

Abstract

In this self-study, the author gained in-depth understanding of her initial beliefs about teaching practice and the events that led to a shift in those beliefs. Reflection on and analysis of the multiple data sources, including teacher journal, field notes, narration and videotapes, provided many perspectives to portray the shift towards student-centered instruction, particularly the jigsaw method, the changed teacher's role, the role of social interactions in cooperative learning, subject matter acquisition, and assessment. Beliefs about the role of teacher education and collegial inquiry focused on reflective practice in life-long professional development were also examined through qualitative research methods.

The effects of the jigsaw method classroom instruction grounded in the social-constructivist learning principles on students' learning, social interactions, attitudes towards science, and achievement were examined and compared to the traditional whole-class instruction. The intervention with a 120 sixth grade students was carried out using combined quantitative and qualitative data, including pre-test, post-test, student-created materials, student reflections and videotapes of lessons. The findings show that (1) the students appreciated the independence and responsibility for their learning during the jigsaw instruction which increased their interest in studying science, (2) the jigsaw method had a positive effect on the previously low and medium-performing students and a slightly negative effect on the high-performers, (3) no difference was found on the individual post-test results between the experimental and control groups on any level of the Bloom's taxonomy, and (4) the jigsaw group students were able to cope better with

the requirements of the final assignment, creating pamphlets using external sources, both in terms of social interaction and cooperation and the quality of work.