The 14th International Congress on Mathematical Education
Shanghai, 11th –18th July, 2021

# ARE YOU REALLY TEACHING MATHEMATICS? WHAT EDUCATION CAN LEARN FROM HISTORY

Po-Hung LIU
National Chin-Yi University of Technology, China

It is asserted that teachers' beliefs about mathematics may have an impact on their teaching of mathematics (Jao, 2017; Shilling-Traina & Stylianides, 2013; Thompson, 1992). By taking this into account, several studies have paid attention either to investigate school teachers' belief system of mathematics or employ various approaches to develop teachers' appropriate conceptions regarding mathematics. Furthermore, it is believed that history of mathematics could improve or expand an individual's understanding of the nature of mathematics (Liu, 2009), hence may challenge and reconstruct teachers' epistemological beliefs of mathematics as a result. Wilder (1950) reminds us that mathematics is a part of, and is influenced by, the culture in which it is found. In this manner, the culture dominates its elements, and in particular its mathematics. For instance, a Chinese mathematician living about the year 1200 C.E. would mainly focus on computing with numbers and solving equations without paying attention to geometry as the ancient Greeks understood it. In contrast, a Greek mathematician of 200 B.C.E. would focus more on geometrical proofs than on algebra and numerical computation as the Chinese practiced it. This lecture aims to question the conventional view of treating mathematics as a significant instrument for developing personal career by advocating that we should regard mathematics as a cultural discipline of human endeavor in our teaching. By doing so, on the one hand, I will interpret the history of mathematics in terms of micro aspects to discuss the effect of the history of mathematics in the teaching and learning of mathematics. On the other hand, a sociological macro-view will be employed to investigate the rise and down of mathematics in the European and Chinese culture for shedding more light on the intellectual value of mathematics in education.

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