De La Salle University – Dasmariñas
GRADUATE PROGRAM

PERFORMANCE OF STUDENTS IN SELECTED TOPICS IN ANALYTIC GEOMETRY USING FULL E-LEARNING AND PARTIAL E-LEARNING STRATEGIES

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Master of Arts in Mathematics

MA. THERESA CHRISTINE CUARTERON-VALDEZ

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AKLATANG EMILIO AGUINALDO ARCHIVES

ABSTRACT

Name of Institution: De La Salle University-Dasmariñas

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Title: **Performance of Students in Selected Topics in Analytic Geometry Using Full E-learning and Partial E-learning Strategies**

Author: Ma. Theresa Christine C. Valdez

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STATEMENT OF THE PROBLEM:

The study aimed to determine the performance of students in selected topics in Analytic Geometry using full E-learning and partial E-learning strategies. Specifically, this study attempted to answer the following questions:

1. What is the mean performance test score of the students in selected topics in Analytic Geometry when taught using:

   1.1. Full E-learning strategy?

   1.2. Partial E-learning strategy?

2. Is there a significant difference between the performances of the students in selected topics in Analytic Geometry using the full E-learning strategy and the partial E-learning strategy?

SCOPE AND COVERAGE:

This study involved two intact matched groups of Computer Science students in Analytic Geometry during the third trimester of school year 2002-2003. The lessons covered in the study were limited to the topics the Ellipse and Hyperbola, which were regularly taken by Freshman Computer Science and Engineering students during the final period of the trimester.

METHODOLOGY:

This study utilized a Quasi-experimental Design, specifically, the Matching Posttest Only Control Group Design. The research instrument used was a Performance Test, prepared by the researcher, which underwent content validation, item analysis and internal consistency analysis using the Kuder Richardson Coefficient Formula (KR20). The statistical treatment used to analyze the data gathered was t-test for correlated samples both for the matching procedure comparing the midterm grades of the respondents in Analytic Geometry and the comparison of the performances of the two groups after the experiment.

MAJOR FINDINGS:

1. The mean performance of the partial E-learning group was found to be 74.63 with a standard deviation of 6.23, which was higher than the performance of the full E-learning group, which obtained a mean performance of 67.75 with a standard deviation of 5.97.

2. It was found that there was a significant difference in the performances of the partial E-learning and full E-learning groups using the t-test for correlated samples. This was evidenced by the higher computed t value of 2.89 against the tabulated t value of 2.13 obtained at a level of significance of 0.05 and 15 degrees of freedom.

CONCLUSIONS:

Based on the results of this research, it is concluded that:

1. Among the low performing students, the partial E-learning group performed better than the full E-learning group in the selected topics in Analytic Geometry.

2. The partial E-learning strategy was a more effective pedagogical method as compared to the full E-learning strategy particularly for low performing students in teaching Analytic Geometry.

RECOMMENDATIONS:

On the basis of the results obtained in this study, the following recommendations are given:

1. The partial E-learning strategy should be utilized by teachers in conducting their classes in Analytic Geometry especially to address the needs of low performing students.

2. The study maybe replicated using a bigger sample possibly using students with high performances, a different subject and a longer study period.

3. More comprehensive studies should be conducted to include all or any one of the following:

3.1. a pretest to know if improvement occurs on a particular group of students using the partial E-learning strategy;

3.2. a survey be conducted on the perception of students on an E-learning experience; and,

3.3. the partial E-learning strategy be tested against pure traditional instruction.

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