

Effectiveness of Integrating Glocalized and Experiential Learning in Teaching Meter Reading, Pie Graph and Probability

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Abstract: *Local experience with global standards can lead to excellence. More so, global competitiveness requires massive authentic instructions. The study utilized mixed method design specifically sequential explanatory. The researchers aimed to assess the effectiveness of integrating glocalized and experiential learning in teaching meter reading, pie graph and probability. Purposive sampling was used which includes 28 students for experimental group and 18 students for controlled group. Specifically, it sought answers to the following questions: (i) what is the mathematical performance of the experimental group before and after the intervention? (ii) what is the mathematical performance of the controlled group in their pre-test and post-test? and (iii) is there significant difference between mathematical performance of the two groups before and after the intervention? Furthermore, quantitative data were collected through the administration of validated pre-test and post-test. On one hand, qualitative responses were taken from the unstructured interview. Based from the data analysis, it was revealed that there was considerable increase to the mathematical performance of experimental group than controlled group. This implies the effectiveness of integrating glocalized and experiential learning in teaching mathematics. The researchers suggested that teachers should use the intervention for high-quality education and use in other grade levels to show better retention of the lesson. Future researchers are encourage to consider this work as a reference for future studies on glocalized and experiential learning in teaching.*

Keywords; *Glocalized, Globalization, Localization, Experiential Learning*

1. INTRODUCTION

Local experience with global standards can lead to excellence. More so, global competitiveness requires massive authentic instructions. The experiential learning approach supports numerous activities where students can reflect, gain knowledge, and apply what they learn to a new context in their daily lives. It is about learning, which is dependent on fundamental skills, achieving or acting on increasingly difficult talents in the future, stated by Monaliza S. Aagsalog (2019).

2. This study measured the effectiveness of integrating glocalized and experiential learning in teaching meter reading, pie graph and probability, which means that its research design was mixed method, is a research approach in which researchers collect and analyze both quantitative and qualitative data within the same study. Mixed methods research capitalizes on the potential capabilities of both qualitative and quantitative methods, allowing researchers to investigate many points of view and identify linkages that exist between the intricate layers of our multifaceted research issues (Shorten, et al., 2017).

2.1 The explanatory-sequential approach is a sequential strategy that is utilized when the researcher wants to supplement quantitative results with qualitative data. As a result, the qualitative data is employed in the later

interpretation and clarification of the quantitative data analysis results. (Edmonds, et al., 2016)

2.2 The data collected, processed, and computed using SPSS (Statistical Packages for Social Science). In order to describe and analyze the study's aim, statistical treatments such as tally, frequency, percent, mean, standard deviation, and t-test were used to determine the performance of the students before and after the intervention.

3. The corresponding analysis and interpretation of the data are incorporated in the portion of the study. All the collected information from the selected section of Grade VI students in Effectiveness of Integrating Glocalized and Experiential learning in Teaching Meter Reading, Pie Graph and Probability, one of Integrated School in City of San Fernando have been tabulated and analyzed to have a comprehensive presentation and interpretation of data gathered. Data were organized in tabular form to determining in presenting substantial result.

3.1 The Mathematical Performance of Experimental Group before and after the Intervention.

For the result of post-test from Grade VI-Mars (Experimental Group) when it comes to mathematical performance of the students, the SPSS clearly shows for the items 25-30 (outstanding) was 57.1%, for the items 19-24 (very satisfactory) was 39.3%, and for the items 13-18 (satisfactory) was 3.6%. Therefore, the overall result in this group indicates that the mathematical performance of

the Grade VI-Mars after the intervention with highest percentage of 57.1% (outstanding) and the lowest percentage was 3.6% (Satisfactory).

3.2 The results of the post-test from Grade VI-Mercury (Controlled Group) when it comes to mathematical performance reveal that for the items 7-12 (fairly satisfactory) was 33.3%, for the items 13-18 (satisfactory) was 44.4%, and for the items 19-24 (very satisfactory) was 22.2%. This specifies that the Grade VI-Mercury (Controlled Group) after the mathematical performance were the scores 13-18 with the highest percentage of 44.4% (satisfactory) and the lowest percentage was 22.2% with (very satisfactory).

3.3 There was a substantial difference (sig. = 0.000, $t=4.855$, $df=44$) between the experimental and controlled groups' mathematical performance before and after the intervention. The data on the table clearly shows the result of T-Test for Grade VI-Mars (Experimental Group) and Grade VI-Mercury (Controlled Group), shows that the mean ($\bar{x} = 12.250$, $sd=5.488$) of Grade VI-Mars and the mean ($\bar{x}= 2.444$, $sd=3.958$) result of Grade VI-Mercury. This indicates that there is significant between the two groups, having a mean of 12.25000, while Grade VI-Mercury (Controlled Group) has a mean of 2.44444, which means Grade VI-Mars performed better than Grade VI-Mercury.

4. This chapter presents the summary of findings, synthesize the conclusion that were taken from the outcome of the study and suggested recommendations derived from the information reported in the previous section of this study that may be helpful in the administrations, teachers, students and future researchers.

4.1 The data revealed the performance of the Experimental group before the intervention and the highest percentage in Pre-test was 39.3% "Fairly Satisfactory" while the lowest percentage was 14.3% "Did not meet the expectation and Very Satisfactory". On the other hand, after the intervention the highest recorded percentage in Post-test is 57.1% that will fall under the scale of Outstanding while the lowest percentage was 3.6% "Satisfactory".

4.2 The data showed the performance of Controlled group before the intervention and the highest percentage in Pre-test was 61.1% "Fairly Satisfactory" while the lowest percentage was 5.6% "Very Satisfactory". On the other hand, after taking the post-test, the highest recorded percentage was 44.4% that will fall under the score description of "Satisfactory" while the lowest percentage was 22.2% "Very Satisfactory".

4.3 The results showed that there is significant difference of the mathematical Performance of the Experimental and Controlled Group before and after the intervention. Therefore, the analysis reveals that there was significant different between the two groups, the result implies that

there is significant difference between the Experimental group ($\bar{x} = 12.250$) and the Controlled group ($\bar{x} = 2.4444$).

5. CONCLUSION

Based on the indicated findings, the following conclusions were drawn as follows:

1. The findings revealed that there is significant increase in the mathematical performance of the Experimental Group before and after the intervention.

2. The results showed that there is improvement in the mathematical performance of the Controlled Group in their Pre-test and Post-Test but still need to enhance.

3. Intervention significantly has strikely increased in the mathematical performance of the students. The distinction in the performance of the students between the pre-test and post-test of each section signify that there is significant difference between the mathematical performance before and after taking pre-test and post-test with experimental group and controlled group. The researchers proved that the intervention of the students' mathematical performance and satisfaction.

6. RECOMMENDATION

The effectiveness of Integrating Glocalized and Experiential learning in teaching Meter Reading, Pie Graph and Probability as an intervention in teaching mathematics was proven by this study. As a result, the following recommendations are made:

1. It is recommended that Integrating Glocalized and Experiential learning has been shown to be effective, the researchers suggested that teachers should use glocalized and Experiential learning as a strategy in their course outline to ensure that students receive high-quality education and use to other sections or grade level to show better retention of the lesson.

2. The findings suggested that Integrating Glocalized and Experiential learning in Teaching Meter Reading, Pie Graph and Probability linked to be effective when interconnected with the strategy used. It is shown that intervention has positive impacts towards the mathematical performance of the students. The controlled group who had significant increase in their mathematical performance in their Pre-Test and Post-Test has improvement but not the same as with Experimental Group who had larger improvement after the intervention. They can use the integrating glocalized and experiential learning to the other unit or level.

3. This study showed that students improve their mathematical performance before and after the intervention. The authors recommend that the

administration should integrate intervention to improve interest in educational achievement in mathematics and motivate students in their academic performances with the use of integrating glocalized and experiential learning in teaching.

4. Future researchers are encouraged to use this study as a reference about the integrating of glocalized and experiential Learning in teaching. The intervention can also be explored to other fields of specialization, programs, and discipline.

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