TPACK MODEL IN DEGREE STUDIES FOR INITIAL TEACHER TRAINING IN ICT

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Under the abbreviation TPACK we mention the acronym of "Technological Pedagogical Content Knowledge" (TPCK or TPACK) is made. It is a model of teaching and learning (E-A) that identifies the types of knowledge that a teacher needs to master to integrate the Information and Communication Technologies (ICT) in an effective way in imparting education. It is included among the cognitive models in cooperative environments, where, in addition, the technology is used. The pioneers in implementing this model are teachers Punya Mishra and Matthew J. Koehler, of Michigan State University (between 2006 and 2009).

In this paper, the literature on this model E-A, and the possibilities offered in the initial teacher training degree in Primary, in particular, for implementation in the area of Didactics of Geography, is analyzed. A proposal for real intervention and the first evaluative results of the project, carried out at the Faculty of Education at the University of Alicante, along the course 2014-2015, with 2nd year students, is presented.

Traditionally, teacher's education is limited to the acquisition of knowledge of one or more disciplines, depending on whether he/she is professional for primary, secondary or higher education, leaving in the background, pedagogical training. Studies commissioned of the analysis of the development of educational research show consensus in reference to the idea that there is still a pending task of deepening in the educational research and in the changes that occur in the classroom. Against this background, more common than it might seem, they have been proposing a series of active and collaborative methodologies E-A, which match the current changing world. Such methodologies are Collaborative Learning Techniques (TAC), Project Based Learning (PBL) Problem-Based Learning (ABP), case studies, structured and critical debates, etc.

Linked to these new forms of implementing of contents, development of basic skills, including digital, is also necessary. In response to that, emerge models that allow the confluence of active and collaborative methodologies, using ICT as is the case of TPACK model. This new understanding of communion between them goes through a process of "reflection" of teachers, in their task of conjunction of disciplinary content and pedagogical content elements. It is in this context that starts the model proposed in 2006 by P. Mishra and MJ Koehler, under the name of "Technological Pedagogical Content Knowledge" or TPACK. Consequently, the model proposes that for the teacher has the training to incorporate ICT in the classroom need not only to possess the knowledge "base" of an isolated and independent manner but must also to possess in interaction. Only then, the technology is incorporated into the training process in a proper way properly and achieve the objectives of E-A provided by the learner.

The need to train future teachers in ICT has led to the development of works and studies on how to carry out this process. In most cases, more emphasis has been placed on the tool or technology that would teach regardless of the educational part and classroom application of the ICT. It must also be a comprehensive training covering various aspects such as the management of ICT tools: mastery of the language used by the technologies, knowledge of various tools and their use depending on the needs of each moment, etc. (Cabero, 2014). From this reflection, a TPACK intervention for training in ICT Geography arises, from the active and participatory methodology Problem-Based Learning (ABP). This proposal has been carried out in a classroom of 2nd degree course in Primary of the University of Alicante, to 111 students of the educational institution.

This study falls within research descriptive (Arnal et al, 1992) and "ex-post-facto", that is, one study that first event occurs and then, the possible causes and consequences are analyzed (Cancela et al., 2010, p.3). As working tools have been used two questionnaires that were passed to the sample before and after the implementation of the training. The sample used in this research is 111 students in the 2nd year of the Degree in Primary Education Faculty of the University of Alicante. As a tool for collecting and processing of data it has been chosen the computer statistical program SPSS (version 22). Various parameters used to measure reliability of the questionnaires were: Cronbach's coefficient and Cronbach's alpha; correlation tests, specifically Pearson's Chi-Square; the nonparametric Kruskal-Wallis test to check for differences in responses.

From the carried analysiswe can say that the work in the classroom of Didactics of Geography with the model TPACK itself developed the CK and the ability of to achieve it, allowing likewise the training of the sample in pedagogical knowledge (PK)

and technological (TK). In this sense, a contribution to the Didactic of Geography is generated because presents a model of E-A of this discipline that allows to train competent teachers both in content and in active methodologies as well as the proper management of ICT.