

ORCHESTRATING UNIVERSITY TEACHERS' TPACK, THROUGH CONCEPT MAPPING

Barbara de Benito¹, Jesús Salinas¹, Alexandra Lizana¹ & Milagros Guiza²

¹University of Balearic Islands, Spain

²UNPA, Argentina

Email: {barbara.debenito, jesus.salinas, alexandra.lizana}@uib.es, mguizae@gmail.com

Abstract. As part of a case study based on concept mapping, this poster displays an exploratory research, applying a qualitative methodology, to identify, analyze and establish relations between factors that define technological, pedagogical and content knowledge (TPACK) of higher education teachers. TPACK framework, was used to analyze its elements amongst twenty higher education professors, belonging to different disciplines. In order to apply TPACK framework to analyze university teachers' expert knowledge, a procedure for the elicitation, representation and transfer of expert knowledge developed in previous studies was applied. The application of concept map-mediated interviews allows us to learn about the processes where professors apply their TPACK technology experience for teaching and to analyze the interrelationships between elements from TPACK. It also allowed to recognize specific disciplines and context use. This study proves that TPACK framework could be used as an analysis tool for teacher's competencies relating to ICT (Information Communication Technology) concentrating on how teachers apply technology. The research was done in different phases whose objective was to deeply comprehend the different factors that take part and interact in the teaching/learning process. Factors that directly relate to teachers' knowledge and the context where the learning process takes place. The first phase was to identify teachers using ICT for their teaching related to three factors: use, description of good practice and student's participation. Phase II define TPACK factors categorized in 5 dimensions: formation and teacher experience, discipline, ICT usage abilities, teaching/learning methods and techniques and planning. In phase III we analyzed six context variables: professor's attitude, students' attitude, experiences, teacher training, objectives and competences and resources. Data gathering was made in phase IV through concept map-mediated interviews. Concept map coding processes and analysis generated from the interviews was done in phase V, initial categories used were: factors extracted from TPCK Model, types of knowledge from TPACK and context variables. Results and discussion were made in last phase.

Keywords: concept mapping, TPACK, faculty development