



De La Salle University - Dasmariñas
GRADUATE PROGRAM

**Relative Effectiveness of Using the Jigsaw II
and the Traditional Method in
Teaching Integral Calculus:
A Comparative Study**

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of the Graduate School of Education, Arts and Sciences
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ABSTRACT

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OBJECTIVES OF THE STUDY:

A. GENERAL:

This study aimed to compare the relative effectiveness of using the Jigsaw II and the traditional method in teaching Integral Calculus.

B. SPECIFIC:

1. To determine if there is no significant difference between the pre test and post test achievement mean scores of the students who



were exposed to

- 1.1 the Jigsaw II method
 - 1.2 the traditional method
2. To determine if there is no significant difference between the post test achievement mean scores of the students who had undergone the Jigsaw II and the traditional method.
 3. To determine if there is no significant difference between the attitudes toward mathematics of the students who had undergone
 - 3.1 the Jigsaw II method before and after the experiment
 - 3.2 the traditional method before and after the experiment
 4. To determine if there is no significant difference in the post mean mathematics attitude scores of the students who had undergone the Jigsaw II and the traditional method.

SCOPE AND COVERAGE:

This study was conducted at DLSU-D in Dasmariñas, Cavite using two intact sections of second year Computer Science students who were enrolled in Integral Calculus during the second semester of school year 1998-1999.



METHODOLOGY:

This study made use of a quasi-experimental design, known as the Pre test-Post test Nonequivalent Control Group Design. It made use of two instruments namely: the achievement test, prepared by the researcher, and a validated instrument known as Mathematics Attitude Scale (MAS). The statistical methods applied were the t-test for dependent samples and the t-test for independent samples. Validation of the achievement test was done through content validation, item analysis and by the Kuder Richardson formula 20.

FINDINGS:

1. The achievement score of the students exposed to Jigsaw II had a mean score of 12.52. This is 0.24 higher than the mean score of the students who were exposed to the traditional method. However, the difference was not significant at 0.05 level.
2. The mean attitude score of the students who underwent the Jigsaw II is 156.67 while the students exposed to the traditional method had 149.11. The difference was statistically significant at 0.05 level.



CONCLUSIONS:

The Jigsaw II and the traditional method are equally effective in teaching Calculus. However, Jigsaw II proves to be a better option since it leads students toward a more favorable attitude in mathematics.

RECOMMENDATIONS:

1. Teachers in Integral Calculus can make use of any of the two methods in teaching the subject.
2. This study may be replicated using a bigger sample, a longer achievement test and possibly covering a longer period of time and using a different research design.
3. Further studies be done to test the effectiveness of the other cooperative learning techniques in other fields of mathematics and in other areas of science.
4. Seminars on Jigsaw II be conducted for teachers and student-teachers of DLSU-D as enhancement to the presently used classroom strategies.



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