



Master in Teacher Training: A real implementation of Active Learning



Xavi Canaleta^a, David Vernet^a, Lluís Vicent^{b,*}, José Antonio Montero^a

^a Engineering Department, La Salle, Ramon Llull University, Barcelona, Spain

^b La Salle Open University, La Massana, Andorra

ARTICLE INFO

Article history:

Available online 24 October 2013

Keywords:

Active Learning
Project-based learning
Competence evaluation method
Technical impact

ABSTRACT

Teaching methods based on lectures often result in student passivity rather than pro-activity with the only goal of the student being to pass the final exam. Consequently, content retention is temporary and true learning is not achieved. Lack of student motivation can be solved by using Active Learning methodologies: serious games, Project-Based Learning (PBL), blended learning, etc. In addition, these methodologies enhance the development of the competences of students and provide a better evaluation of outcomes, provided adequate tools are used. However, apart from this, a more profound use of Information and Communications Technology (ICT) is needed to improve the effectiveness of learning and to create a learning system adapted to our current society. Learning Management Systems (LMS), social networks and blogs are indispensable for the efficient application of innovative learning methodologies. The Master in Teacher Training (MTT) provides an ideal case study as the most relevant features of Active Learning are present. The main contributions to this learning environment have been the incorporation of Active Learning methodologies (using real scenarios and project-based collaborative learning), an innovative method for assessing the Master and the impact of technology in learning. All of these have resulted in very positive results in relative to academic marks, surveys and entrepreneurship.

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1. Introduction

Until recent times the traditional teaching model considered learning to be a process in which the student accumulates knowledge and skills; and the teacher is the person in charge of transferring this knowledge. Thus the traditional teaching model is essentially based on the actions of the teacher, with the student taking a passive role, mostly limited to listening and taking notes.

Present day cognitive science defends a model which is clearly very different to the traditional one, based on the knowledge that we have acquired on the way people learn. Authors such as Vygotsky (1978), Piaget and Inhelder (1973) or Gardner (1983, 1993) have laid the foundations for a new model associated with the way we learn. According to the new focus, all learning should be based on individual students actively constructing their own knowledge (Biggs, 1996). This idea promotes the application of different teaching methodologies in the classroom, in which the role of the teacher changes substantially with respect to that of a traditional lecture. When strategies such as cooperative learning, case studies, problem or project-based learning are applied in the classroom, the main task of the teacher is to guide students through this

learning process, helping them to discover for themselves the knowledge they must learn, and using the tools which best suit the character and personality of each individual student. See Feden & Vogel (2003) Feden & for more detail on these methodologies.

It could be said that in the teaching–learning binomial, the traditional teaching model is based on teaching, while the current model focuses its attention on learning. In a lecture the message that the teachers provide is the objective of the class, whereas when the more active strategies mentioned in the previous paragraph are employed the aim is for the student to experience a complete learning experience.

In an ideal situation the training of future teachers should include all of the previously mentioned techniques. Furthermore, in order to make the course more effective, some of these training techniques should be applied in the course itself so that future teachers not only acquire the knowledge of the strategies, but experience them for themselves.

In an effort to achieve an effective learning experience in the area of teacher training, different Active Learning strategies have been applied. Innovate teaching methodologies have been employed and a competence-based evaluation system has been created. This new evaluation system should be able to validate whether the learning objectives have been acquired or not. None of this would have been possible without the intervention of the ICTs in the process.

* Corresponding author.

E-mail addresses: xavic@salleurl.edu (X. Canaleta), dave@salleurl.edu (D. Vernet), vicent@uols.org (L. Vicent), montero@salleurl.edu (J.A. Montero).

2. Framework

The Master in Teacher Training (MTT) is a professional MA program for teachers who teach in Secondary Education (*Educación Secundaria Obligatoria* – ESO), Baccalaureate and Vocational Training (*Formación Profesional* – FP). It has been the program in Spain since 2009 and replaced the former teaching diploma (called CAP – *Certificado de Aptitud Pedagógica*), which ceased to be valid in October 2009.

The Master's Degree in Teacher Training in Secondary Education, Vocational Training and Language Training is a certified MA program whose main objective is to train participants to be competent professionals in the field of pedagogy and didactics so that they can competently perform their teaching duties in a variety of environments.

The course has 60 ECTS-credits¹ in accordance with Article 5 of the Order ECI/3858/2007². The general structure of Master should include at least the following modules:

- A basic Multidisciplinary Module of 12 ECTS-credits applicable to all specialties of the Master.
- A Specific Module of 24 ECTS-credits for each of the specialties.
- An internship of 16 ECTS-credits including a Specialty-Specific Master's Dissertation.

The Master in Teacher Training is essentially a powerful tool that should serve for the training of future teachers of Secondary Education, Baccalaureate or Vocational Training. But the effectiveness of this tool is directly related to the way these studies are designed, implemented and developed. If qualified teachers fall into the trap of past teaching habits and commit the same mistakes (a poor development of the contents or a short period of placement in a school, for example) the MTT may lose its effectiveness. Thus the success of the training depends on each university rather than the government regulations in force.

The first important contributions made in the field of MTT were the modifications to the overall structure of this Master in order for it to be validated by ANECA, *Agencia Nacional de Evaluación de la Calidad y Acreditación* (National Agency for Quality Evaluation and Accreditation) and thereafter, by AQU, *Agència per a la Qualitat del Sistema Universitari de Catalunya* (Agency of the Quality of the University System of Catalonia).

In line with the demands of the regulation ECI/3858/2007, the overall structure of the three modules proposed an adjustment in the division of the ECTS-credits which reduced the number of credits obtained in the specific module subjects in order to achieve a more homogeneous structure. The end result can be seen in Table 1. This adaptation permitted the standardization of the workload of the materials to be studied (both the generic and the specific module) to 5 ECTS-credits. Additionally, the expansion of the number of module credits of Practicum and Master's Thesis to 20 ECTS-credits led to improved educational work placements, considered essential for the training of future teachers.

The dual role of the students makes this Master unique. They are both students and teachers and in this active training MA program they will develop individual teaching strategies. This is where the learning goal can really be exploited and makes the

Table 1

MA program structure (Ramon Llull University).

Multidisciplinary module (15 ECTS)
Personal Development, Education and Society
Subject 1 (5 ECTS)
Learning and Personality Development
Subject 2 (5 ECTS)
Processes and Contexts
Subject 3 (5 ECTS)
Society, Family and Education
Specific Module (25 ECTS)
Advanced Training for the Teaching of Technology
Subject 4 (10 ECTS)
Course Training Contents: Technology
4.1: Objectives and Location Technology (5 ECTS)
4.2: Advanced Supplementary Curriculum Contents of Technology (5 ECTS)
Subject 5 (10 ECTS)
Learning and Teaching Technology
5.1: Technology in the Social Context (5 ECTS)
5.2: Learning Methodologies and Evaluation Methods (5 ECTS)
Subject 6 (5 ECTS)
Teaching Innovation and Introduction to Educational Research
Practicum and Master's Dissertation (20 ECTS)
Subject 7 (14 ECTS)
Placement in a School
Subject 8 (6 ECTS)
Master's Dissertation

program the ideal scenario for applying Active Learning (Biggs, 1985), the awareness and the understanding of the phenomenon of learning itself, because the course objective for these students is the learning process itself.

3. Learning methodology

A notable aspect in the implementation of MTT is the learning methodology used in the development of the Master. If our aim is for the future teacher to apply Active Learning strategies in order to obtain an effective learning process, then he or she should be trained using the same techniques. The MTT had the great advantage of starting from scratch. It did not inherit previous curriculum. It was therefore the ideal environment to implement a major methodological change.

The level of satisfaction expressed by the students is correlated by the teacher's perceptions of the effectiveness of group work (Oakley, Hanna, Kuzmyn, & Felder, 2007). Therefore the training of teachers in these methodologies is essential.

The main features of the learning methodology applied on the MTT are the following:

- The Master in Teacher Training of Ramon Llull University develops its materials promoting cooperative learning.
- Collaborative Project-Based Learning Methodologies are used.
- Final exams have been replaced by class presentations of projects (and continuous evaluation).
- Projects are subject to review and evaluation by teachers and other students.

A great number of examples (Mitchell, Canavan, & Smith, 2010) show that the use of PBL guarantees both academic success and the satisfaction of the students.

However, special attention must be given to the learning strategy which was initially employed in the Master in the academic year 2009–2010 and which has been annually reviewed and improved upon until the current course 2012–2013. This

¹ ECTS: European Credit Transfer and Accumulation System. One academic year corresponds to 60 ECTS-credits that are equivalent to 1500–1800 h of study in all countries irrespective of standard or qualification type and is used to facilitate transfer and progression throughout the European Union.

² ECI/3858/2007 of 27 December, establishing the requirements to verify official university degrees which enable qualified graduates to practice in the professions of Teacher of Secondary School Education, Vocational Training and Language Teaching, BOE n. 312, 2007.

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