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for the Psychology of Mathematics Education

VOLUME 1

Plenary Lecture, Working Groups,
Seminar, National Presentation,
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Editors:

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M@T.ABEL 2020 PROJECT: A TEACHER TRAINING PATHWAY DURING THE COVID-19 HEALTH CRISIS IN ITALY

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The M@t.abel 2020 project developed by the international centre for innovation in the educational field Future Education Modena (FEM) supported Italian teachers during the COVID-19 health crisis in 2020 suggesting activities based on mathematics laboratory teaching methods (Anichini et al., 2004) that teacher used with their classes also via distance learning. We present the results of an open-ended questionnaire administered to 293 teachers involved in the project to analyse the impact of this project in terms of teacher training. We analyse the results of the questionnaire using the lenses of a Mathematics Teacher's Specialised Knowledge (MTSK) developed by Carrillo-Yañez and colleagues (2018). MTSK model considered Mathematical Knowledge (MK) and Pedagogical Content Knowledge (PCK) as each divided into three subdomains. The three subdomains of MK are: Knowledge of Practices in Mathematics (KPM), Knowledge of the Structures of Mathematics (KSM) and Knowledge of Topics (KoT). The subdomains of PCK are: Knowledge of Mathematics Teaching (KMT), Knowledge of Features of Learning Mathematics (KFLM) and Knowledge of Mathematics Learning Standards (KMLS). The research questions of this particular study are: (i) Did the teachers involved in the M@t.abel project recognize an enrichment of their mathematical knowledge? (ii) if so, which components of the MTSK model were influenced by the project?

It emerged that teachers recognised an enrichment in PCK sub-domains, particularly in KMT and KFLM; improvements in MK subdomains were also registered, in particular for what concerns KoT: many teachers explained that the project and reflections on the specific activities helped them to clarify some mathematical items such as perpendicular and angle. Finally, even though no question was designed specifically to investigate beliefs, some of the teachers stated that the project helped to gain confidence in changing their way of teaching mathematics, influencing their beliefs about maths teaching and learning.

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