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教師の数学教育観の形成・変容に関する事例研究： ある中学校教諭のライフストーリーの分析・解釈

メタデータ	<p>言語: Japanese</p> <p>出版者: 東京学芸大学大学院連合学校教育学研究科</p> <p>公開日: 2021-07-06</p> <p>キーワード (Ja): 数学教師教育, 数学教育観, ライフストーリー, 統合・発展, ETYP:教育関連論文</p> <p>キーワード (En): Mathematics Teacher Education, Beliefs about Mathematics Teaching and Learning, Life story, Integration and Development</p> <p>作成者: 森田, 大輔</p> <p>メールアドレス:</p> <p>所属:</p>
URL	http://hdl.handle.net/2309/00173410

A Case Study on the Formation and Transformation of Teacher's Beliefs about Mathematics Teaching and Learning:

Analysis and Interpretation of Life Story

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Teachers' beliefs are the driving force behind teaching as a "cultural activity". Mathematics teachers in Japan are said to maintain their beliefs about mathematics teaching and learning that "develop classes in which children create mathematics on their own initiative and in an evolutionary manner, making use of their mathematical thinking and diverse ideas"; but, how such a belief about mathematics teaching and learning was formed and what kind of experience was involved in the process have not been clarified. The purpose of this paper is to clarify how the teachers' beliefs about mathematics teaching and learning are formed and transformed as they become more experienced.

To achieve this goal, I use a life story. A life story is "oral story of a person's life" and "A qualitative research method that attempts to read and understand the various aspects and changes of one's life world, society, and culture as a holistic by focusing on one's own life and talking based on one's own experience." (Sakurai, 2012). In Japan, there is research which specifies the belief of the teacher in the life story research, which coincides with the purpose of this paper.

This paper analyzes the narratives of a male teacher who worked at a junior high school in the Kanto region for 14 years. This teacher's narrative was rearranged in time series, and was roughly divided into learner's term, first term, and long term training term, then descriptions were made about those terms. Then, I analyze and interpret the influence of the social

context inferred from the interview data on the formation and modification of the beliefs about mathematics teaching and learning in comparison with existing prior studies.

As a result of the analysis and interpretation of the interview, it was apparent that the teacher who placed importance on the performance of the teacher started to aim at the belief about mathematics teaching based on "integration and development" in the new school. Further, through the long term training, he learned important topics such as, "the importance of raising questions in children", "making someone feel like solving a problem", and "allowing for children to discover and create for themselves". Although the teacher's "integration and development" was originally aimed towards these topics, through this understanding came deepened meaning of the word "teach".

Key words

Mathematics Teacher Education, Beliefs about Mathematics Teaching and Learning, Life Story, Integration and Development

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