WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

UNDERPRIVILEGED STUDENTS' CONCEPTUAL UNDERSTANDING THROUGH MATHEMATICS IN A BOX

A Thesis Presented to the

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College of Education

West Visayas State University

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In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

(Mathematics)

by

Jeena A. Amoto

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APPROVAL SHEET

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Abstract

This mixed methods research aimed to determine the effectiveness of using Mathematics in a Box in the development of conceptual understanding of underprivileged students, describe how underprivileged students developed their conceptual understanding, determine their challenges in learning, and identify their coping strategies. It involved one-group pretest-posttest quasi-experimental design and case study of single case. The 42 participants, Grade 10 students enrolled in Evening Opportunity Class, took the pretest and posttest, and wrote on their journals. Five of them participated in a one-one-interview, and ten joined in the focus group interview. The quantitative data were analyzed with mean, standard deviation, and Paired-Samples *t*-test. Data gathered through observation, interview, focus group interview, and journals were analyzed through thematic analysis. From developing to above average, the conceptual understanding of the participants increased significantly after intervention. Furthermore, underprivileged students learned when they "saw and touched" the problem, made connections between concrete and abstract, used relevant examples, applied simple rules, recognized the importance of math, and expressed themselves. However, they had difficulty in comprehension, problems in understanding complex rules, misconception in previously taught math concepts, and personal circumstances to deal with. To overcome their problems, they dissected the problem

into smaller understandable pieces, spoke in a language that they are comfortable with, studied independently, and reflected on their answer. The results implied that Mathematics in a Box is effective for underprivileged students, but more studies may be conducted to compare it with other teaching strategies in a different group of students

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