

Mathematics Pedagogical Value System centering on mathematics knowledge acquisition in elementary school

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The paper investigated the pedagogical values presented in the mathematics teaching of a fifth grader elementary school teacher. Based on the valuing theory of Rath, Harmin and Simon (1987), the study defined a value as any belief or attitude or other similarity which meets the three criteria of choosing, prizing and acting. The criteria have different methods of examination.

The methodology of the research was classroom observation and interviews. The time for research was one year. Ten lessons were observed and 18 interviewed were conducted. The research subject was a teacher, Ms. Lin, who has been teaching in elementary school for nine years.

The purpose of classroom observation was to look for the repeated behavioral patterns of Ms. Lin, such as the demand for previews, the raise of testing questions, the neglect of student's wrong solution, and the repetition of reviews.

Furthermore, interviews were used to examine if Ms. Lin's value indicator met the criteria of choosing and prizing. For example, after considering the pros and cons of teacher-centered and student-centered teaching, Ms. Lin still chose to teach in former teaching style. Ms. Lin said, "going over them three times is better than going over them twice; twice is better than once." These words revealed that she stressed that students must learn the knowledge from the textbooks well.

Therefore it was concluded that the purpose of mathematics teaching is to teach student to learn the knowledge in the textbooks is a mathematics pedagogical value of Ms. Lin.

In addition to the mathematics pedagogical value stated, two more values of Ms. Lin were defined. But these values were not equally important. In the educating of teachers, the relationship among the values must be clarified and the core values must be found first. Then we further examine whether the core values accord with the current education policies. If not, in modifying teachers' mathematics pedagogical values, the change of core values will be the underlying solution. Of course, how to change teachers' mathematics pedagogical values is a new subject for research.

References

Raths, L.E., Harmin, M., & Simon, S.B. (1987). Selections from Values and Teaching. In P.F. Carbone, (Ed.), Value Theory and education, Malabar: Krieger.