

A Self-Study of the Facilitation of Science Teachers' Action Research

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Abstract : With the rapid switch to remote learning due to the COVID-19 pandemic, science teachers were suddenly required to teach their classes online. This breakneck shift to eLearning raised the question of how teacher educators could support science teachers who wanted to use reform-based methods of instruction while using virtual technologies. In this retrospective self-study, we, two science teacher educators, examined our practice as we worked with science teachers to implement inquiry, discussion, and argumentation [IDA] through eLearning. Ten high school science teachers from a large school district in the southeastern US participated virtually in the COVID-19 Community of Practice [COVID-19 CoP]. The CoP met six times from the end of April through May 2020 via Zoom. Its structure was based on a model of action research called enhanced normal practice [ENP], which includes exchanging stories, trying out ideas, and systematic inquiry. Data sources included teacher educators' meeting notes and reflective conversations, audio recordings of the CoP meetings, teachers' products, and post-interviews of the teachers. Findings included a new understanding of the role of existing relationships, shared goals, and similarities in the participants' situations, which helped build trust in the CoP, and the effects of our paying attention to the science teachers' needs led to a well-functioning CoP. In addition, we became aware of the gaps in our knowledge of how the teachers already used apps in their practice, which they then shared with all of us about how they could be used for online teaching using IDA. We also identified the need to pay attention to feelings about tensions between the teachers and us around the expectations for final products and the project's primary goals. We found that if we are to establish relationships between us as facilitators and teachers that are honest, fair, and kind, we must express those feelings within the collective, dialogical processes that can lead to learning by all members of the CoP, whether virtual or face-to-face.

Keywords : community of practice, facilitators, self-study, action research

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