



MS THESIS DEFENSE

IMPACT OF A PROBLEM SOLVING INTERVENTION PROGRAM ON THE METACOGNITIVE STRATEGIES OF GRADE 7 STUDENTS

by Erika Khryss D. Yu

MS Mathematics Education candidate

Date: 20 March 2019 (Wednesday)

Time: 05:00 – 06:30 PM

Venue: Kostka Hall Conference Room

Advisers:

Flordeliza F. Francisco, PhD and Romina Ann S. Yap, PhD

Panelists:

Maria Alva Q. Aberin, PhD (Ateneo de Manila University)

Olivia F. Ang, MS (Ateneo de Manila University)

Mark Anthony C. Tolentino, PhD (Ateneo de Manila University)

THESIS ABSTRACT

In recent years, students struggle in mathematical problem solving despite being taught Polya's problem solving process and heuristics. Recognizing the need to provide better alternatives, programs that focused on the enhancement of metacognitive skills, a major determinant of success in problem solving, have emerged. This qualitative case study then looked closely into metacognitive strategies used by three grade 7 students before and after they went through the Adapted Maths Practical module, an existing problem solving intervention program. The collection of data was done through pretest and posttest, and interview. Based on the findings, the program made an impact on the respondents in terms of the improvement in the metacognitive strategic behaviors used in understanding, planning, executing, and re-evaluating necessary steps made when solving non-routine problems. In the understanding and planning stage, students were able to devise additional heuristics using what they knew about the problem and the heuristics that they learned in the program. Strategic behaviors that required them to monitor and keep track of the activities that they were doing while answering the problem in a logical manner were also evident in their performances. Lastly, students also showed usage of metacognitive strategic behaviors in re-evaluating their own work. Two of three students attributed their perceived improvement to the problem solving intervention program.