

ABSTRACT OF THE DISSERTATION

EVALUATION OF THE RESTRUCTURED MATHEMATICS CLASSES AT NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE

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This quantitative research evaluates the effects that changes in remedial mathematics classes mandated by Public Act 12—40, which did not alter pedagogy or insert modifications in various nonacademic factors, had on college students' successes in those mathematics courses at Northwestern Connecticut Community College. Quantitative studies were conducted by examining students' mean grade point averages before and after the mathematics program was altered. In addition, the amount of randomly selected students who failed to complete gateway courses before and after the course were changed was examined to determine the possible effects that course changes had on dropout or attrition rates.

The results of the study's significance tests were mixed: for 2 questions where the null hypotheses were rejected, the students in the 1st sample group (Fall 2011-Spring 2013) had significantly higher success rates in the comparable MAT 137 classes, and they repeated classes with lower frequency than those students in the 2nd sample group (Fall 2014-Spring 2015). For the other 3 questions, the significance tests showed that between the 2 sample groups, there were

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no significant differences in the areas studied. In comparison with the students who were in the 1st sample group, the students of the second 2nd sample group either fared worse or showed no change in their performances despite alterations made to the mathematics classes.

The outcomes of this study contribute to previous research on mathematics remediation in community colleges, emphasizing that reformulating remedial classes, without making pedagogical changes and altering other factors such as students' academic and social integration, will not yield improvements in students' outcomes or increase students' persistence rates. The study's results can serve to validate the incorporation of academic and nonacademic components proved to improve students' success and lower attrition rates in future remedial programs.