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Methodological trends in teachers who train primary and secondary teachers*

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ABSTRACT
In Spain, the Espacio Europeo de Educación Superior (EEES) has propelled and developed the current academic structure, but not as much as the new methodological approaches that should go with the new organization of the teaching. Teamwork, seminars, class presentations, debates and so on, are suggested in all the guidelines, but are all of them really put into practice? In this paper the results of research about the design and practice of the activities accomplished by professors are shown, analyzed and discussed. In the research 132 professors took part, from three public universities in Madrid, that work as professors teaching education degree and/or the master's in secondary teacher training. Data points out, from the statements of professors, that their activities in teachers training are clearly moving away from traditional trends towards identifying with intermediate and constructivist tendencies.

KEYWORDS
teaching methods; teachers education; conception of teacher; Espacio Europeo de Educación Superior; pre-service teachers.

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TENDÊNCIAS METODOLÓGICAS DE PROFESSORES UNIVERSITÁRIOS QUE FORMAM DOCENTES DO ENSINO PRIMÁRIO E SECUNDÁRIO

RESUMO

Na Espanha, o Espacio Europeo de Educación Superior (EEES) tem impulsionado a estrutura acadêmica atual, mas não as "novas" abordagens metodológicas que devem acompanhar a nova organização do ensino. O trabalho em equipe, seminários, exposições, debates, entre outros, são propostas ao longo das orientações, mas são de fato colocadas em prática? Este artigo analisa e discute os resultados de uma investigação sobre a concepção e a implementação de atividades realizadas por professores universitários. Participaram 132 professores que exercem a docência formando professores de ensino fundamental e médio. Os resultados mostram que as declarações de professores sobre as atividades desenvolvidas estão se movendo claramente longe de tendências tradicionais e identificam-se com tendências intermediárias e construtivistas.

PALAVRAS-CHAVE

metodologia de ensino; formação de professores; concepções de professores; Espacio Europeo de Educación Superior; professores em formação.

TENDENCIAS METODOLÓGICAS EN LOS DOCENTES UNIVERSITARIOS QUE FORMAN AL PROFESORADO DE PRIMARIA Y SECUNDARIA

RESUMEN

En España, el Espacio Europeo de Educación Superior ha impulsado la estructura académica actual, aunque no los "nuevos" enfoques metodológicos que deberían acompañar a la nueva organización de la enseñanza. En todas las directrices se proponen trabajos en grupo, seminarios, exposiciones, puestas en común, etc., pero ¿realmente se ponen en práctica? En este artículo se analizan y discuten los resultados de una investigación sobre el diseño y puesta en práctica de actividades realizadas por profesores universitarios. Participaron 132 profesores que ejercen docencia en la formación de maestros de primaria y profesores de secundaria. Los resultados muestran que las declaraciones de los docentes sobre las actividades que llevan a cabo claramente se alejan de tendencias tradicionales y se identifican con tendencias intermedias y de orientación constructivista.

PALABRAS CLAVE

metodología de enseñanza; formación de profesores; concepciones de profesores; Espacio Europeo de Educación Superior; profesores en formación.

INTRODUCTION

The M.E.C Commission [Spanish Ministry of Education] which drafted the "Proposals for the Renovation of Educational Methodologies in Universities" report (España, 2006) understands that it is necessary to take advantage of the convergence process to bring about profound innovative change, especially in relation to teaching methodologies:

> "The construction process of the European Higher Education Area (EHEA) is the perfect opportunity to promote a reform that must not remain a mere reshaping of the structure and content of university studies but must reach the heart of university activity, which is the interaction between professors and students to generate learning."(*idem,* p. 7)

For this commission the present situation is characterized, from the perspective of didactic methodology, by:

a) The poor recognition of teaching in comparison to research.
- The concentration of teachers efforts on the transmission of content.
- The scarce pedagogical-didactic preparation of university professors, caused by the lack of a solid initial and permanent training system for university professors.
- The reluctance of faculty to methodological change.
- The lack of information and awareness of faculty about the change in pedagogical culture that EHEA promotes.
- The absence of a tradition of co-operative work in university teaching.
- The excessive size of classes still found in certain fields.
- The difficulty to involve students in their own educational processes.

Furthermore, a study conducted by González Sanmamed y Raposo (2008), pointed out that the educational activities that generated the greatest interest among faculty were those referring to methodology. Sánchez Gómez and García-Valcárcel (2002) reached similar conclusions.

Considering this situation, our contribution focuses on the description and analysis of those methodological trends with which professors teaching in an undergraduate program for primary school teachers and a master's program for high school teachers identify with most and to suggest certain implications for the didactic training of faculty within the framework of the EHEA.

FACULTY CONCEPTIONS OF TEACHING METHODOLOGY

As pointed out by De la Cruz *et al*. (2006), research about the conceptions of teaching held by university professors shares the idea that these concepts are very important since they give direction and meaning to the practice of teaching. These conceptions will, in the university environment of teacher education, "impregnate"

the perceptions of students who will become primary or secondary teachers. University educators who train teachers therefore are *teaching to teach by teaching*.

Furthermore, the absence of *practical references* of an innovative character during initial teacher education results in future teachers teaching in the way that they had been taught and not being very receptive, in practice, to innovative ideas (Cheng *et al.*, 2009; Haney; McArthur, 2002; So; Watkins, 2005). In this regard, Skamp and Muller's (2001) study emphasizes that the factors that future teachers highlight as being the most relevant in their conception of what makes a good teacher are their previous experiences as students and during practical training during initial education.

Therefore, teaching methodology is an essential element in the educational curriculum bcause it provides the answer to a key question in teacher education: *How to ensure that future teachers learn their profession?* This question of *How to train future teachers* is a professional issue of critical importance for educators. There is no one and simple answer to this question. However, we do not share the idea that there are no methodological principles that guide training practices, that all which is required to educate teachers is that they have command of the knowledge they will impart. To allow other to construct knowledge that is more valid that that which they possess at the beginning of the education process cannot be done in just any manner: not all options are equally valid (Rivero *et al.*, 2011).

There is a generally widespread consensus among researchers about some of the teaching principles that can facilitate learning among students (Duit; Treagust, 2003; Watts; Jofili, 1998) and that are applicable to teacher education even if for nothing more than the the principle of isomorphism between education and teaching (Martín del Pozo *et al.*, 2013). We refer to the following:

a) Placing the focus on the learner; in other words, to shift from education centered on the transmission from the professor-educator to one focused on the student (their ideas, likes, interests, needs, etc.).
b) Creating a learning environment that favors interactions (between educators and future teachers, among the latter, and between different types of knowledge, etc.).
c) Promoting the construction of knowledge through democratic negotiation processes, which implies a certain degree of epistemological relativism and questioning of the common power relationships.

In the conclusion to their study of initial education for teachers, Rivero *et al.* (2011) propose four *general levels of progression* to teaching methodology. These levels are:

- *Intuition*. The methodology does not follow an articulated model; neither specific activities nor didactic resources are specifically formulated and the proposed teaching situations are not arranged in a logical order. The underlying obstacle is that it appears that *a specific methodology is not needed to teach.*

- *Transmission.* At this level, the methodological logic is a subsidiary of the logic of the content that is being transmitted. The activities are situations proposed to reinforce the teaching and the resources serve to support them. The underlying obstacle is the belief that *students and their ideas do not influence methodology.*
- *Substitution.* This model focuses more on the student than on the teacher. This teaching methodology is based on the logic of detecting the ideas of the students and their expansion and/or substitution with the correct knowledge. The activities and didactic resources serve to facilitate student learning. The underlying obstacle is the understanding that *teaching is the direct cause of learning.*
- *Research.* This teaching methodology responds to a logic based on the investigation of relevant problems to enhance the evolution of the students' ideas. These ideas are considered the axis of the teaching-learning process. Both the activities, which are understood as program units, as well as the didactic resources are elements designed to facilitate the construction of knowledge. The fact that one is working in situations linked to future practice and reflecting on how to deal with them, allows future educators to put themselves in the situation of a teacher and make decisions, reflecting on which are the most adequate and why. This contemplation of these situations allows them to progress from their initial positions to more elaborate conceptions.

We share the belief that the methodological proposals *based on the research* of professional issues which are open-ended, familiar, interesting and relevant to future teachers all have great potential to facilitate professional learning.

For their part, Solís *et al.* (2012) consider that teaching methodology in the field of initial education of secondary school teachers is directly related to the different didactical models (traditional, technical, artistic and research). The traditional didactic model is no longer the prevalent model found among future teachers. The most commonly found are intermediary teaching perspectives that lie between the traditional model and the model based on student research. The presence of transition models is quite widespread.

For Jiménez Llanos and Correa Piñero (2002), the study of university professors' conceptions about teaching is based on various cultural theories (traditional, active, constructivist, critical, and technical). One also observes the presence of different theories that indicate a synthesis of the cultural theories, mainly the activist and constructivist.

In the case of university professors who work with the education of teachers, De la Cruz *et al.* (2006) have identified two opposing poles: a conception of teaching focused on the teacher, the subject matter and its transmission, and another focused on the student and the facilitation of learning. Other authors had previously identified the same positions. Doyle (1997) for example, had labeled them as knowing/giving information and facilitating/orienting learning. Tatto (1998), meanwhile, had described them as teaching as the transmission of subject contents

and as the transmission of cultural values and critical thought. Similarly, Gargallo López (2008), in reference to research by university professors, highlighted two main models, typologies or orientations; one focused on teaching and the other on learning. He cautioned, however, that many professors are located in an intermediary zone. The study by Meirink *et al*. (2009) also detected two broad perspectives, the traditional whose focal point is the teacher and another with a more reformist approach, focused on the student.

Finally, it is worthwhile pointing out that if we take the current European models as a reference point we find a heterogeneous landscape in which teaching is devalued and a trend towards more active teaching (España, 2006). In Europe it is impossible to speak of either a single teaching method or a characteristically European method. There are a variety of perspectives built around multiple variables (fundamentally the starting points of students and the final objectives of study programs). This is a multiform landscape although trends indicate a greater involvement of students in their education and greater curricular flexibility.

METHOD

This study involves a type of non-experimental quantitative research. Given that the data was collected from a sample of subjects in which the independent variables had already occurred, we opted for a *transversal* design of the *ex post facto* type. This design was chosen because it constitutes a first step towards being able to systematically ascertain the methodological reality in the initial education of non-university teachers.

The main objective of this work is to describe and analyze the positioning of university professors in the Madrid region towards different methodological trends in the education of primary and secondary teachers. In keeping with this objective, we sought to establish whether teaching within the framework of an undergraduate or masters program influences the professors' answers. We were also interested in establishing whether within these aspects there are statistically significant relationships that should be considered.

PARTICIPANTS

This study was carried out in the years 2011 and 2012 in public universities in Madrid that educate primary and secondary school teachers. We used a non-random sampling in which the subjects were identified through the faculty directories published on the websites of the participating universities. The overall population was 427 professors, of whom 132 agreed to participate voluntarily.

The 132 professors who participated teach at the Autonomous University of Madrid (21 subjects, 15.9%), the University of Alcala (33 subjects, 25%) and in the Complutense University of Madrid (78 subjects, 59.1%). Although these subjects represent 42 departments and 16 colleges in the three participating universities (see Table 1), more than half of the participants (75 subjects, 56.8%) came from the field of education. Of the participating professors, 32 teach in the undergraduate

teachers college (24.2%), 73 in the master's program for educating high school teachers and 27 (20.5%) in both.

Table 1 - Sample distribution according to University Department

	Frequency	Percentage
Science	8	6,0
Education	75	56,8
Philology	8	6,1
Economics/Business	5	3,8
Industrial engineering degree	3	2,3
Bibliometry	3	2,3
Art	1	0,8
Geology	7	5,3
Philosophy and Language	1	0,8
Geography and History	2	1,5
Chemistry	6	4,4
Physics	4	3,0
Sociology and Political Science	2	1,5
Medicine	3	2,3
Philosophy	3	2,3
Psychology	1	0,8
Total	132	100

Source: Data base of the study.
Prepared by the authors

The professional status of the participating faculty was represented by permanent staff (83 subjects, 62.9%) and 49 non-permanent staff (37.1%).

Furthermore, considering the teaching experience of the participants, 62 subjects (47%) have 20 years or more experience, 33 subjects (25%) have 10 to 19 years of teaching experience and 37 subjects (28%) have less than 10 years of teaching experience. Thus, the majority of the participating professors have more than 15 years of experience.

SYSTEM OF CATEGORIES AND THE RESEARCH TOOL

To characterize the different methodological options of the professors of people studying to be elementary and high school teachers, we consider that the activities employed reflect the methodology used in the classroom. They define the didactic interactions, the content being worked on, the concrete implementations, the distribution of time and space, the necessary resources, etc. They establish the framework of classroom life yet they are conceived of differently depending on the educational approach we adopt. For example, in a transmissive approach they are considered to be situations in which the students play the lead role in testing and applying the information transmitted by the teacher (Azcárate, 1999). For many teachers, activities are just special situations that provide hands-on opportunities

that are interesting and motivating to students (Appleton, 2002). In fact, when one considers the distribution of time in certain subject matters, one can still see a differentiation between the hours devoted to theory, when the teacher explains, and those devoted to hands-on activities. However, from the didactic perspectives of a constructivist approach, activities are seen to be an integral part of the methodological process whose purpose is to help students in the construction of knowledge (Nilsson; Loughran, 2012).

The activities must be coherently related to form an articulated whole. Although educators commonly organize time in the classroom as a function of the logic of contents, in a class focus based on the investigation of relevant professional problems, the sequence of activities is determined by the evolution of the ideas of the future teachers. Course contents are considered tools to address the professional issues being studied and to promote the development of the competencies necessary for teaching (Azcárate; Castro, 2006).

Monereo *et al*. (2009), in a study that evaluated teacher's classroom activities, proposed different categories that we have used as guidelines in this study. These are:

a) the activities' degree of authenticity, for example, its realism (In our case its applicability to professional practice) and relevance (considering the students' interests and motivations);
b) the complexity and depth of the contents, for example if the activities only require repetition or application or questioning and if they indicate the social relevance of the discipline;
c) the extent to which autonomy is promoted in the learning process, for example do the students play a role in the process of conducting the activities or in how the activities are related to the evaluation.

To definitively characterize the different methodological options available to professor's at teacher colleges, we selected the following categories: *Content of the activities; Relevance of the activities to students* (their interests, initial knowledge, participation, diversity); *Activity of the professor; Resources; Evaluation of the activity; and Involvement of external elements in the activity.*

Considering these categories, an online questionnaire was produced *ad hoc* using *Google Drive Form*. This questionnaire included a first part with seven elements to gather information about variables that allow describing the sample (university, faculty and department to which they belong; if they currently teach in the undergraduate or master's education program; years of teaching experience; professional status).

The second part had 13 questions to which the professors responded based on their conceptions relative to activities they plan and undertake in the initial education of primary or secondary teachers.

Three possible responses were formulated for each question, categorized as *traditional, constructivist and intermediary*. The *traditional perspective* response refers to a transmission model based on a comprehensive and encyclopedic focus in which great importance is given to the students' acquisition of conceptual knowledge.

The *constructivist perspective* applies to a cognitive model based on a critical and multicultural focus in which teachers emphasize the organization of work methods that allow students to learn autonomously and to continue learning and thereby build their own cognitive structure. The *intermediary perspective* response involves a cognitive model that goes beyond the more traditional conception but does not adopt a constructivist orientation. An open response option was included in case none of these three responses corresponded to the professor's position.

To ensure the validity of the content of the instrument, the research team considered the critical evaluation made by different collaborating experts who assessed the pertinence and clarity of the questions posed in the questionnaire. Once the data had been gathered, its reliability was calculated using Cronbach's alpha index. The result of the calculation was. 894 thus guaranteeing internal consistency.

Two discussion groups were created to complete this study, one of professors in the undergraduate education program and the other by professors in the master's program. The results of both groups have yet to be published. This paper only includes data collected from the questionnaire.

DATA ANALYSIS

The information gathering process was systematic, given that the participants were formally invited by email to answer the questionnaire and later received five reminders of the research objectives on a bimonthly basis.

Once the data was collected, a database was compiled and subjected to a descriptive statistical analyses, a comparison of means (*Student* T tests), and Pearson bivariate correlations using the SPSS 19.0 program.

To classify the faculty responses in terms of methodological trends, a cluster analysis was conducted to validate the descriptive conclusions of the study. An hierarchical conglomerate procedure consisting in the elaboration of a structure or dendrogram using SPSS software was used to create groups or clusters. The squared Euclidean distance was used as a measure of distance between cases, given that it is the most used in this type of analysis, since it speeds up the analysis and eliminates distortions caused by variable measurement differences (Santesmases, 2001). Furthermore, the non-consideration of any pertinent group was deemed to be a defect.

RESULTS

The results of the descriptive analysis have been grouped in table 2 which indicates the majority responses for the 13 items and the percentages corresponding to each perspective.

Table 2 - Response distribution according to methodological perspective

Items	· Majority response	C* %	T %	I %	O %
1. What is the relationship between your classroom activities and the future professional practice of your students?	a. They are activities that combine the theoretical academic content with those related to professional practice.	18,2	6,1	75,7	-
2. How do you take into account students' interests?	c. I introduce activities to stimulate student interest	56,8	6,1	31,8	5,3
3. What intellectual requirements predominate in the activities?	c. Application of information and reasoning.	29,5	6,1	53,8	10,6
4. What are the characteristics of the procedures used in the activities you plan?	b. They are chosen and or planned by the students in coordination with the teacher	49,2	34,7	11,4	4,5
5. To what extent do the activities deal with current social issues related to the course?	a. They generally incorporate social themes relevant to students.	50	8,3	37,9	3,8
6. What evaluation procedures do you use?	b. Exams and activities carried out during the teaching-learning process.	32,6	-	60,6	6,8
7. Do the activities you prepare require the use of ICTs?	c. I occasionally design activities which require the use of ICTs.	37,9	6,8	50	5,3
8. Do you propose activities that involve team work?	b. Most of the activities I propose are designed for team work.	50,8	12,1	31	6,1
9. How do you conduct your work in the classroom?	b. I explain the contents and propose activities for their application.	31,7	4,5	51,5	12,1
10 Do you conduct activities that consider the students' previous knowledge?	b. Yes, because it facilitates the re-formulation of knowledge	80,3	3	11,4	5,3
11. How do students participate in class?	b. I propose varied activities which require the active participation of students	18,9	18,9	52,2	9,8
12. Do you consider student diversity when you design activities?	c. I try to regularly consider this	68,2	5,3	22,7	3,8
13. Do the activities you propose involve other professionals, institutions and /or official organizations unrelated to the university?	c. No, but I intend to do so	18,9	31,1	32,6	17,4

* C: constructivist; T: traditional; I: intermediary; O other.
Source: Data base of the study.
Prepared by the authors.

First, we can highlight that most of the responses are in the intermediary and constructivist perspectives, while the traditional responses are the minority.

Grouping the responses in terms of activities completed and then analyzed in terms of the categories established in the study, we can say that the educators identify mostly with a methodology characterized by:

- *Selection of the activity content* (items 1 and 5). This is an intermediary position that proposes a combination of both academic content and professional practice. The regular or occasional incorporation of social themes is considered to be ideal.
- *Relevance of the activities to students* (items 2, 3,4,8,10,11, and 12). The professors are inclined to consider the interests, previous knowledge and diversity of the students when planning and developing activities. These activities are carried out in teams and require the consensus and active participation of the students. However, they identify with intermediary activities between those of the recognition of the information (traditional perspective) and those featuring questioning and or investigation (constructivist perspective). In other words, activities in which students have both to apply information and use reason.
- *Professor's activity* (item 9). The professors identify with an intermediary position of their activity which includes content transmission and planning student activities.
- *Resource inclusion (*item 7). The use of technological resources remains an area in which professors still require training, given they admit only occasional use of these resources. However, it should be considered that an important percentage of the university professors in the sample are of an advanced age.
- *Activity evaluation* (item 6). An intermediary position is adopted to evaluate the learning process, including exams and activities conducted by students.
- *Involvement of outside elements* (item 13). One of the methodological weak points is the activities' openness to external elements. It is readily recognized that this exposure is lacking but its inclusion in the future is seen favorably. It seems that the *Practicum*[1] is considered sufficient to address this need.

To ascertain if the three sub-samples (professors who teach in the undergraduate education program, the master's program or both) are independent or related, we used the Chi-squared independence test. Therefore, considering where they teach, we found that there are no significant differences in the responses of the three sub-samples and that statistically significant differences only appear in item 6: *the evaluation procedures they say they use.* What stands out in this item is that the traditional option is discarded by all of the respondents. In terms of the constructivist response (74.4%) and the intermediary (48.8%), we find is that it the professors in the master's program who predominate over the other groups (Table 3).

1 Period of realization of teaching activities in a school at the end of the studies to become a school teacher.

Table 3 - Significant results in the chi-squared independence test

Item 6	Responses (methodological trend)	Teach in...			Chi Test	Sig (bil.)
		Undergraduate E.D	Master's	Both		
		%	%	%		
Which evaluation procedures do you use?	Exam (midterm and or final) (traditional)	0	0	0	15,314	0,004
	Exams and activities carried out during the teaching-learning process (Intermediate)	30,0	48,8	21,3		
	Only activities carried out during the teaching-learning process (Constructivist)	14,0	74,4	11,6		
	Other	22,2	22,2	55,6		

Source: Data base from the study.
Prepared by the authors

On the other hand, Table 4 shows that 75% of professors who only teach in the undergraduate education program adopt an intermediary methodological position, similar to those who teach in both programs (63%). Whereas professors in the master's program also opt for an intermediary position, it is clear that an important percentage choose the constructivist response (43.8%).

Table 4 - Percentages of responses by each sub sample to item 6

Item 6	Responses (methodological trend)	Teach in...		
		Undergraduate	Master's	Both
		%	%	%
Which evaluation procedures do you use?	Exam (midterm and or final) (traditional)	0	0	0
	Exams and activities conducted during the teaching-learning process (Intermediary)	75,0	53,4	63,0
	Only activities realized during the teaching-learning process (Constructivist)	18,8	43,8	18,5
	Other	6,3	2,7	18,5
	Total	**100**	**100**	**100**

Source: Data base of the study.
Prepared by the authors.

If we return to the sample as a whole and given that no differences seem to exist among faculty based on the degree program in which they teach, we conducted a conglomerate analysis. The results of the analysis are shown in the dendrogram (Figure 1) which presents the stages of the fusion process and the existing distances

between the merged elements on a 25-point standardized scale. The solution shown presents a structure broken down into two conglomerates. Items 1, 3, 6, 7, 9, 11, and 13 are gathered in conglomerate 1, while conglomerate 2 contains items 2, 4, 5, 8, 10 and 12.

Dendogram that uses an avg. connection (between groups)
Combination of conglomerates of re-scaled distance

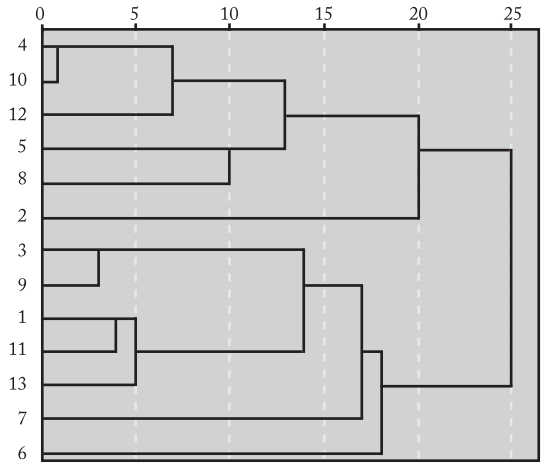

Figure 1 Dendrogram Obtained using an analysis by hierarchical conglomerates
Source: Results from SPSS 19.0 for Mac
Prepared by the authors based on the results of the SPSS program.

The items in conglomerate 1 respond to a methodological perspective we call intermediary which, though far from a traditional model, fails to position itself clearly in the constructivist fold. As such, the activities of the professors whose responses fall into this conglomerate are characterized by:

a) The combination of academic content with professional practice.
b) The professor's explanation and the implementation of applied activities, both reasoned and varied, to ensure student participation.
c) The occasional use of ICT's.
d) Evaluation by means of activities, as well as exams.
e) The lack of clear involvement of elements external to the university (in this case schools) beyond that of the *Practicum*, although the intention to do so in the future was stated.

The items in conglomerate 2 respond to a methodological perspective of a constructivist orientation in which autonomy, ideas, and students' interests play a leading role. The activities are characterized by:

a) Proposing activities that strengthens the students' interests, in social issues and include them regularly.
b) Consider students' previous knowledge to facilitate its reconstruction.
c) Recognize student diversity.
d) Promoting teamwork and autonomy in the selection of the procedures to be used in the activities.

These results are similar to those found by Jimenez and Correa (2002) who issued a questionnaire to 119 professors from different departments at the Universidad de la Laguna to identify the implicit theories used by the faculty. Here too the traditional perspective was the least represented, whereas the active and constructivist the most. The authors warn that the professors make their own partial syntheses of the cultural theories concerning teaching and that the constructivist theory was thus articulated around the concept of autonomy, while the traditional was concerned with the presentation of content. In our case, we saw how one of the conglomerates representative of the constructivist option also focused on one of the most genuine themes of this trend: working with the ideas, experiences and interests of students.

Meanwhile, the Gargallo López (2008) study, involving 327 professors from 13 different schools in the Valencian university system, and which also used a cluster analysis of the data obtained from a questionnaire, obtained four conglomerates: one centered more on teaching and the professor (74 professors), another on learning and students (69 professors) and two intermediate clusters: one closer to teaching (96 professors) and the other closer to learning (88 professors).

CONCLUSIONS

First of all, it can be highlighted that thanks to the participation of 132 educators from a population of 427 in the public universities of Madrid, we have been able to describe and analyze with a certain degree of representativeness how these professionals position themselves in relation to the different proposed methodological perspectives. Furthermore, the fact that 30.9% of the faculty responsible for the education of future primary and secondary teachers agreed to participate, shows the great interest these educators have in analyzing and reflecting on their professional practices. Nevertheless, it would be interesting to replicate this analysis at other universities and contrast the results of our study with those of all university professors in Spain. This would allow contrasting the existence of common methodological trends in the training of future teachers.

We agree with Jimenez Llanos and Correa Piñero (2002) that the two beliefs concerning teaching which were identified by different authors (De la Cruz *et al*., 2006; Doyle, 1997; Gargallo López, 2008; Meirink *et al.*, 2009; Tatto, 1998) are overly simplistic, since they do not include all of the possibilities for the thinking of the professors. Nonetheless, based on our results, we can definitively conclude that in the realm of initial teacher education, the traditional trend is barely representative.

The teachers in our sample are divided, almost equally, between an intermediary perspective and a constructivist orientation.

The *intermediary* perspective is observed in 7 of the possible 13 items. The elements chosen by the educators indicate a procedural mode in their teaching characterized by the combination of theoretical approaches and their application to professional practices. To execute this perspective, the educators explain the contents and then present related activities. Moreover, these educators only use ICT's occasionally and their evaluations are focused on exams and the evaluation of activities conducted during the teaching-learning process.

As regards the constructivist perspective, we have found that the faculty responses fitting this perspective appear mostly in six of the thirteen items in the questionnaire. We can conclude that, in our sample, this trend is characterized by approaches that consider the fact that students must be given the lead role in activities and that they must consequently be given the opportunity to participate through team work in their planning. As such, these educators indicate that attention must be paid to the students' previous ideas, interests and diversity.

Nevertheless, it is necessary to contrast the positions taken in this questionnaire and those in the discussion groups, with class plans and that found in the observation of teaching practice within teacher education as conducted in the study by Solís *et al.* (2013). Most faculty members were found to practice methodological models different than their theoretical declarations, practical plans or the reflections on their practice.

Moreover, we must consider that the content of the education provided by the professors can influence their methodological positions. For instance, the results of the De la Cruz *et al.* (2006) study, involving 45 educators of secondary school teachers, differentiate between those professors who were in charge of teaching specific didactics, in whose case an orientation focused on the transmission of content predominated, and those who were responsible for psychopedagogic training for whom the facilitation of learning predominated.

All of these studies show the need to improve the didactic training of university faculty, while considering what González Sanmamed and Raposo Rivas (2008, p. 304) affirmed:

> "The education provided is mostly of an informative character with a vertical transmission, which aims to facilitate adaptation to the most superficial and extreme changes. It ignores the possibility to revise and re-orient the conceptions and practices developed in schools and university classrooms and, above all, the possibility to promote the learning and professional development of the university teacher."

It is therefore necessary that professors in teacher's colleges contrast their own viewpoints with alternative practices and not just with theoretical information. We must not lose sight of the fact that the direct practical reference points of the university professors are also based on their own experience as university students. This is the main educational practice that they know and on which they base

themselves, evn if unconsciously, to plan and conduct their own teaching. Professors at teacher colleges also need to experiment with their own new ideas and reflect upon that experimentation in order to consolidate didactic change. These steps are viable and make sense in the context of teacher training teams.

We cannot ignore Sáez' (2000, p. 43) warning as a conclusion to his study on student opinions of teaching methodology: "methodological change should be conducted in optimal working conditions which is currently difficult because of the massive size of university classes." This issue should be specified with regards to certain universities, classes and departments.

Finally, we cannot overlook the fact that in the report drafted by the Commission of Experts for the Reform of the Spanish University System (España, 2013) no reference is made to the necessary methodological renovation of university teaching practices. This leads us to the conclusion that a good researcher is, by definition, a good teacher. Being a good researcher is a necessary - but for all intents and purposes - insufficient condition for being a university professor and particularly in the field of initial teacher education.

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