

Pedagogical Simulations with Professional Actors
Integrating Self-Regulation to Cultivate Professionalism
in Teaching

By:

Yafit Moradoff
School of Education

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Abstract

One of the main challenges researchers and educators face is finding the optimal training conditions for developing professionalism among teachers. According to the literature review, many teachers encounter difficulties in transforming skills learned during their theoretical training to the practice in class. This gap may be reduced by constructing focused and methodological programs for this purpose. One of the main current theories for developing professionalism among teachers is the Professional Vision (PV) theory (Santagata & Guarino, 2011; Seidel, Blomberg, & Renkl, 2013; Van Es & Sherin, 2010). Teachers' professional vision includes the ability to notice meaningful components of teaching and learning (noticing), the ability to explain and justify them (reasoning) and the ability to offer alternative strategies (predicting), directed at goals and teaching strategies.

According to researchers, teachers do not learn to control the professional vision skills spontaneously or to bridge the gap between their training and the practice in class. Most researchers agree that the manner of coping with these difficulties is via training programs held in active learning environments with authentic teaching experiences that may assist the teachers in transmitting their learned skills to actual teaching in class (Kramarski, in press; Van Driel, Beijaard, & Verloop, 2001; Vermunt, 2016).

In response to this difficulty, the current study offers a program based on an innovative learning environment which integrates unique simulation that includes watching role plays by professional actors and videos that depict teaching scenarios and allow watch-overs, conducting a focused research and granting a professional feedback on the teachers' activities in them. The use of simulations with professional actors was scarcely used in studies thus far, despite the clear evidence of its efficiency in various fields, especially medicine (Rubin and Eizenberg, 2008; McHardy & Allan, 2000). This study is the first to examine the use of simulations with the participation of professional actors in the general field of teaching strategies in education and specifically in cultivating teachers' "Professional Vision". Despite the eminent potential in integrating simulations in programs for improving teachers' professionalism, the results of previous studies indicate that learning environments that do not integrate explicit self-regulation do not improve teachers' professionalism. Furthermore, these environments do not contribute to applying the acquired knowledge in the teachers' practice in class. The use of explicit regulation in the current study is based on self-regulated learning (SRL) theories that encourage active learners who set study goals for themselves while planning and criticizing their efforts in order to achieve these goals. However, since self-

regulation is not developed spontaneously, it must be cultivated. Despite the theoretical importance attributed to professional development via Professional Vision that integrates self-regulation, only few studies examined the assimilation of these skills in the classroom and specifically among teachers in practice. Moreover, majority of the studies conducted thus far examined future educators only. Therefore, the current study offers an integrative model, PV-SRL, which integrates two theoretical frameworks: one refers to the teachers' "Professional Vision" and the other to "self-regulated learning" with the use of an innovative learning environment that includes simulations with professional actors, conceptualizing authentic situations that permit the practical examination and assessment of the model. The integrative model proposed in the study bases the cultivation of self-regulation on self-metacognitive questioning directed at goal setting, assessment and evaluation of activities. This model answers the need posed by recent studies in the field of teachers' professional development, pointing out the importance of developing models that integrate between various theories and approaches for applying skills acquired during real time teaching in class.

In the current study participated 149 teachers with over 5 years of seniority who teach in elementary schools across the country. In addition, a focus group for examining transfer over time, consisting of eight randomly chosen teachers from each of the study groups, was examined. The participation in the study was part of the Ministry of Education's continuing education programs for teachers' professional development. The teachers were randomly divided into four study groups dealing in the cultivation of "Professional Vision" (PV) in different learning environments:

Integrated environment integrating the use of simulations and exposure to self-regulation.

Simulation environment using simulations without exposure to self-regulation.

Regulation environment with exposure to self-regulation, without simulations.

Review – an environment that included the use of "Professional vision" (PV) without simulations or exposure to self-regulation.

The intervention programs lasted for three months and consisted of 10 sessions.

The six research questions dealt with the comparison between the study groups in the following examined skills: 1. "Professional vision" (PV) referring to the following skills: observation, interpretation and offering an alternative strategy, directed at the class goals and teaching strategies; 2. Self-regulated learning (SRL) that refers to the metacognitive aspect of self-regulation; 3-4. Self-regulated learning (SRL) that refers to the motivational aspect of self-regulation in the context of teachers' beliefs in teaching and learning (teacher-student in

the center) and self-efficacy. 5. Comparison between lesson planning and its real-time execution. 6. Examining the preservation (transfer) effect over time of the study variables among the focus group.

The study was conducted in the mixed method approach with various qualitative and quantitative tools for examining the study variables. In accordance, the study used the following tools: 1. Declarative questionnaires; 2. Analyzing authentic situations presented in simulations and movies; 3. Analyzing real time teaching practice: planning the lesson plan, filming the lesson; 4. Reflection. The varied tools were administered in four different time points: before, during, after the intervention and three months following it. The findings from the qualitative and quantitative tools were adequate.

The findings of the study indicate that in all study tools, the integrative environment reached the highest level in all the examined skills compared to the rest of the groups, including real time teaching practice and transfer over time. The simulation environment mostly improved few of the professional vision skills, as derived from the declarative questionnaires and the authentic situations analysis tools. The most significant change compared to the other groups was observed in the actual teaching in class via the targeting teaching style where the student is in the center. This achievement was preserved over time. The findings of this group emphasize the efficiency in experimenting in authentic situations simulating a real environment, for the purpose of executing transfer over time to the classroom.

The regulation environment significantly improved its ability in the proposing alternative (Professional vision) skill, as well as its knowledge in self-regulation, as derived from the declarative questionnaires and analysis of authentic situations. On the other hand, its achievements in transmission to real time teaching practice in class were lower. The findings regarding transfer over time pointed to the difficulty in assimilating the learned skills, compared to the elaborated planning of the lesson plan and its reflection. The findings of this group indicate the importance of practical practice alongside the practice of knowledge and skills.

Finally, the control group presented a slightly smaller improvement than the rest of the groups, both in the professional vision and self-regulated skills. In this group, no change was observed in majority of measurements in the class teaching practice in real time and over time.

Additional interesting findings referred to the comparison between two learning environments integrating simulations in holistic evaluation, which simultaneously integrates both components of the integrative model – professional vision and self-regulation. The holistic evaluation was examined via a specific indicator constructed for the purpose of this study. The results indicated a dynamic relationship between both types of skills, expressed by different sequences and strengths. The findings in the holistic evaluation were different both in composition and in strength from the findings of each of the skills, separately.

This study offers a theoretical, methodological and practical implications and offers new directions for future studies.

Theoretically, the current study discusses teachers' professional knowledge from two different perspectives using a unique integrative model, PV-SRL, for developing professional vision in an innovative learning environment that integrates the use of a simulation with the participation of professional actors and cultivation of self-regulation in learning and teaching. Methodologically, the study was conducted by cross-referencing quantitative and qualitative tools that include declarative questionnaires, analysis of authentic situations following the viewing of a movie and a real-time learning process. Furthermore, an evaluation was conducted in different levels, both in real time and in transfer over time. The study developed three learning environments (integrative, simulation and guidance), which were examined in one sample, as well as various tools and indicators adapted to the unique model of the study. These included a holistic evaluation tool that integrates both components of the integrative model, professional vision and self-regulation among the two unique learning environments exposed to simulations, which contributed to a triangulation of the findings.

Practically, the study offers an integrative, structural and methodological intervention program (PV-SRL) for the development of professional vision in an innovative learning environment that includes the use of unique simulations. The program can be used in different training frameworks, such as training new teachers and teacher's training in various fields.