

IN-SERVICE MATHEMATICS TEACHERS' NOTICING OF EXEMPLARY LESSONS: AN EXPLORATORY STUDY IN CHINA

Kexin Chen¹, Qiaoping Zhang¹, and Shu Xie²

¹The Education University of Hong Kong ²Northeast Normal University

Teacher noticing is regarded as a desirable ability in mathematics teachers' expertise in teaching. Research on teacher noticing mainly focus on pre-service teachers (PSTs) and relatively less on in-service teachers, and most studies are conducted in Western countries. There is a need to study in-service teachers' noticing in other cultures. We apply two frameworks for data collection, which are Learning to Notice (van Es, 2011) and FOCUS Framework adapting from Three-Point Framework (Yang & Ricks, 2012). Our questions are: 1) What do in-service teachers notice, and how do they respond to their noticing? 2) What is the influence of these two frameworks in teacher noticing?

17 in-service primary teachers in northeast China were invited to observe 10 exemplary primary mathematics lessons online. Their teaching experience ranged from 3 months to 27 years. Each teacher was required to choose at least one lesson to observe with one noticing framework. These lessons were taught by expert teachers in China. We used two coding methods to distinguish the feather of what and how teachers notice. One method was concerning agent, topic and stance (Van Es & Sherin, 2006); another concerned the four-level criteria of teacher noticing (Van Es, 2011). Results showed that teachers mainly noticed students' mathematical thinking and teachers' teaching pedagogies, which were two central elements of a lesson. Most teachers who chose the FOCUS framework had noticing levels in baseline and mixed. Compared to the FOCUS framework, teachers choosing Learning to Notice had a better performance in both breadth and level of noticing. It was found that higher-levels of teacher noticing mainly were found among teachers with more than 19 years of teaching. The findings can help us understand in-service teachers' noticing ability in China and enlightens us to explore the relationship between teachers noticing level and teaching experience.

Acknowledgment

Seed Fund of The Education University of Hong Kong, R4248: RG43/21-22R.

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