

Enhancing Early Childhood Preservice Teachers' Problem-Solving Skills through Inquiry Approach

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Introduction: This study examined early childhood preservice teachers' problem-solving skills through inquiry-based approach related to socio-scientific issues (SSI) that involve Health and Safety subject in early childhood education programme.

Method: Action research project was conducted which involves the researcher working independently on in-class research project with students in solving the problems related to socio-scientific issues (SSI) in early childhood education such as childhood obesity, childhood immunization and the use of technology among children. A qualitative research design was adopted and it involves 28 third-year university students in early childhood education programme. Data were collected through online questionnaire, classroom observation, interviews and students' written report.

Results: From interviews conducted with the students, the students agreed that this project helped motivate them in learning Health and Safety subject and increased their interest in researching the socio-scientific topics. Findings also show that when students are invited to take part in the learning process from the initial stage until the end of the process, they experience a sense of agency and responsibility for their learning. Thus, this approach involves greater student engagement and increase their intrinsic motivation. Students can evaluate and reflect on their own learning when they have been part of the learning process and play an active part in the planning and identification of main learning goals. Questioning and searching for answers are extremely important parts of inquiry and through this process knowledge can be generated effectively.

Research limitations: This study is a small-scale study supported by University of Malaya Learning Improvement and Teaching Enhancement Research Scheme thus the generalization of the findings is not the purpose of the study.

Conclusion: This study promotes innovations in teaching and learning and reorganization of Health and Safety subject that encourage student engagement and as a new strategy in fostering students' socio-scientific reasoning through inquiry learning. Moreover, most of the teacher trainee from Bachelor of Early Childhood Education did not pursue science stream in school thus they are not familiar with the steps in conducting scientific investigation that integrated the elements of inquiry.

Keywords: Socio-scientific issue, inquiry-based learning, early childhood education, health education

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