

# A STUDY OF DEVELOPING “SCHOOL-BASED” MATHEMATICS TEACHING MODULE ON “TIME”

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The purpose of this one-year case study was to develop a “school-based” mathematics teaching module. Based on the “OCTL” model (Yao, 2001), a practical teaching module of fourth grade was developed, named “Time”. The objectives of this “Time” module included constructing mathematical concepts related time, preparing abilities of problem solving, emphasizing the connection between mathematics and daily life of students. The mathematics knowledge contained in this “Time” teaching module was to understand the time-related concepts, the relations among days, hours, minutes, seconds and the conversions of these time units, to know how to measure time, to develop the sense of time and so on. The teaching module was made up of five instructional activities including “a day of Maruko’s school life”, “my holiday life”, “a tour of scenic and historic spots”, “weekend plan” and “a round-the-island tour”, all of which are based on the topic of “Time”. Both qualitative and quantitative research techniques, such as field notes, interviews, observations, related document, and surveys, were applied to collect data for investigating responses of students during the period of conducting modules in the cooperative teacher’s mathematics class. There were three main findings reported in this study. One was the result of paper test emphasizes on students’ learning of Time-related concepts, another was students’ affective feelings about the activities designed in this Time module through questionnaires, the other was participating teacher’s opinion about this instructional module. These findings were useful for researcher to reflect and to modify the design of this Time module. As for the procedures of developing mathematics instructional module, according to the researcher and participating teacher’s one-year investigation, the better gateway is to adopt collaboration: confirming subject→gathering relevant information→taking use of the wisdom from a supporting group to outline the initial design→developing entire structure of the module→composing details of lesson plan→designing learning sheet and related assessment→pre-testing module→revising module→putting the module into practice→collecting and analyzing data→revising module once again→concluding the development of this instructional module. Finally, some suggestions were also presented in this article for developing, and using the “school-based” mathematics teaching modules.

## REFERENCE

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