

# PRE-SERVICE TEACHER'S CONCEPTIONS ABOUT THE USE OF THE HISTORY OF MATHEMATICS AS A DIDACTIC RESOURCE

Miguel Ángel Fuertes-Prieto<sup>1</sup>, María Santágueda-Villanueva<sup>2</sup>, and Gil Lorenzo-Valentín<sup>2</sup>

<sup>1</sup>Universidad de Salamanca, <sup>2</sup>Universitat Jaume I

Previous studies have pointed out the importance and advantages that the History of Mathematics can have as a didactic resource, not only to teach mathematical concepts, but also to show that mathematical knowledge is part of our culture. The role that History of Mathematics can play in Mathematics Education and how to integrate it into teacher education remains, however, an open question (Clark et al., 2018; Fauvel & van Maanen, 2000).

In order to find out what are the attitudes, knowledge and beliefs of trainee teachers about the use of the History of Mathematics as a teaching resource, a survey based on the one used by Alpaslan et al. (2013), has been carried out in two Spanish universities, among 2<sup>nd</sup> and 3<sup>rd</sup> course preservice teachers (N=141), also retrieving information about their initial training, their usual qualifications in mathematics and their knowledge of History of Mathematics.

Using the SPSS statistical program, lineal clustering, analysis of variance (ANOVA), correlation study and comparison of means has been done, seeking for relationships between previous studies, knowledge and the main conceptions about the use of mathematics as a didactic resource. Preliminary results show that most of the preservice teachers are prone to use the history of mathematics as a didactic resource (71%), and are aware of its advantages, as a way to understand mathematics in depth (73%), realizing that mathematics is a universal creation of different cultures (81%). But most of them do not know how to integrate it into their future classes (65%). Cluster and ANOVA analyses show that these general results are independent of their previous studies and even of their history of mathematics knowledge. These results can be considered when designing mathematical training of future teachers.

## References

- Alpaslan, M., Işıksal, M., & Haser, Ç. (2014). Pre-service mathematics teachers' knowledge of history of mathematics and their attitudes and beliefs towards using history of mathematics in mathematics education. *Science & Education*, 23(1), 159-183.
- Clark, K. M., Kjeldsen, T. H., Schorcht, S., & Tzanakis, C. (2018). *Mathematics, education and history. Towards a harmonious partnership*. ICME-13 monographs. Springer.
- Fauvel, J., & van Maanen, J. (Eds.) (2000). *History in mathematics education: The ICMI Study 6*. Springer.