

学位論文の要旨 (論文の内容の要旨)  
Summary of the Dissertation (Summary of Dissertation Contents)

論 文 題 目

Dissertation title

Exploring Beliefs on Teaching-Learning and Actual Practices: A Case of Secondary School Science Teachers in Bangladesh

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## ABSTRACT

Poor quality of secondary science education is the most critical global concern. The poor quality education in the area of science in Bangladesh is attributed to low learning interest, low enrollment, and low achievement, generating gradual declines of science learners in general, as well as of the candidates of the national examinations (MoE, 2006). Those may be attributed to poor quality of teaching. A considerable body of research, alternatively, advocates that teachers' beliefs about teaching and learning affect their teaching practices and affect many aspects of their professional work. However, these beliefs and practices influence in many contextual and teacher's levels factors (Ernest, 1988). In recent times, researchers have interested in exploring teacher's beliefs in general, and science teachers' epistemology in particular. Since teachers' beliefs especially beliefs about teaching-learning, play a major role in every aspects of teaching-learning researchers advocate the need of closer examination for understanding the relationship between teacher beliefs and educational practices (Pajares, 1992, Richardson, 1996). However, very few studies have explored beliefs and practices closely with multiple data sources especially real lesson observation with video camera. Extensive review of literature reveals that there has been no research conducted yet to explore teacher's beliefs and practice in Bangladesh. Therefore, the present study was designed to explore science teachers' beliefs and their actual practices closely through fine grain analysis of their espoused and enacted beliefs with multiple data sources. It also investigates the relationship between beliefs and practices and attempts to identify the background factors that influence teachers' beliefs and practices in lesson implementation in the secondary schools of Bangladesh.

Multiple sources of data gathered from questionnaire survey, interviews, and lesson observation in camera and observation checklist. Two hundred and fifty three secondary science teachers were surveyed from co-education secondary schools at Dhaka city while 13 of them, selected through maximum variation technique, were interviewed. Among the survey and interview respondents 89 and

4 were female respectively. The age of the participants ranged between under 25 up to 60 years with teaching experiences ranged between one year to more than 20 years. They studied Physics (P), Chemistry (C) or Biology (B) at their graduation. All of them have Bachelor Degree in education (B.Ed.) and some of them received in-service trainings which include: Subject Based Cluster (SBC) training; Continuing Professional Development (CPD) training; Teaching Quality Improvement (TQI) training; and 3 months Overseas Training (OT). Fourteen science lessons of thirteen science teachers at secondary level (Grade-VI-X) were observed and recorded. The observed lessons covered a range of topics included in the science syllabus. The average duration of the lessons was 32 minutes and average size of the class was 42. The data was collected in February and March 2012 and in April 2013. Ipsative score was accounted for survey questionnaire while interview and video captured data were analyzed by using coded categories after transcribing verbatim. Miles and Huberman (1994) suggested method was used for analyzing interview data, while video data for classroom observation was analyzed through Flanders Interaction Analysis method and Questioning-based Discourse Analysis method suggested by Flanders (1970) and Chin (2006) respectively. Finally, the results from the analyses were thoroughly discussed and summarized accordingly.

The results about teachers' beliefs on teaching-learning aspects revealed that less than half of the secondary science teachers of the researched schools hold traditional beliefs regarding teaching-learning; more than one fifth of the participant teachers hold modern beliefs while nearly one third of them hold transitional beliefs. Both modern and traditional science teachers were consistent in expressing their beliefs regarding teaching-learning. However, secondary science teachers under transitional group did not have holistic and consistent view about teaching-learning aspects. They possessed modern belief about teaching strategy and teachers' role aspects of teaching-learning. On the other hand, they held traditional beliefs about students' role, learning content and learning environment aspects. Since beliefs about teaching-learning are intertwined, in-service trainings and other professional trainings should address all the aspects of modern teaching-learning in a packaged programme so that the teachers can have a complete idea about modern approach of teaching.

The results regarding teaching practices unveiled that the science teachers of the researched secondary schools mainly employed didactic teaching (teacher-centered) where students' participation in the process of learning was negligible. Evidently, teachers communicate student primarily through lecturing, ask many lower-order questions which triggered word or phrase type student's response, correct student wrong response and praise correct response in a non-interactive, monologic discourse manner.

A reflection of beliefs was evident on teaching practices. It is found that teachers held modern beliefs regarding teaching-learning employ facilitative teaching practices. They use very few lecturing, allow student to talk, listen students' ideas carefully, ask various type of questions, employ much more neutral feedback to students' responses, and use several teaching method. On the other hand, teachers held traditional beliefs employ didactic teaching practices. They use predominant lecturing, hardly allow students to talk, criticize and justify authority, basically use lower order question to check student's content knowledge; use evaluative feedback to students' responses, and employ a handful teaching method. While transitional teachers play dual role in teaching practices.

The study also revealed that teaching experience and in-service training exert influence on teacher's beliefs and their teaching practices. Science teachers who had long teaching experience and received much more in-service trainings possessed modern beliefs. Similarly, those teachers employed more student-oriented practices.

The current teaching practices revealed through this study is completely opposite as stated in the teacher education curriculum of Bangladesh. It is found that the way secondary science teachers perform

teaching practices was not able to involve learners into learning process while active involvement of the learners into the learning process is the core of science teaching depicted in the secondary teachers education curriculum. Therefore, this study recommends employing facilitative feedback to students' various responses in order to make prolonged interaction results active involvement and meaningful learning towards scientifically literate citizen, 'the ultimate goal' of science education in Bangladesh.

備考 論文の要旨はA4判用紙を使用し、4,000字以内とする。ただし、英文の場合は1,500語以内とする。

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