

This study determined the effectiveness of using teacher-made interactive multimedia materials (IMM) in teaching Geography. It utilized the experimental method. Percentage, Mean, and t-test for dependent and independent groups were used in the analysis of results.

Majority of the students in experimental group perceived that the lesson is more easier to understand when the teacher utilizes IMM in the classroom because she can facilitate the lesson well. It also encourages participation in discussion and interactions among learners. They obtained a final academic grade of Very Satisfactory (VS) and obtained higher scores in the formative assessments compared to those in the controlled group. The performance of the two groups significantly differ as students in the experimental group developed positive attitude and interest in Geography.

Keywords—interactive multimedia materials (IMM), Geography, tourism, academic performance, experimental method

I. INTRODUCTION

Effective teaching of any course or subject will not only stimulates student's interest but also improve their attitude and academic performance on the subject. To achieve effective teaching and learning process, there is the need to use variety instructional materials.

Effective teaching and learning requires a teacher to teach the students with instructional materials and use practical, collaborative and interactive activities to make learning more vivid, logical, realistic and pragmatic [1]. Instructional materials are indispensable to the effective teaching and learning activities [2] and it stimulates sensory organs for enhanced learning [3].

Lack of classroom materials is one of the problems that teachers are facing. To address this, teachers must be resourceful and are encouraged to search for necessary instructional materials through local means to supplement or

replace the standard ones and/or develop their own instructional materials [4]. The best way for teachers to make use of their manipulative skills is to improvise so as to achieve their lesson objectives[5]. The importance of improvising instructional materials as well as developing materials that optimizes students' participation is necessary [6][7].

Interactive multimedia media normally refers to products and services on digital computer-based systems which respond to the user's actions by presenting content such as text, moving image, animation, video, audio, and video games. IMM are didactic materials which are supposed to make learning and teaching interactive, enjoyable and focused. They are materials or tools locally made or imported that could make tremendous improvement in students' academic performance if intelligently used [8]. These are multimedia materials and presentations which provide sound, visual or both appealing to the sense organs including simulations of processes [9][10].

Interactive multimedia integrate computer, memory storage, digital (binary) data, telephone, television, and other information technologies. Their most common applications include training programs, video games, electronic encyclopaedias, and travel guides. Interactive multimedia shift the user's role from observer to participant and are considered the next generation of electronic information systems [11].

II. OBJECTIVE OF THE STUDY

This study determined the effectiveness of using teacher-made interactive multimedia materials (IMM) in teaching Geography course to Tourism Management students. The academic performance of students as well as their attitude and interest towards the subject is measured and described.

III. METHODOLOGY

The experimental research method based only on the difference between the magnitudes or performance before and after with control design was used. Subjects were 3rd year BS Tourism Management students of Columban College, Inc. enrolled in BST311(Geography) during the 1st Semester of Academic Year 2017 – 2018. Twenty-two (22) were randomly assigned as controlled group (taught without the use of IMM) and 23 were randomly assigned to the experimental group (taught using IMM).

There were 10 topics discussed in both groups and pre-test and post test consisting of 50 items were conducted for each

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topic. The teacher-made tests were validated by experts with a reliability index of 0.86. The IMM were also subjected to critiquing by experts.

Data were gathered through interview, assessment results and performance rating. Percentage, Mean, and t-Test for dependent and independent groups were used in the statistical analysis.

IV. RESULTS AND DISCUSSION

A. Profile of the Subjects

The mean age in both group is 19 years and Tourism Management Program was their first choice in enrolling in the College. There were 96% female in the controlled group while 98% female in the experimental group.

B. Pre-test Performance in Geography

The controlled group had a pre-test mean score of 19.35 in the ten topics in Geography while the experimental group had a pre-test mean score of 20.15. The two groups have the same level of performance rated as “Below Expectations”.

There was no significant difference in the pre-test performance of the two groups with a t-value of 0.879 and a P-value of 0.323.

C. Attitudes and Interest towards Geography before the Intervention

The controlled group had a weighted mean of 3.31 in their attitudes and interest towards Geography while the experimental group had weighted mean of 3.25. The two groups have the same level of attitudes and interest towards the subject which were rated as “Moderately Positive”.

There was no significant difference in the attitudes and interest of the two groups before the intervention with a t-value of 0.416 and a P-value of 0.421.

TABLE I: ATTITUDES AND INTEREST TOWARDS GEOGRAPHY BEFORE THE INTERVENTION

Attitudes towards Geography Course	Controlled Group		Experimental Group	
	WX	Verbal Description	WX	Verbal Description
Geography is a very worthwhile and necessary subject.	3.28	Moderately Positive	3.28	Moderately Positive
Geography helps to develop the mind and teaches me to think	3.14	Moderately Positive	3.14	Moderately Positive
Geography is important in everyday life.	3.32	Moderately Positive	3.32	Moderately Positive
Geography is one of the most important courses for BS Tourism students to study.	3.49	Positive	3.49	Positive
I think studying advanced Geography is also useful.	3.22	Moderately Positive	3.11	Moderately Positive
A strong Geography background could help me in my professional life as Tourism Management graduate.	3.62	Positive	3.62	Positive
I get a great deal of satisfaction out of studying Geography.	3.47	Positive	3.26	Moderately Positive
I have usually enjoyed studying Geography.	3.39	Moderately Positive	3.28	Moderately Positive
I really like Geography.	3.33	Moderately Positive	3.13	Moderately Positive
I am happier in Geography class than in any other class.	3.43	Positive	3.23	Positive
Geography is very interesting subject.	3.24	Moderately Positive	3.24	Moderately Positive
I am comfortable in answering questions in Geography class.	3.12	Moderately Positive	3.12	Moderately Positive
Geography lessons do not scare me at all.	3.24	Moderately Positive	3.18	Moderately Positive
I have a lot of self-confidence when it comes to Geography.	3.38	Moderately Positive	3.25	Moderately Positive
I learn Geography easily.	3.16	Moderately Positive	3.16	Moderately Positive
I would like to teach Geography to my peers.	3.13	Moderately Positive	3.13	Moderately Positive
OVERALL	3.31	Moderately Positive	3.25	Moderately Positive
t = 0.416				
P-value = 0.421 NOT significant at $\alpha = 0.05$				

D. Post Test Performance in Geography

The controlled group had a post test mean score of 32.27 in the ten topics in Geography described as “Met Expectations” while the experimental group had a post test mean score of 45.38 with a descriptive rating of “Above Expectations”.

There was a significant difference in the post test performance of the two groups with a t-value of 5.879 and a P-value of 0.000.

Therefore, the use of IMM is more effective in increasing the performance of Tourism Management students in Geography.

E. Attitudes and Interest towards Geography After the Intervention

The controlled group had a weighted mean of 3.54 in their attitudes and interest towards Geography which is described as “Positive” while the experimental group had weighted mean of 4.58 which was rated as “ Highly Positive”.

There was a significant difference in the attitudes and interest of the two groups before the intervention with a t-value of 3.416 and a P-value of 0.032.

Therefore, the use of IMM is more effective in enhancing the attitudes and interest of Tourism Management students in Geography.

TABLE II: ATTITUDES AND INTEREST TOWARDS GEOGRAPHY AFTER THE INTERVENTION

Attitudes towards Geography Course	Controlled Group		Experimental Group	
	WX	Verbal Description	WX	Verbal Description
Geography is a very worthwhile and necessary subject.	3.45	Positive	4.43	Highly Positive
Geography helps to develop the mind and teaches me to think	3.54	Positive	4.56	Highly Positive
Geography is important in everyday life.	3.32	Moderately Positive	4.58	Highly Positive
Geography is one of the most important courses for BS Tourism students to study.	3.65	Positive	4.75	Highly Positive
I think studying advanced Geography is also useful.	3.32	Moderately Positive	4.34	Positive
A strong Geography background could help me in my professional life as Tourism Management graduate.	3.79	Positive	4.78	Highly Positive
I get a great deal of satisfaction out of studying Geography.	3.54	Positive	4.67	Highly Positive
I have usually enjoyed studying Geography.	3.36	Moderately Positive	4.57	Highly Positive
I really like Geography.	3.46	Positive	4.53	Highly Positive
I am happier in Geography class than in any other class.	3.76	Positive	4.72	Highly Positive
Geography is very interesting subject.	3.56	Positive	4.62	Highly Positive
I am comfortable in answering questions in Geography class.	3.58	Positive	4.47	Highly Positive
Geography lessons do not scare me at all.	3.57	Positive	4.36	Positive
I have a lot of self-confidence when it comes to Geography.	3.76	Positive	4.69	Highly Positive
I learn Geography easily.	3.45	Positive	4.61	Highly Positive
I would like to teach Geography to my peers.	3.54	Positive	4.67	Highly Positive
OVERALL	3.54	Positive	4.58	Highly Positive
t = 3.416				
P-value = 0.032 Significant at $\alpha = 0.05$				

F. Difference in the Performance in Geography Before and After the Intervention

There was a significant difference in the mean performance of the controlled group before and after intervention with a t-value of 3.265 and a P-value of 0.0283. Therefore, there is a significant increase in the performance result.

There was a significant difference in the mean performance of the experimental group before and after intervention with a t-value of 7.265 and a P-value of 0.000. The use of IMM is therefore, effective in increasing the performance in Geography.

G. Difference in the Attitudes and Interest towards Geography Before and After the Intervention

There was a significant difference in the weighted mean rating on the attitudes and interest towards Geography among students in the controlled group before and after intervention with a t-value of 1.265 and a P-value of 0.008. Therefore, the increase in the rating from “Moderately Positive” to “Positive” is significant.

There was a significant difference in the weighted mean rating on the attitudes and interest towards Geography among students in the experimental group before and after intervention with a t-value of 5.760 and a P-value of 0.008. Therefore, the increase in the rating from “Moderately Positive” to “Highly Positive” is very significant in enhancing the attitudes and interest towards Geography among Tourism Management students.

V. CONCLUSIONS

The result of the experiment implies that the use of IMM could be a better alternative strategy in presenting lessons in Geography. They form a focal point and attract attention, arouse interest and promote a desire to learn, supplement description and help to explain words and processes, give an accurate impression of the concept, illustrate relationships, promote retention and memory, help to consolidate what has been learned, help to save teaching time, make learner to have self-esteem, learners get motivated and have the idea of sharing in participation in Geography lesson. With the use of IMM the performance as well as the attitudes and interest of the Tourism Management students towards the course Geography was enhance.

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