THE DEVELOPMENT OF BANGLADESHI SCIENCE TEACHERS' CONCEPTIONS OF NATURE OF SCIENCE

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ABSTRACT

In the present era, science and technology are rapidly and constantly changing. Students are expected to be scientifically literate individuals who have attained one essential characteristic, that is, understanding of the Nature of Science (NOS). Science teachers are builders of future scientific literate persons and responsible for developing an adequate informed understanding about the NOS in the students they teach. The basic requirement for teaching about the NOS for science teachers is that they must possess an adequate understanding about the NOS. The more science teachers understand about the NOS, the more they can deliver and develop students' understanding of the NOS. The main objectives of this study are: a) to explore Bangladeshi science teachers' conceptions of the NOS and b) to develop their NOS conceptions. (1)To serve the first objective, the Myths of Science Questionnaire (MOSQ), which consists of 14 items, was used to explore the Bangladeshi science teachers' conceptions of the NOS. The MOSQ can be used to explore four main aspects of the NOS: a) scientific knowledge; b) scientific inquiry; c) scientists' works; and d) scientific enterprise. (2)To address the second objective, an explicit-reflective workshop was created to help the participating science teachers develop their NOS conceptions. Both quantitative and qualitative data were collected for data analysis. The findings from the first phase revealed that the participants possessed uninformed conceptions of the NOS; this is comparable to the findings of other researches around the world that may impede the instruction of the NOS in science classrooms. The explicit-reflective NOS workshop designed for this study showed the positive effects of developing more informed conceptions of the NOS in the participants.

After the workshop, the participants realized their conceptions of the NOS and the importance of the NOS teaching and learning. They wish to see the explicit-reflective of the NOS workshop being conducted for other science teachers around the country.

KEY WORDS: NATURE OF SCIENCE / SCIENCE TEACHERS / BANGLADESH / BANGLADESHI SCIENCE TEACHERS

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