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ממורה מנוסה למתמטיקה למנחה בהכשרת מורים : חקר מקרה של
מנחה בסדנאות מבוססות-וידאו בהכשרת פרחי הוראה

From an experienced mathematics teacher to a
professional development facilitator: A case study of a
facilitator in a pre-service video-based workshop

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Abstract

Video-taped lessons hold many pedagogical benefits in training and advancing teachers' professional expertise. Therefore many programs around the world offer video-taped lessons as a training method for mathematics teachers. In Israel, the VIDEO-LM project (Viewing, Investigating and Discussing Environments Of Learning Mathematics) which operates at the Department of Science Education, the Weizmann Institute of Science, offers professional development courses for mathematics teachers. In these courses, video-taped math lessons allow for shared viewing, analysis and discussion in order to deepen the participants' mathematical knowledge for teaching (MKT), and develop their introspective abilities. Scaling up the project requires the training of competent facilitators. Experienced mathematics teachers are indeed promising candidates, but according to the available literature; a teacher's school experience does not indicate ability to guide peers. The goal of this research is to characterize and analyze the process that an experienced mathematics teacher, Debbie (pseudonym), undergoes when she becomes a pre-services video-based workshop facilitator, while considering facilitation patterns and key decision making processes. The data for this study comprises three VIDEO-LM pre-services' workshops and four interviews with Debbie. Out of the four, two were video-based interviews. The data was collected during VIDEO-LM pre-services' course during the 2014-2015 academic year. The findings underline Debbie's professional development process. In the interviews, Debbie expresses her critique regarding her own facilitation moves taken in the workshops, she examines alternatives and verbalizes flexibility in choosing facilitation moves for a given situation. These are indicators of Debbie's development which consists of the expansion of her facilitation repertoire. Debbie's facilitation patterns can be characterized as (a) an awareness of and determined adherence to the mathematics of the video-taped lesson; (b) the implicit use of the VIDEO-LM analytical framework in order to promote the discussions in the workshops; (c) support of the pre-service teachers' understanding of their future students and work; (d) reflective facilitation driven from three sources: self-reflection, reflection on practice and reflection on the group. Debbie's reflective facilitation provoked two decision-making processes required for her work. The first consists of the planning process where Debbie chooses which video-taped lessons will be discussed at the workshop, her goals for each workshop and the discussions that would help pursue these goals. This decision process is the adaptation Debbie makes to VIDEO-LM so it will fit pre-service teachers. The second decision-making process occurs when Debbie has to make real-time decisions during the workshops. Debbie's beliefs regarding learning and teaching mathematics, her references to her practices as a teacher to discuss and explain her facilitation moves and her mathematical and mathematical-pedagogical articulations impacted these decision-making processes. It seems that the broad reflection which characterized her work as a facilitator supported Debbie's professionalization process and decision-making processes. Therefore, one of the conclusions of the study is to adopt the methodological tool, the video-based interview as a supporting tool for training facilitators. The novelty of this study consists listening to the voice of the facilitator, and as such it may enrich the existing knowledge and the wise design of the training of facilitators.