

THE CLASSIFICATION OF TEACHING METHODS IN HIGHER EDUCATION

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Abstract

The present article presents some of terms and taxonomic in teaching methods study. In order to overcome these difficulties, meaning of some key concepts in this field and describes the development of a list of teaching methods with their definitions, an instrument that we judge essential for the development of competencies in the model of European Higher Education Area. This list of methods has been made from documentary sources and a panel experts, and pursues the following objectives: to provide teachers a tool for the design of academic guides, to help the processes of design of training actions for teachers and serve the research in this field.

Keywords: Competence, higher education, teaching method, teaching methodology.

INTRODUCTION

The methodology is one of the essential elements in the elaboration of didactic units since it was included in the Glaser model (Ferrández and Sarramona, 1975). However, and despite how much has been written about her, it is not yet possible to find a classification of practical teaching methods and also to facilitate its use by teachers. This is an important problem, because on the one hand the teacher may notice a lack of choice-methods for the development of skills, and on the other they are difficult to the actions of formation of the same. In addition, the construction of methods of collecting information for research in this field becomes very complex. As an approach to these problems, this paper proposes a conceptual delimitation and shows the process of constructing a list of teaching methods used in a research on the teaching strategy of higher Education institutions (Alcoba, 2010) as well as a revised version of this relationship. It is common in the scientific literature on teaching methods to find lists of methods that each

author lists according to his experience and knowledge, it is certainly uncommon for some authors to rely on the work of others. This is possibly the cause of the various problems that arise in research in this field, such as those mentioned below. One of the first difficulties that arises after the analysis of different authors is the great dispersion that exists in the enumeration of methods. Another example is found in Navaridas and De Miguel, who talk about case study (De Miguel, 2006; Navaridas, 2004), while López Camps refers to it as case method (López Camps, 2005).

On the other hand, we will say that it is not always easy to know if authors use different terms because they refer to different methods, because they do not always define the terms they use. In seven of the sources we have consulted (approximately one out of three) this phenomenon occurs. This issue is complicated because the definitions used by some authors for certain methods are similar to those mentioned by others for different methods, or because some methods seem to encompass others. To cite one example, Kolb defined

learning as the process through which knowledge is created through the transformation of experience (Kolb, 1984). From this definition, and although in some sources, the experiential learning appears as a teaching method (Bourner, 1997; BusinessWeek, 2006; Monterrey, 2006), it is plausible to also consider it as an approach that encompasses all those methods in which the learner is directly in touch with reality in order to learn or discover something, as, for example, occurs in laboratory practices. Another difficulty we find is that some authors link some methods to others as a sign of their similarity, but these similarities are not shared by other authors. For example, Jares talks about simulation games and exercises (Jares, 2002) and Fernández March about simulation and game (Fernández March, 2006).

However, Navaridas and the Monterrey TEC only talk about simulation (Monterrey, 2006; Navaridas, 2004). On the other hand, Gairín writes simulation/role playing (Gairín, 2005), but role play appears isolated in other authors, such as Amat and López Camps (Amat, 2002; López Camps, 2005). For this last author, finally, the case method is part of the games and simulations, while in other authors we find both methods separately, as for example in Domínguez et. at or in Navaridas (Domínguez, Amador, Hermosilla and Lozano, 2007; Navaridas, 2004).

Finally, if we look at the objectives of the various methods, there does not seem to be any agreement between the different authors. For example, Amat refers that the methods that promote creativity are tutoring, Phillips 66 and brainstorming (Amat, 2002), and yet for Navaridas, tutoring is one of the methods aimed at changing knowledge, specifically one of individualizing strategies. For him, the methods that foster creativity are brainstorming, didactic questioning, audiovisual techniques and the incident method (Navaridas, 2004). But Bourner, however, expands the list of methods used by the student to generate ideas to ten, among which it is striking to find relaxation techniques (Bourner, 1997).

CONCEPTUAL DELIMITATION

The absence of unified terminology in the field of teaching methods is a proven fact, and that is why it is common in this field for authors to begin by defining the meaning that the terms they use have for them (Furkatovna, 2021, p. 584).

In this paper we use the expression teaching method to refer to the basic unit of methodology. In the review of lists of teaching methods that we carried out in this work, nine authors used this term (Sáenz, 1994; Bourner, 1997; Davis, Misra and Van Auken, 2000; Gil, Álvarez, García and Romero, 2004; De Miguel, 2006; Fernández March, 2006; Petty, 2006; BusinessWeek, 2008; Honolulu Community College, nd).

The other terms used were: training methods and techniques (Domínguez et al., 2007), didactic methods (EuroFM, 2007; Zabalza, 2003), teaching techniques (Fernández Serrat, 2007), educational methodologies (MEC, 2006), technical teaching strategies (Monterrey, 2006), teaching-learning strategies (Andreu, 2005), methodological strategies (Gairín, 2005), training methods (López Camps, 2005), teaching strategies (Navaridas, 2004), pedagogical methods (Amat, 2002), didactic activities (Jares, 2002), and teaching methodologies (URV, 2006).

From our perspective, a teaching method is the set of techniques and activities that a teacher uses in order to achieve one or more educational objectives, which makes sense as a whole and which responds to a denomination known and shared by the scientific community. We emphasize that method is a term of a more generic nature than activity or technique, but more specific than model, and we emphasize the relationship that exists between the method and the purposes it seeks, which from our point of view are none other than the educational purposes in its various levels of concretion. Now, for a method to be such (and not a technique or an activity), it must make sense as a whole, that is, it must be possible to clearly differentiate when a teacher is using one method and when another. Thus, in its

execution, the master class should not be the same as the case method, nor should the resolution of exercises and problems be the same as professional practices. Finally, a teaching method must have a name that is recognized and shared by the scientific community. A method is not until it is researched and reported on. A teacher can design a large number of activities, but the methods (and probably the techniques) belong to a higher complexity scale and to be constituted as such there must be some agreement in the scientific community about them.

It is also interesting to clarify the meaning of the term methodology. According to the Dictionary of the Royal Academy, the methodology is the "science of the method", or the "set of methods that are followed in a scientific investigation or in a doctrinal exposition". (RAE, 2008). In the first meaning we are therefore referring to scientific knowledge and in the second to a set of methods. From this point of view, educational methodology is, first of all, the area of science that studies teaching methods. And, secondly, the methodology is the set of methods used by a teacher.

The first of the meanings establishes a relationship between both terms that from our approach is crucial, since it establishes a clear connection between the discipline, the methodology, and its object of study, which is the method (Martín-Molero, 1993, p. 52). This relationship does not exist if other terms are chosen (methodology is not the study of techniques or strategies, for example). For us, therefore, the methodology is the list of teaching methods used by a teacher and the articulation of it in the classroom and not, for example, the way he has to describe them. In other words, what a teacher has to include in the methodology section of an academic guide, at a minimum, is a list of the methods he uses and not, or at least not only, if it is active, if it is participatory or whether or not it follows the principles of meaningful learning.

From our perspective, techniques and activities are concretions of the set of methods used by

teachers. Thus, to cite an example within the former, we will say that a specific awareness-raising exercise can be considered a technique within the general method defined by group dynamics. Similarly, speaking in public or the use of slide presentations can be considered techniques that are part of the method known as a lecture. The activities, on the other hand, are located in another field of specification, which incorporates the content in question and which are contextualized within a particular subject: thus, for example, the viewing of a certain film is an activity, as so is the dissection of a specific animal for anatomical examination. Brainstorming and Phillips 66 are group work techniques, that is, techniques within the group work method. On the contrary, a particular brainstorming aimed at achieving a specific result within a classroom will be an activity. We collect in Table 1 some clarifying examples of the difference between these three terms.

CONSTRUCTION OF THE LIST OF TEACHING METHODS

As we have written above, research in teaching methods entails a series of difficulties that we have tried to overcome through the actions that we are going to enumerate.

On the one hand, we seek to have an abundant number of sources. As we have mentioned, authors usually base their listings on their own knowledge and experience. However, our research was based on the twenty-two sources mentioned above, which is the only inventory we know of based on such an abundant number of sources. These are very diverse authors, and in some cases their works are very distant in terms of their field of study: some are reflections on university teaching, others are research papers and some more talk about Education in general. We decided to include all of them based on Marzano's (1998) meta-analysis, which found that the academic level of the students does not significantly influence the effect of a given method. Therefore, a priori, what works at one educational level can also work at another.

On the other hand, and given the existing terminological difficulty, for the definitions of each of them we start from the only teaching methods questionnaire that we know of that incorporates a glossary, which is that of Navaridas (2004). In the event that the definition provided by the glossary, in our opinion, could be improved, we tried to do so, and in the case of methods not included in the questionnaire, we resorted to external sources.

The analyzed sources yielded a total of 84 teaching methods. We thought that it was an excessively high number due to its lack of practicality, and to reduce it we only considered those methods that had been cited by at least two authors, to guarantee a minimum of agreement. However, one of the difficulties was to define when there was agreement between the authors regarding a specific method. Consider that, as we have already said, the authors sometimes use different terms, and also do not always define the methods in their lists. The sources used individually named a total of 247 teaching methods, and therefore it would be long and complex to explain in each case each and every one of the decisions we made to determine if there was concurrence in several authors regarding a method. But we will cite some examples: firstly, we consider that when there was an important semantic similarity in a part of the name of the method, or in its meaning, the authors were referring to the same method. For example, we assume that, in its essence as a teaching method, a lesson is the same as a lecture. On the other hand, if we did not find significant differences in the definition of two methods that seemed similar to us, we decided to group them under a single denomination. It is the case of debate, round table and colloquium. A final example is the methods that come from works in English, in which we use a broad translation criterion; Thus, for example, we translated *ex-cathedra* teaching by master class.

The first list we obtained incorporated thirty-nine teaching methods and their definitions. This work was submitted to the judgment of nine experts, who formulated their observations on the methods and definitions collected. This

is how the first version of the list was built, initially elaborated within the framework of an investigation on the teaching strategy of Higher Education institutions (Alcoba, 2010). This list served in said study to achieve the following objectives:

- Use a common language when referring to teaching methods.
- Serve as a basis for the preparation of a questionnaire through which the methodological fabric of the institution in which the study took place was analyzed.
- Guide teacher training processes.
- Prepare the academic guides for the different subjects.

We present a revised version of that list, which incorporates twenty-five teaching methods with their definitions. Despite the fact that all of them have been transformed during the research process, due to rigor and fidelity to the authors who formulated them at the beginning, we have decided to incorporate the original definitions. We also note the number of sources that named the different teaching methods, which is the criterion we have followed to order them. That is, the first of the methods was the most named (20 of 22 sources), and the last method the least named (2 of 22 sources).

CONCLUSIONS AND NEXT STEPS

In 1980 there was already talk of a "multiple action that today the university crisis and that of secondary education demands: the renewal of teaching methods" (Román, 1980, p.30). More than twenty-five years later it was collected: "the diagnosis of the current situation could be synthesized by stating that the reform of educational methodologies is perceived as a process that is essential to address for an update of the training offer of Spanish universities." (MEC, 2006, p. 7).

It is significant that after such a long period of time the need to reflect on the methodology continues to manifest itself, as an echo that recursively points out this pending subject of the teaching profession. It may be due to the

fact that no significant progress has been perceived in this field, or that the progress that has been achieved is not sufficient. In either case, it is a fact that, since methodology is one of the keys to the teaching function, it is still necessary to reflect on its in-depth knowledge and its practical application.

However, as we have gathered above, research on teaching methods is a field full of terminological and taxonomic difficulties. For this reason, it is not always easy for teachers (especially for those who do not have specific training in teaching) to choose and apply the different teaching methods that their teaching work requires. In this sense, little effort will be made to clarify what a teaching method is and how it should be applied, and this not only for classroom practice, but also for the design of teacher training programs and for the structuring of teaching methods. instruments for collecting information that the investigation requires.

The field of study around teaching methods is frankly wide, and it is still necessary to dedicate research efforts to advance in this field. In this work we have created a list of twenty-five teaching methods with their definitions, based on twenty-two documentary sources and a panel of nine experts, and we have exposed some terminological precisions that, from our perspective, are necessary. The next step is to classify the methods of teaching that we have included in the inventory. From our point of view, this classification should have at least two axes:

- On the one hand, we should be able to classify teaching methods according to the educational purpose (or purposes) that each of them serves. In this way, teachers could have a basic scheme to relate learning activities with the skills they seek to develop in their students.
- On the other hand, it would be clarifying to be able to connect the teaching methods with the techniques they contain. This would help in an important way to define the internal articulation of each method, in addition to significantly supporting teacher training programs.

From our perspective, the model proposed by the European Higher Education Area, which has focused many of the research efforts on the study of competencies, also brings research on teaching methodology to the fore, and shows that science of teaching methods is more current than ever.

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