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Satisfaction of Health Science teachers with the convergence process of the European Higher Education Area

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European Higher Education Area;
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Abstract The European Higher Education Area (EHEA) has implied a major transformation of university studies in European countries. The aim of this study was to assess the satisfaction of university teachers in the area of Health Sciences with the convergence process to determine positive and negative aspects in their practices. The sample was composed of 1,361 teachers of Spanish public universities. They all participated in an ad hoc survey that included questions pertaining to the following issues: a) personal and professional information, b) general and institutional aspects, c) aspects related to teaching, research, and administrative work, d) methodology and the teaching-learning process, e) assessment of students, f) training of teachers, and g) coordination, organization, and resources at the school. Results reveal that teachers are not totally satisfied with the way the EHEA is being established. In conclusion, certain changes would be necessary to achieve real convergence between countries.

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PALABRAS CLAVE

Espacio Europeo de Educación Superior;
Profesorado;
Ciencias de la Salud;
Docencia;
Estudio descriptivo mediante encuesta

Resumen El Espacio Europeo de Educación Superior (EEES) ha supuesto una profunda transformación de los estudios universitarios en los países miembros. Con este estudio se pretende conocer la satisfacción del profesorado universitario de la rama de Ciencias de la Salud sobre el proceso de convergencia, para comprobar los aspectos positivos y negativos en la práctica del profesorado. La muestra está compuesta por 1.361 profesores pertenecientes a universidades públicas españolas. Todos ellos participaron en la realización de una encuesta, elaborada ad hoc, que consta de preguntas relacionadas con: a) información personal y profesional, b) aspectos generales e institucionales, c) aspectos relacionados con la docencia, investigación y gestión, d) metodología y proceso de enseñanza-aprendizaje, e) evaluación del alumnado, f) formación, y g) coordinación, organización y recursos en el centro. Los resultados ponen de manifiesto que el profesorado no está totalmente satisfecho con la forma en la que se está implantando el EEES. Se concluye que serían necesarios ciertos cambios para que se llegue a una convergencia real entre países.

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The European Higher Education Area (EHEA) was created following the Bologna Declaration (1999) with the aim of building a knowledge-based economy and achieving greater competitiveness. An example of the current context of competitiveness is the growing interest in developing tools to produce international rankings of universities (e.g., Bengoetxea & Buela-Casal, 2013) and even rankings of academic and research professionals (e.g., Buela-Casal, Olivas-Ávila, Musi-Lechuga, & Zych, 2011). With the creation of the EHEA, the goal was to adopt comparable systems, create a two-cycle system, set up a new credit system known as the European Credit Transfer System (ECTS), promote mobility, and ensure quality education. The concept of lifelong learning and the idea of using Information and Communication Technologies (ICTs) to achieve greater competitiveness first appeared in the Prague Declaration (2001). The aim was to achieve quality not only in education but also in research. As a result, a strategy aimed at creating a European Research Area (ERA) was presented at the European Council of Lisbon (2000). The Berlin Declaration (2003) established the link between the EHEA and the ERA and highlighted the role of European quality assurance agencies.

The Bergen Declaration (2005) underlined the need to develop well-structured and time-bound doctoral programs. The idea of improving the status and professional prospects of doctoral students and the funding available to researchers originated in the London Declaration (2007). As a result, several studies have analyzed aspects related to this stage of education (e.g., Bermúdez et al., 2011; Buela-Casal, Bermúdez, Sierra, Ramiro, & Castro, 2011; Guillén-Riquelme, Guglielmi, Ramiro, Castro, & Buela-Casal, 2010; Olivas-Ávila & Musi-Lechuga, 2012). In the Leuven Declaration (2009), special attention was given to new approaches in the teaching-learning process. Finally, the Budapest-Vienna Declaration (2010) led to the consolidation of the EHEA, although with differences between countries in its level of implementation, as stated in the declaration. This has also been confirmed in a number of studies (Ariza, Bermúdez, Quevedo-Blasco, & Buela-Casal, 2012; Ariza, Quevedo-Blasco, Bermúdez, & Buela-Casal, 2012, 2013; European University Association [EUA], 2010).

To consolidate the EHEA, the Tuning Project was launched with the aim of finding common reference points between countries without developing a European curriculum. The objectives of this project include ensuring convergence in subject areas, learning outcomes, and generic competences (González & Wagenaar, 2003). A new higher education paradigm has originated as a consequence of European-level transformations (De Miguel, 2006). In this new paradigm, teaching is student-centered and students are the main players in their own education (De Juanas & Beltrán, 2012). This also implies a change in the role of teachers, who have become mediators in the teaching-learning process rather than just transmitters of knowledge.

The introduction of the EHEA has implied changes in higher education at all levels. It is therefore necessary to learn about the experience of teachers, who are one of the main players in this process. It is key to assess their degree of satisfaction regarding various aspects of the EHEA, given that the study by Latorre and Blanco (2008) revealed that

Health Science teachers had certain needs related to their preparation for the EHEA. In that study, teachers made some suggestions to enable a good implementation of the process (e.g., providing the necessary means to adopt the ECTS and better structural conditions). Teachers tend to be somewhat reluctant to change (Monereo, 2010) and according to Fernández, Carballo, and Galán (2010), negative attitudes toward the EHEA among teachers may be due to lack of knowledge and training on the issue. For this reason, the purpose of the present study was to assess the degree of satisfaction of Health Science teachers with the EHEA. Our aim was to learn about various aspects regarding teachers, such as their views and attitudes about the process, how the change has influenced their teaching work, and identify possible needs that prevent them from performing their tasks well.

Method

Participants

The sample was composed of 1,361 Health Science teachers of Spanish public universities.

Materials

The following materials were used in the research:

- *Ad hoc* Survey on the “Satisfaction of Spanish University Teachers with the Introduction of the EHEA”. The survey included 65 mixed questions divided into seven blocks: a) personal and professional information, b) general and institutional aspects, c) aspects related to teaching, research, and administrative work, d) methodology and the teaching-learning process, e) assessment of students, f) training of teachers, and g) coordination, organization, and resources at the school. It also included a section for additional comments and suggestions.
- Database with the e-mail addresses of Health Science teachers.
- Computer application for sending, applying, and compiling the survey results.

Design and procedure

The research was a transversal descriptive survey-based study of populations using probabilistic samples. The article was drafted following the recommendations made by Hartley (2012).

First, we prepared the questions of the survey. Next, we selected the sample among Health Science teachers with a confidence level of 97% and an estimation error of 3%. After that, teachers were sent an e-mail inviting them to participate in the study. Participants were provided a link through which they could access the web-based application where the survey was located. All the responses were automatically recorded in this application. In addition, participants had a unique code that granted them personalized access. This prevented the same participant from answering more than once. Furthermore, anonymity of respondents and data protection were ensured and respected.

Table 1 Percentage of participation of Spanish university Health Science teachers according to their university.

University	%
Barcelona	11.46
Autónoma de Barcelona	6.76
Granada	6.32
Valencia	6.25
Zaragoza	5.95
Santiago de Compostela	5.22
Oviedo	3.67
Murcia	3.6
Sevilla	3.6
Alcalá	3.31
Miguel Hernández de Elche	3.31

Note. Universities with the same percentage of teacher participation are listed in alphabetical order. Only universities with participation greater than 3.3% are shown.

Results

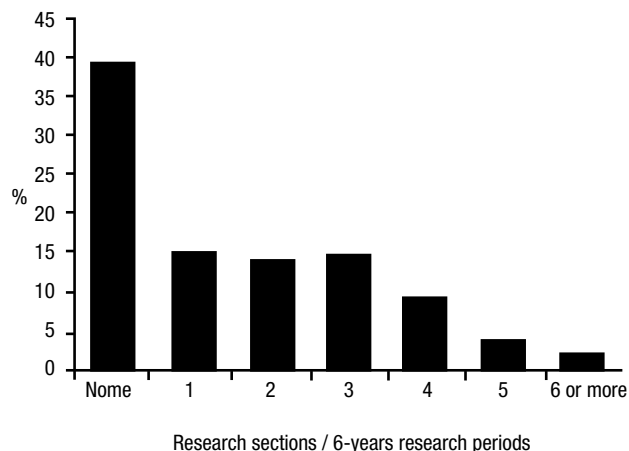
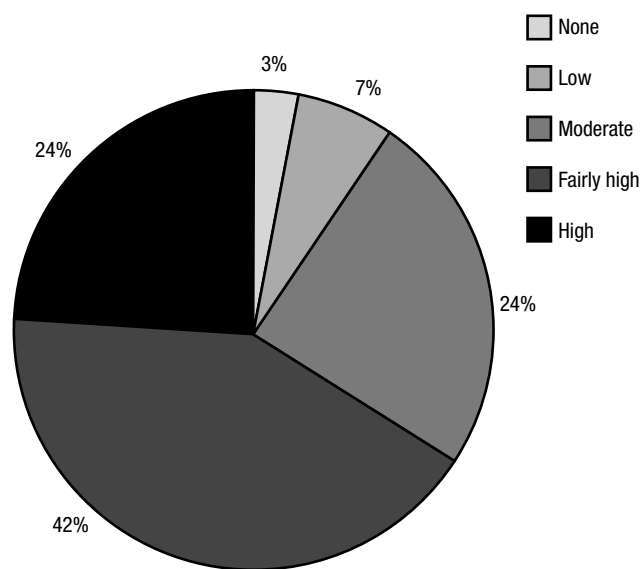
A total of 1,361 Health Science teachers of Spanish public universities participated in this study. Mean age of participants was 49.89 years ($SD = 9.21$); in the sample, 50.1% of participants were female and 49.9% were male. The institution with the highest participation of teachers in the survey was the *Universidad de Barcelona* (11.46%) (see Table 1). As regards professional category, 61.79% were state civil servants. Of these, most teachers were *Profesores Titulares de Universidad*, that is, state civil servants having passed a public competition (39.97%). Mean years of teaching experience was 18.87 ($SD = 10.89$) and 39.46% of teachers had not completed any recognized six-year periods of research activities, known as *tramos de investigación* (see Figure 1).

General and institutional aspects

Among participants, 47.1% believe that the adaptation process to the EHEA could be improved regarding structural, methodological, and organizational aspects, while 41.22% consider that it is not being implemented well. In addition, 51.87% doubt that these changes will be positive for Spanish universities, whereas 26.89% argue that they will be beneficial. Furthermore, 42% admit that they have had to make considerable efforts to plan their subject to adapt it to the EHEA (see Figure 2).

In the sample, 54.52% of respondents report that it was easy to adapt to the new system and 20.79% were satisfied with the system in place prior to the establishment of the EHEA; 33.28% state that they would like return to the previous system; 33.87% believe that the quality of higher education will improve moderately and become more effective and efficient. Teachers' degree of satisfaction with certain changes brought about by the EHEA is shown on Table 2.

As regards the most appropriate duration of university studies, 41.15% consider that it should be four years for a Bachelor's Degree (*Grado*) and 40.85% believe that an

**Figure 1** Percentage of Spanish university Health Science teachers according to the recognized six-year periods of research activities they have completed.**Figure 2** Percentage of Spanish university Health Science teachers according to the level of effort they have devoted to adapting their planning to the European Higher Education Area.

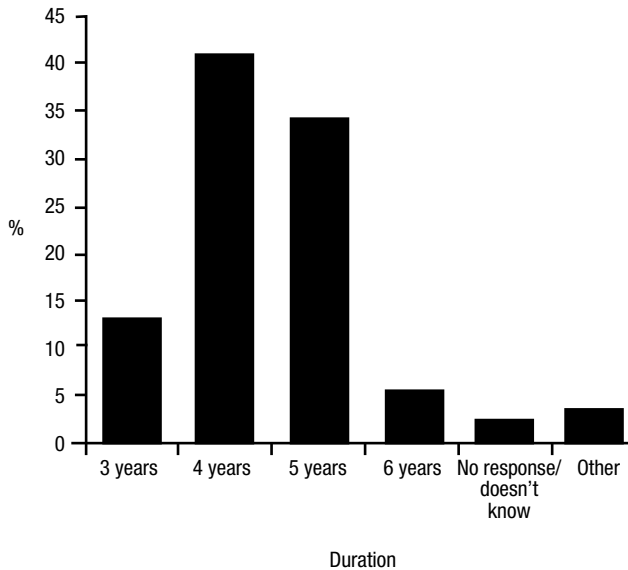
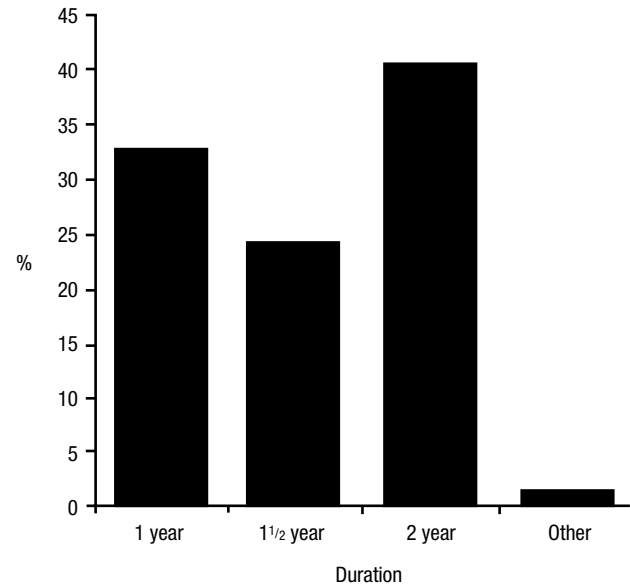
Official Master's Degree (*Máster Universitario Oficial*) should be spread over two years, that is, 120 ECTS credits. Among respondents, 3.53% and 1.47% believe that the duration should depend on the contents of the Bachelor's Degree or the Master's Degree, respectively (see Figures 3 and 4).

According to the survey, 42.98% of teachers consider that they received a fair amount of institutional information to adapt their subject to the EHEA, 29.24% report receiving little information, 16.02% report receiving no information, and 10.21% report receiving a lot of information. Moreover, 55.03% report being aware of the existence of a cooperation plan to facilitate teachers' adaptation in their school and 25.5% do not know whether such a plan exists.

Table 2 Percentage of Spanish university Health Science teachers according to their degree of satisfaction with aspects related to the European Higher Education Area.

	Degree structure	ECTS	Qualifications system	EDS	Accreditation of teaching
None	11.54	8.96	8.6	6.39	9.48
Low	21.09	19.54	18.37	16.16	18.22
Moderate	38.43	35.19	35.56	35.27	36.15
Fairly high	24.61	30.05	31.01	29.68	28.07
High	4.34	6.25	6.47	12.49	8.08

Note. ECTS = European Credit Transfer System; EDS = European Diploma Supplement.

**Figure 3** Percentage of Spanish university Health Science teachers according to their opinion on the most appropriate duration for a Bachelor's Degree.**Figure 4** Percentage of Spanish university Health Science teachers according to their opinion on the most appropriate duration for an Official Master's Degree.

Teaching, research, and administrative work

Among the tasks attributed to teachers, 73.25% give high priority to teaching, 42.91% give high priority to research, and 39.02% give moderate priority to administrative work (see Figure 5).

Among respondents, 41.17% believe that their planning corresponds quite well to the requirements of the EHEA. Teachers also consider that since the launch of the EHEA they need more time to prepare their classes than they did before (47.47%).

As regards the tasks of teachers, Table 3 shows the level of effort that it requires for teachers to act as mediators, plan and teach their theoretical and practical classes, conduct seminars, guide, supervise, tutor, and assess students, and coordinate their teaching with other teachers.

In the sample, 68.99% of teachers show a positive attitude towards the ERA and 49.52% would like to be able to devote more time to research. As for the way doctoral studies should be structured, 41.15% are in favor of the new

postgraduate studies (with a Master's period and a Doctoral period), whereas 23% preferred the traditional doctorate. These based on compilations of articles are considered more appropriate (47.61%) than those with a classic format (40.85%). Based on the responses to the survey, 54.52% of teachers believe that it is possible to prepare a doctoral thesis in three years depending on the area. More specifically, 27.41% consider that it is feasible to complete it in that timeframe in the area of Health Sciences; 55.25% consider that the quality of theses will not improve with the new organization of doctoral studies and 30.12% are indifferent to the creation of Doctoral Schools. As regards administrative work, 45.85% of respondents would like to devote less time to it.

Methodology and the teaching-learning process

Among respondents, 70.02% agree with the teaching-learning methodology proposed by the EHEA. Yet, a lower percentage of respondents considers that this method will improve the quality of learning (47.69%) and 31.67% of

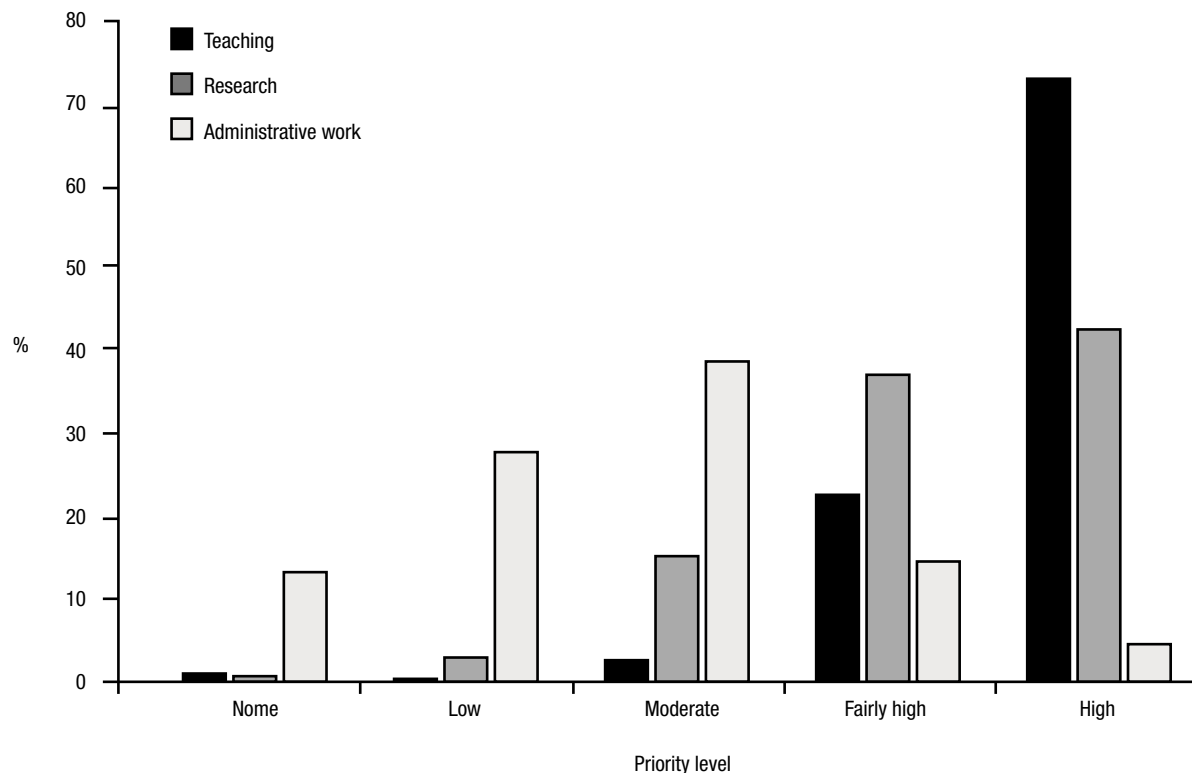


Figure 5 Percentage of Spanish university Health Science teachers according to the priority level attributed to university tasks.

Table 3 Percentage of Spanish university Health Science teachers according to the level of effort it requires to perform their tasks.

	<i>Level of effort</i>				
	None	Low	Moderate	Fairly high	Very high
Acting as a mediator	6.91	14.33	30.86	35.64	12.27
Theoretical classes	7.79	18.88	35.42	26.89	11.02
Practical classes	5.14	13.15	26.08	33.95	21.68
Seminars	6.17	13.3	29.02	34.31	17.19
Supervising students	6.02	12.64	27.85	30.49	23
Tutoring	7.27	15.8	32.26	26.67	18
Assessing students	4.41	9.85	27.63	31.96	26.16
Coordinating teaching	4.56	11.09	30.27	31.37	22.7

respondents intend to continue teaching their classes with a predominance of lectures. As regards the acquisition of skills by students, another aspect that emanated from the establishment of the EHEA, 44.6% report developing them quite a lot among their students and 57.53% doubt that this will be guaranteed with the new postgraduate studies. In addition, 71.93% of respondents report using ICTs regularly in their teaching work. Another aim of the EHEA is to achieve autonomous learning among students. Yet, according to teachers, the level of motivation of students to learn on their own is low or medium (35.78% and 35.56%, respectively); moreover, 57.53% of respondents consider that students seldom attend tutoring sessions.

Assessment of students

The survey revealed that 55.18% of respondents find it easy to assess the skills that their students have really acquired, whereas 41.59% find it difficult. Figure 6 shows teachers' type of assessment of students in their theoretical and practical classes. Those who prefer another option usually combine both types of assessments. In the sample, 36.15% of teachers consider that there is not much difference between the academic performance of students who took a *diplomatura/licenciatura* (undergraduate degrees in the previous system) and that of those who study for a *grado* (Bachelors' Degree), whereas 25.13% believe that the

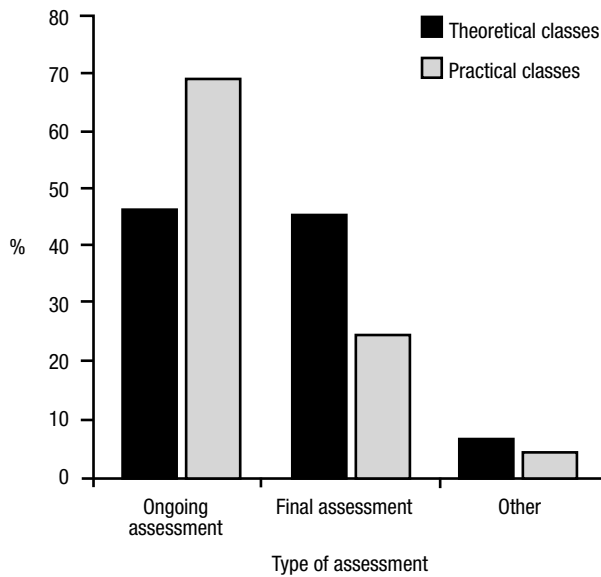


Figure 6 Percentage of Spanish university Health Science teachers according to type of assessment of students.

academic performance of students was better before the EHEA was introduced.

Training of teachers

Among respondents, 51.07% consider that the training they received enables them to teach according to the principles of the EHEA; 43.35% believe this could be improved and

that better training would be necessary; 68.99% argue that their university provides the necessary means to improve their training (e.g., refresher or advanced training courses, materials). One of the objectives of the EHEA is to promote lifelong learning and only 2.72% of respondents report not being motivated by the idea of updating their knowledge for professional improvement. Another objective of the EHEA is to promote teacher mobility between European countries. The survey indicates that 40.63% of teachers are considering a stay abroad, 37.18% would not like to spend time abroad and 20.06% have never considered it.

Coordination, organization, and resources

As regards the level of coordination between teachers of the same department, 49.82% believe that there is little coordination and 46.14% consider that there is a lot, with no middle ground. As for the organization of the schools, one of the challenges of the EHEA is to reduce the student-teacher ratio, but 68.99% of respondents report that this is not happening in their school; 25.42% argue that they have fewer than 65 students on average. Figure 7 shows the perception of teachers on the resources available to them at their school to satisfy the needs derived from the EHEA.

Additional comments and suggestions of teachers

Among respondents, 48.64% wished to express their personal opinion in greater detail and make suggestions for improvement. The main problems that prevent a proper consolidation of the EHEA according to teachers and possible solutions proposed are shown on Table 4.

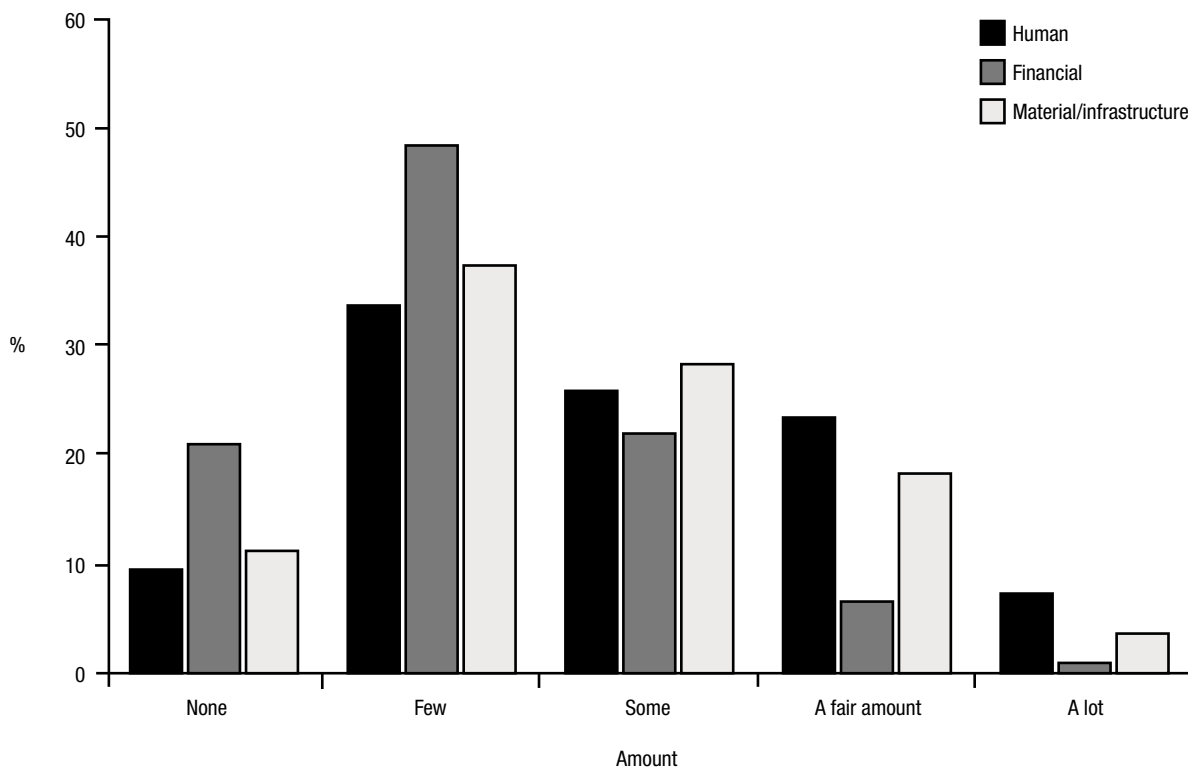


Figure 7 Percentage of Spanish university Health Science teachers according to the amount of resources available at their school.

Table 4 Main problems identified by teachers and possible solutions to enable a good consolidation of the European Higher Education Area (EHEA).*Main problems*

- There are mobility and accreditation difficulties between countries due to the establishment of the 4+1 system in Spain vs. the 3+2 system in most of the EHEA
- The quality of Bachelor's Degrees is not being properly controlled
- Differences between the curricula of universities hamper the recognition of studies
- New doctoral programs imply a greater administrative burden
- Teachers are not given enough information on the competence-based teaching process and how to achieve it
- There is a lack of coordination between teachers of subjects in the same curriculum
- Theory and practice are separated in certain areas
- Dedication to teaching and hospital/health care activities are not recognized
- It is difficult to reconcile teaching, research, administrative, and health care-related work
- There are too few university hospitals where students can practice under the supervision of teachers
- Teachers with many years of experience are reluctant to use ICTs.
- It is difficult to conduct quality research without funding
- It is difficult to reconcile personal life and work
- Students and teachers are reluctant to adapt to new changes
- There are too many students per class
- Teachers do not have enough time to devote to individual students
- Students who enter university have little preparation, dedication, and motivation
- Ongoing assessment allow students to pass with weak knowledge and does not guarantee learning

Possible solutions

- Establish a common curriculum to all European universities avoiding local specificities and facilitating mobility
- Create a national commission of experts to propose and improve similar curricula among universities, with small differences regarding optional subjects
- Truly reduce the student-teacher ratio and make changes in the infrastructure
- Improve the training of teachers in new teaching techniques
- Modify the teaching system in secondary education and improve the selection of students who access university
- Increase the number of student grants and the amount of funding granted
- Improve the organization of clinical internships in hospitals
- Establish a system similar to that of English-speaking countries to allow teachers to reconcile teaching and research work; teachers are able to hire doctoral students who teach their practical classes depending on the research funding they receive and only have to teach theoretical classes. This improves the level of the subject and allows teachers to concentrate on research
- Acknowledge health care work in the accreditation of teachers, since professional experience contributes to improving the quality of teaching in the subject
- Provide the necessary human resources, funding, material, equipment, laboratories, and infrastructure
- Establish an effective teacher assessment system to grant the best-rated teachers advantages in their teaching load
- Harmonize the salary of teachers among countries of the EHEA
- Set up a teaching committee in each school in charge of supervising the work of teachers and students

Note. ICTs = Information and Communication Technologies.

Discussion

This study provides insight about the attitudes of Health Science teachers regarding the EHEA and how this process has influenced their professional work. Teachers are not fully satisfied with the way the EHEA has been introduced in Spain and consider that certain aspects should be improved. In addition to all the planning efforts made by teachers, most of them need more time to prepare their classes since the EHEA was established, as highlighted by Bozu and Canto (2009).

Among their tasks, teachers consider that teaching is the most important, followed to a lesser extent by research. However, they devote a lot of time to teaching-related

tasks that are not acknowledged, such as organizing theoretical and practical classes and seminars, tutoring and assessing students, and so on. This is related to the reduction in the student-teacher ratio, one of the challenges of the EHEA for which no steps have been taken yet. In fact, almost 70% of respondents report that this is not being implemented in their school and affects their teaching. Administrative issues are given less priority by respondents and almost half of them would prefer to devote less time to such tasks. The reason may be that administrative work is considered less important and takes time that teachers would need for their teaching, research and, in some cases, hospital care. In addition, practically half of teachers would like to be able to devote more time to research.

Although almost 55% of respondents found it easy to adapt to the new system, about 33% would return to the previous system and believe that quality will only improve moderately. Teachers show a moderate satisfaction with the new degree structure, the credit and qualifications system, the European Diploma Supplement (EDS), and the accreditation of studies. However, the EUA (2010) argues that the ECTS has been calculated differently in each country and that the implementation of the EDS is being limited to the administrative context rather than the academic context. Most teachers consider that Bachelor's Degrees should take four years instead of three, the period established by most countries in the EHEA. However, they consider that the duration of an Official Master's Degree should be longer (i.e., two academic years, as in the rest of the EHEA). This is one of the problems detected by the EUA (2010), which argues that differences between countries in the duration of studies may represent an obstacle to mobility and recognition of diplomas. One of the aims of the EHEA was to promote the development of common curricula among countries, but this is difficult when there are several curricula for the same degree in the universities of the same country, as happens in Spain. This prevents real convergence and hampers the recognition of subjects and diplomas.

By contrast, the EHEA objectives of promoting lifelong learning and teacher mobility are being accepted by teachers, although to a lesser extent in the case of mobility, since results are quite evenly balanced between teachers who would like to spend time abroad and those who would not. According to Arís and Comas (2011), lifelong learning is considerably related to the recognition of diplomas and mobility. However, as mentioned earlier, there may be difficulties in obtaining such recognition and greater State funding would be necessary for teachers to spend time abroad. Spain is one of the countries of the EU that invests the least in R+D, according to the Organisation for Economic Cooperation and Development [OECD] (2012).

The new organization of doctoral studies is highly rated and respondents show a preference for the new thesis format based on the compilation of articles rather than the classic format, but some studies have obtained opposite results (e.g., Quevedo-Blasco & Buela-Casal, 2013). Although most teachers believe that it is possible to complete the thesis in three years depending on the area, only about 27% consider that it would be feasible in Health Sciences. In this case, it is worth considering the data of the Spanish General Directorate for University Policy (European University Association [EUA], 2009), which indicate that it takes 5.9 years on average to obtain a doctorate in medical sciences in Spain. Over half of respondents consider that the quality of theses will not necessarily improve with the new doctoral studies, although Buela-Casal, Guillén-Riquelme, Guglielmi, Quevedo-Blasco, and Ramiro (2011) observed that Health Sciences is one of the areas with the best performance in this stage of education. In general terms, due to the relevance of current academic publications, the number of bibliometric studies of scientific journals (e.g., Zych & Quevedo-Blasco, 2011) has increased in the last few years.

Although most teachers agree with the new teaching methodology, about 30% still intends to continue to teach

with a predominance of lectures, which prevents the autonomous learning of students promoted by the EHEA. This may be related to the results of the study conducted by Ferrer i Julià (2004), which confirmed that teachers who use traditional methodology are more reluctant to the process implied by the EHEA.

Nevertheless, most respondents consider that the level of motivation of their students to learn on their own is medium/low and that they seldom attend tutoring sessions. This may be due to the fact that, in educational stages prior to the university, students have not been prepared for this type of learning and have been expected to have a more passive role. In order to be successful, this methodology requires the involvement of both teachers and students.

Teachers believe that they develop students' competencies in their subject quite a lot, although about 42% find it difficult to assess whether students have acquired them or not. Results on the type of assessment conducted are quite similar in theoretical classes. In practical classes, most teachers prefer ongoing assessment. Yet, despite the many advantages of ongoing assessment (Delgado & Oliver, 2006), part of respondents consider, at least in the area of Health Sciences, that students are learning less than they did before. As for academic performance, teachers do not see any major differences between students in the previous system and those in the new system.

Part of respondents did not receive institutional information or received little information about the EHEA. This means that the information provided on the process was insufficient. In addition, one in four teachers in this area does not know whether there is a cooperation plan to facilitate teachers' adaptation in their school. Interestingly, about 43% of teachers admit that they need to improve their training to teach in the EHEA. This is confirmed by the study conducted by Rodríguez (2011), who argued that teachers have not been prepared for competence-based teaching. Yet, a positive finding is that close to 70% of respondents are aware of the possibilities provided by their university to improve their training. As regards coordination among teachers, De Miguel (2006) considers that it is one of the elements that improves teaching, along with methodological knowledge and better teacher training. Nonetheless, it is still a weak point, since almost half of respondents report little coordination with the rest of teachers.

Respondents consider that few human, financial and material/infrastructure resources are available to them. It is interesting to note that many respondents note in their open questions that it is unlikely that the principles of the EHEA and the ERA will become consolidated without greater investment of the State in education and research. In fact, it has been proven that funding and quality are closely related to one another (Buela-Casal et al., 2013).

It should be clarified that the controversy over recent legislative changes in Spain may have influenced teachers' opinion on the EHEA. Yet, according to the study by Quevedo-Blasco, Ariza, Bermúdez, and Buela-Casal (2013), about 41% of Health Science teachers agree with the new measures establishing that teachers' research activity will be important in determining their teaching load. In addition, results may also be influenced by the differences in the

participation of universities and the fact that private institutions were not included in the study, given that the process has been established differently in each of them. These results also refer to a specific branch of knowledge, so respondents' opinions may differ from those of teachers in other areas.

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