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**COMPARISON OF STUDENT TEST SCORES IN A COORDINATE PLANE  
UNIT USING TRADITIONAL CLASSROOM TECHNIQUES VERSUS  
TRADITIONAL TECHNIQUES COUPLED WITH ETHNOMATHEMATICS  
SOFTWARE AT TORCH MIDDLE SCHOOL**

A thesis report presented to the School of Education in partial fulfillment of the requirements for the degree of Master of Education.  
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National University June, 2003

abstract

The problem identified for this study was that students are not achieving as necessary for academic success in mathematics at Torch Middle School. As a result, the purpose of this study was to determine if students who were taught a unit in coordinate planes with an ethnomathematics software in conjunction with traditional teaching methods would show significant differences in test scores than those who received traditional instruction only. Hence, the research question for this study was: "Is there a significant difference in test scores of students who are taught a unit in coordinate planes using ethnomathematics software coupled with traditional teaching techniques over those who are taught the same unit using traditional teaching methods?"

A review of literature was conducted on the topics of technology uses inside the classroom and the use of ethnomathematics pedagogy within the classroom. Through the literature review it was conveyed that technology use in the classroom has both advocates and opposition. Some see a need for technology in the classroom while others find that it may be a distraction to the learning process. In the case of ethnomathematics there is a parallel to technology, in that the controversy continues. There are many who endorse the use of an ethnomathematics pedagogy while others see it as a passing fad that is watering down the curriculum.

A quasi-experimental research design was used to conduct the study. Data was collected from the unit examination taken by those students who were enrolled in the researcher's pre-algebra course at Torch Middle School. The mean test scores of Group A and Group B were then calculated and compared using a two-tail t-test, utilizing a level of significance at the 0.05 level.

Based on the results of the statistical testing the null hypothesis was rejected and the alternative hypothesis was accepted. The significance of statistical difference between the two groups demonstrated that the use of ethnomathematics software in combination with traditional teaching practices can increase student success in the area of coordinate planes and associated concepts. In concluding it was found that there is distinct statistical evidence to suggest that teaching a coordinate planes unit integrating ethnomathematics software is an effective tool and tactic to increase student success in this area.

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