

TEMPLATE

RELATIONSHIP BETWEEN TEACHER KNOWLEDGE AND TEACHER NOTICING: A CROSS-LAGGED ANALYSIS OF A TWO-WAVE STUDY

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During the past decade, research on teachers' noticing in the field of mathematics education has significantly increased. Teacher noticing has been commonly accepted as a critical component of teaching expertise, which acts as a very important factor for the improvement of the quality of teaching and students' mathematical achievements specifically. However, little is known about the factors that influence the development process of teacher noticing. Theoretically, it has been widely accepted by researchers that the development of teacher noticing is "a strongly knowledge-guided process" (Stürmer, Könings, & Seidel, 2013, p. 12), and therefore, it is "intimately tied" (Schoenfeld, 2011, p. 231) to teacher knowledge. However, findings identified in a few empirical studies in the field are rather inconsistent. Especially, these empirical studies found that different components of teacher knowledge influence teacher noticing differently (e.g., Yang, Kaiser, König, & Blömeke, 2021). However, so far, almost all the empirical studies mainly employed cross-sectional design. It is not clear how different component of teacher knowledge influence the development of teacher noticing longitudinally. In the meantime, so far, few studies tried to explore the possibility of how the development of teacher noticing facilitate the growth of teacher knowledge.

In view of this, the proposed lecture will report findings of a longitudinal study with the involvement of 189 beginning mathematics teachers at secondary school level in China. The instruments developed in TEDS-M were adapted to assess teachers' general pedagogical knowledge (GPK), mathematics content knowledge (MCK) and mathematical pedagogical content knowledge (MPCK), and video-instruments developed in TEDS-FU study were adopted to assess teachers' noticing conceptualized by the sub-facets of perception, interpretation, and decision making. The possible reciprocal relationships between teacher knowledge and teacher noticing will be discussed by the findings of the cross-lagged analysis.

References

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