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RESEARCH ARTICLE

Development of Cross-sectional Competences at Universidad de Murcia: Strengths, Weaknesses, and Proposals for Improvement

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Abstract

This article aims to analyze and reflect on: a) the role that competencies, as a defining component of work activity and occupation in the coming decades, have in a hyper-technological and globalized society; b) the incorporation that is being given of Competency-Based Training in Higher Education in Spain (both in Vocational Training and in University Studies) and c) the conditioning factors and challenges that Higher Education faces in the immediate future in relation to competencies. The technological factor -from robotization to artificial intelligence- together with demographic, social and economic factors confirm the importance of transversal competences in the professions of the future. Faced with this demand, it is noted that Higher Education is currently in full process of adopting competencies as the axis of training. Although the study program is already defined on the basis of competences, it is still necessary to make progress in the methodological change (through active methodologies) and of evaluation (considering the learning outcomes) so that the insertion of skills in Vocational Training and at the university is complete.

Keywords:
Higher Education, Competences, Transversal competences, Active Methodologies, Learning Outcomes

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Necesidades a Futuro y Situación Actual de las Competencias en Educación Superior en el Contexto de España

Resumen

Este artículo tiene como objetivo analizar y reflexionar sobre: a) el papel que las competencias -como componente definitorio de la actividad laboral y la ocupación en las próximas décadas- tienen en una sociedad hipertecnológica y globalizada; b) la incorporación que se está dando en España de la Formación Basada en Competencias en la Educación Superior (tanto en la Formación Profesional como en los estudios universitarios) y c) los condicionantes y retos que tiene ante sí la Educación Superior en el futuro más inmediato en relación a las competencias.

El factor tecnológico -desde la robotización a la inteligencia artificial- junto con factores demográficos, sociales y económicos confirman la importancia de las competencias transversales en las profesiones del futuro. Frente a esta demanda se constata que en la actualidad la Educación Superior se encuentra en pleno proceso de adopción de las competencias como eje de la formación. Mientras que los currículos ya están definidos en base a competencias se necesita aún avanzar en el cambio metodológico (a través de metodologías activas) y de evaluación (considerando los resultados de aprendizaje) para que la inserción de las competencias en la Formación Profesional y en la universidad sea completa.

Palabras clave:

Educación Superior, Competencias, Competencias transversales, Metodologías activas, Resultados de Aprendizaje

Necessidades a futuro e situação atual das competências no ensino superior no contexto da Espanha

Resumo

Este artigo tem como objetivo analisar e refletir sobre: (a) o papel que as competências -como componente decisivo da atividade do trabalho e a ocupação nas próximas décadas têm numa sociedade hipertecnológica e globalizada; (b) a incorporação que está acontecendo na Espanha da Formação Baseada em Competências no Ensino Superior (tanto na Formação Profissional quanto nos estudos universitários) e (c) os condicionantes e desafios que têm diante de si o Ensino Superior no futuro mais imediato com relação às competências. O fator tecnológico -desde a robotização até a inteligência artificial- junto com fatores demográficos, sociais e econômicos confirmam a importância das competências transversais nas profissões do futuro. Diante desta demanda constata-se que na atualidade o Ensino Superior encontra-se em pleno processo de adoção das competências como eixo da formação. Enquanto os (currículos já estão definidos com base nas competências ainda é preciso avançar na mudança metodológica (através de metodologias ativas) e de avaliação (considerando os resultados de aprendizagem) para que a inserção das competências na Formação Profissional e na universidade seja completa.

Palavras-chaves:

Ensino Superior, Competências, Competências transversais, Metodologias ativas, Resultados de Aprendizagem.

Introduction

The development of transversal competences in higher education is an important area of discussion and concern for international agencies and organizations (CEDEFOP, 2014; OECD, 2016; ILO, 2015, UNESCO, 2016). They point out the importance of deepening the training of future graduates and the need to improve the adjustment between their skills and the requirements of a labor market that requires a greater level of flexibility and capacity to adapt knowledge to the specific context of work and the needs and problems that it poses.

This interest in the development of transversal competences in the university field can be seen in a multitude of studies (Aguado, González, Antú-

nez & de Dios, 2017; Jato, Cajide, Muñoz & García, 2016; Mareque & De Prada, 2018; Martínez Clares & González Morga, 2018a; Robledo, Fidalgo, Arias & Álvarez, 2015; Rodríguez, Ibarra & Cubero, 2018; Solanes, Núñez & Rodríguez, 2008) that approach the development and relevance of transversal competencies in the university context from different perspectives.

Knowledge has become a key factor in the productive, economic, social, and work development. Therefore, the way it is managed has a direct impact in all fields and vital areas. Within this context, information and communication technologies (ICT) have created a grounding that forces us to focus on how information and knowledge are managed, transmitted, and disseminated, being society the whole responsible for these processes, but especially Higher Education that, as Hargreaves and Fullan (2014) point out, is the reference institution for the progress of what they call professional capital in our society. As these authors mention, this professional capital is not solely composed by the own knowledge of the professional field, but also by what it is called social and decision-making capital. From this perspective, Higher Education should go beyond passing theoretical-practical contents within the professional discipline and include the transmission of any other type of knowledge that is part of said capital.

In this same sense there is a general agreement on the need to deepen the development of transversal competences by university students, given that this development is key to achieving the necessary coherence between the employers' current demands and the University of the 21st century training graduates (Mareque and De Prada, 2018; ILO, 2015; Teichler, 2015).

For this reason, during the last decade, a structural transformation in teaching methodologies at the university towards an approach more focused in student learning has been proposed: active methodologies, project learning, problem solving or student tutoring as a way to obtain a personalization of learning, that allow the development of competences in future graduates. But, as mentioned by Ursin, (2017), changes in media and regulations take time to reach the classroom. Despite a broad regulatory and social consensus regarding the need to modify in depth how teaching is carried out and, above all, how and what is learned in university classrooms, there is still an important way to go in this regard.

The consensus around the importance of the introduction to competences in Higher Education implies reflecting and modifying ways of doing around how university curricula are taught, evaluated, and managed. Although it can also be debatable that the university is too focused on the needs of the labor market and not on the purpose of generating valid knowledge itself, whether it is related or not to the needs and demands of employers. Because of this argument, other voices point out that the acquisition of competences by university students contributes not only to their comprehensive development or their job integration, but also to their personal and social dimension (Ibáñez, 2009; López Gómez, 2016).

As the study by Rodríguez (2014) points out, students show some reluctance to the competency-based training model, because it will demand them more work; although according to these studies they are finally more satisfied with the learning they achieve.

This discourse has a direct impact around four major areas (Manzanares and Sánchez, 2012) regarding the introduction of the competence model in Higher Education:

- The debate itself on Higher Education, which requires a reflection on the need for lifelong learning, the work of the university institution itself or the training of professionals.
- The organization and structure of the university degrees divided from the Bologna Process into two differentiated cycles: undergraduate education and postgraduate education (master's and doctorate).
- The curriculum itself, the competences introduction in the design of the classes (structured around subjects) or the elaboration of a final work that highlights the competences that were acquired throughout the studies.
- The methodological dimension: the discourse about competences requires to refocus the methodology used in the university classroom, going from being focused

on the mere transmission of theoretical content to enabling and enhancing the acquisition of competences.

Thus, as pointed out by Rodríguez et al. (2018), it is important to increase the Higher Education effort to improve the skills related to the student's autonomy and reflective capacity, which are closely related to the capacity for lifelong learning.

Despite different conceptualizations and, even, denominations around transversal competences in different Anglo-Saxon contexts, they refer to them with different adjectives (key skills, core skills, essential skills, soft skills, employability skills, etc.) that go beyond some nuances (Rodríguez, 2015, UNESCO, 2016) that refer to certain knowledge, attitudes, and essential skills in comprehensive training and the development of employability.

Even though they tried to systematize and classify the transversal competences in different occasions (Aubert & Gilbert, 2003; Clemente & Escribá, 2013; González & González, 2009), the most accepted typology in the educational sphere is the one suggested by the Tuning project that presents a three-dimensional model: instrumental competences, those who will allow the students' academic development, they are linked to capacities and abilities of instrumental character; interpersonal competences, those related to the ability to have a relation with others, team work and, in general, they happen to facilitate interaction, collaboration and cooperation; systemic competences, that require the previous management of instrumental and interpersonal competences. On the other hand, in Solanes et al. (2008) work these three dimensions disaggregate in a total of seven:

- Instrumental: Work performance and management skills
- Interpersonal: Interpersonal relations and work team
- Systematic: Leadership, work motivation, and learning capacity.

The complexity of transversal competences leads to the possibility of finding a multitude of approaches both in their denomination and in their classifications or typologies. Therefore, to understand them in greater depth, it is necessary to analyze some of their constituent characteristics (González Morga, 2017, ILO, 2015, Rychen & Salganic, 2003)

- They have a transversal and transferable character, they are not learned and applied in a single context, but they can be used in a person's different dimensions and areas.
- They allow to address multiple situations, not only they can be applied in different contexts, but they can be used to face and solve aspects of different kinds as well.
- They are not related to just one occupation but are necessary to develop a multitude of jobs in very different organizations and at different hierarchical levels within them.
- They are not associated with specific contents that can change over time, but have a more structural character, they are stable over time.

As Blanco (2009) points out, the shift in the methodological approach demanded by the competency learning model application in the university has affected both the role of the teaching staff and of the student himself. On one hand, the teacher has to modify its role, he goes from being a transmitter of knowledge to a learning facilitator, proposing training experiences. On the other hand, the student has to abandon a passive role and become an active agent of its own learning.

This requirement to both university agents raises the need to review how teachers and students' approach and perceive the competency model and how they are playing their role in the teaching and learning processes. It is necessary to know if students and teachers assume the imperative need of the model and if they are truly working in a different way in the university classrooms, besides from knowing if it's possible to improve this practice.

That been said, different researches are being developed around the perception of the development of competences in Spanish universities, both from the students' perspective (Clemente & Escribá, 2013; Herrero, González & Marín, 2015; Rodríguez et al., 2018) and from the graduates' point of view and even from the employers' perspective (Freire, Teijeiro & Pais, 2013; Michavila, Martínez, Martín, García & Cruz, 2016; Palmer, Montaño & Palou, 2009).

The study of Sarceda and Rodicio (2018) on the

formation of general, specific, and transversal competences, finds that students perceive that the first ones are addressed to a greater extent in the university institution, the specific ones are addressed in the internship centers, while the transversal ones are addressed to a lesser extent. In this same sense, the study developed by Mareque and De Prada (2018) indicates that some transversal competences, such as creativity, are not sufficiently developed.

Some studies indicate that certain methodological strategies mostly contribute to the achievement of some types of competencies. For example, the work of Robledo et al. (2015) points out, in a comparison between different methodologies (Problem Based Learning [PBL], case method, expert method, shared study method, and directed study method), that PBL is more effective when developing instrumental, systemic, or interpersonal competences among the students. As the authors of this study point out, two possible reasons for the greater effectiveness of this methodological approach emerge: the link between knowledge and professional practice and the demand for greater autonomy on the student's side. However, they advise the use of different methodologies, so that they are enhanced and favor a greater range of competences.

It is clear that the incorporation of the competences and, specifically, of the transversal competences on the University part has not been a simple process, that's why with this work we try to contribute to a better knowledge of how the teaching-learning has been integrated of competences in the training of students and knowing which actions could be developed to improve the competency training.

For this, the following research objectives are established:

1. To know the development of transversal competences in the classrooms of the University of Murcia from the last-year degree students' perception.
2. To identify the strengths and weaknesses of training in transversal competences through the students' vision.
3. To analyze the improvement proposals that the students establish regarding the training in transversal competences.

Method

Design

The research is developed under a non-experimental, descriptive and transversal design. Among the methods or techniques of data collection, the survey is chosen and materialized in a questionnaire that alternates quantitative and qualitative questions, which is why a mixed analytical approach is required for the analysis of the data.

Participants

The population under study corresponds to 4th year students of the University of Murcia. The selection of the participants is done through a stratified random sampling with which a total sample of 1137 students is obtained, representing the last year students of the bachelor's degree with a confidence level of 99% and a sampling error of 3.44%.

The participants are distributed in different branches of knowledge, respecting the proportionality of the strata group in the global population. 50% are students of the branch of Social Sciences, 16% of Health Sciences, 14% belong to Experimental Sciences, 16% to Arts and Humanities and 4% to Engineering. Of the total number of students that answered the questionnaire, 68% are women and the remaining 31% are men, the average age for both is 23 years (DT = 4.16).

Instruments

The information collection is carried out using the Cross-sectional Competence Evaluation Questionnaire (CECTGRA) ad hoc designed. This questionnaire integrates 5 blocks of questions elaborated around a scale of competences that includes the *development* assessment or the teaching degree of the transversal competences in the university classrooms, the *command* or acquisition that the student presents and the *relevance* or value that is granted to the professional development.

The list of transversal competences included in the scale was defined ad hoc by Martínez Clares and González Morga (2018a) after the analysis of key documents for the design of the bachelor's degrees and various studies that contemplate the employers' vision of the competences that

are required the most in the productive market in recent years. This list of competences is grouped according to the Tuning model, adopted by the National Agency for the Evaluation of Quality and Accreditation (Agencia Nacional de Evaluación de la Calidad y Acreditación - ANECA) for the preparation of the white paper's certifications of Spanish universities, whose competences are structured in instrumental, interpersonal, and systemic.

Its internal structure was validated through the Confirmatory Factor Analysis with satisfactory goodness of fit indicators (development dimension: CFI = .094; NFI = 938; RMSEA = .072) and its reliability is verified both at global scale (alpha = .927) and the resulting subscales too (instrumental competences, alpha = .785, interpersonal competences, alpha = .825, systemic competences, alpha = .899).

In order to answer to the objective of this study, the obtained results in the interpersonal competences development analysis, (*team work, social interaction, ethical and social commitment, and emotional control)* and open questions related to strengths and weaknesses of university education in transversal competences, as well as proposals for improvement were presented.

Procedure

Once the questionnaire has been designed and subjected to a content validation process through the judgment of experts and the method of individual pleas, the information is collected. This is planned in the last year of the Degree with the intention of giving the students a perception as complete as possible of their university education. For the questionnaire application, the tutors of each group-class are contacted and the members of the research team themselves go to the classroom to make a brief explanation of the questionnaire and to remark on its voluntary, anonymous and confidential nature.

For the analysis of the quantitative data, both descriptive statistics (mean, standard deviation) and inferential statistics are used, through non-parametric tests (Friedman for related samples, Mann Whitney U for two independent samples and Kruskal Wallis H for independent samples of more than two groups), given the non-normal distribution of the data tested with the KS test. For the treatment of quantitative data, the statistical software SPSS v.23 is used. The qualitative data analysis is done through a procedure of information reduction, categorization and interpretation of results through semantic networks or network. For this, the ATLAS.ti 7 program is used as a support or tool to classify, select, and represent the information.

Results

The development of transversal competences in university classrooms is considered acceptable, although it can be improved with a mean around the value of 3. The most developed competence, according to the student's perception, corresponds to *team work*, while *emotional control* is the least one, as indicated by the statistics in Table 1.

Tabla 1
Descriptive and inferential analysis of the transversal competences' development

COMPETENCE	MEAN	STANDARD DEVIATION	FRIEDMAN TEST CHI SQUARE (GL) SIG.
Teamwork	3.54	0.94	571.227 (3) .000
Social interaction	3.12	1.04	
Ethical and social commitment	3.51	0.98	
Emotional control	2.88	1.13	

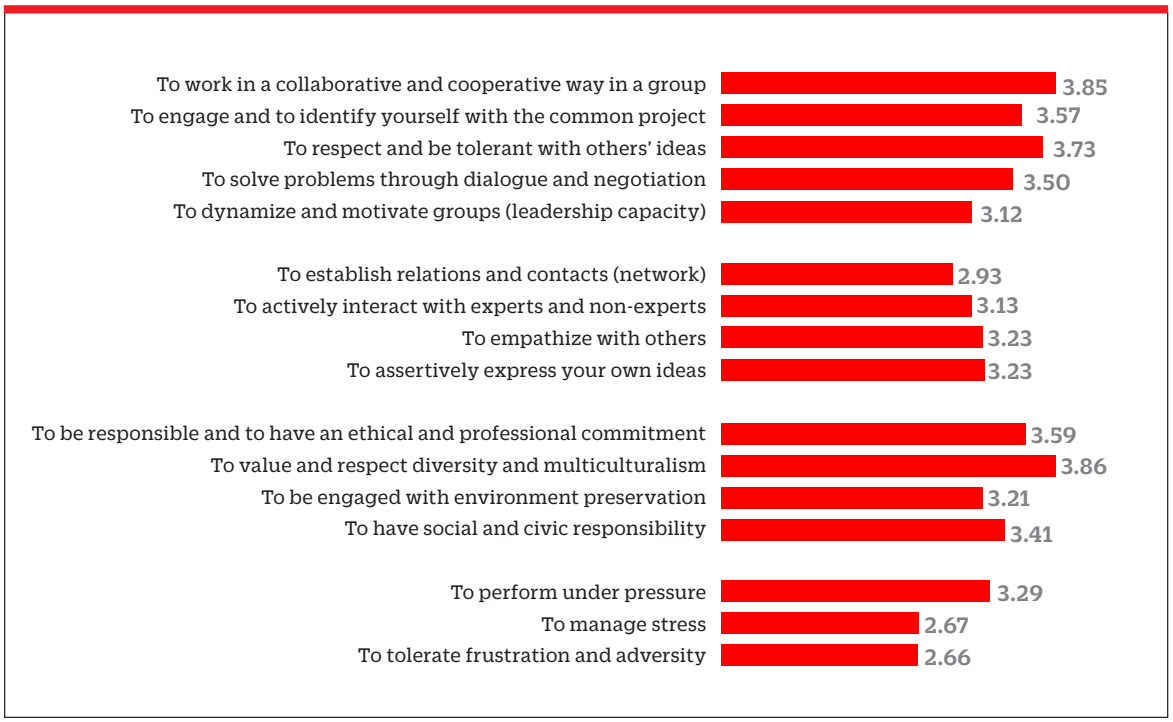

Figure 1. *Descriptive analysis of the unit's development that integrate transversal competences.*

Table 2
Descriptive and inferential analysis of the development of transversal competences according to the branch of knowledge

COMPETENCES	BRANCH OF KNOWLEDGE	MEAN	STANDARD DEVIATION	CHI-SQUARE (GL) SIG.
Teamwork	Social Sciences	3.78	0.88	82.443 (4) .000
	Health Sciences	3.49	0.85	
	Experimental Sciences	3.17	0.94	
	Arts and Humanities	3.27	1.01	
	Engineering	3.27	0.89	
Social interaction	Social Sciences	3.27	0.99	75.987 (4) .000
	Health Sciences	3.41	0.95	
	Experimental Sciences	2.66	1.03	
	Arts and Humanities	2.90	1.10	
	Engineering	2.63	0.88	
Ethical and social commitment	Social Sciences	3.61	0.93	30.508 (4) .000
	Health Sciences	3.57	0.90	
	Experimental Sciences	3.53	1.05	
	Arts and Humanities	3.29	1.06	
	Engineering	2.93	1.03	
Emotional control	Social Sciences	2.80	1.10	12.426 (4) .014
	Health Sciences	2.98	1.05	
	Experimental Sciences	2.87	1.19	
	Arts and Humanities	2.89	1.14	
	Engineering	3.37	1.28	

Table 3
Descriptive and inferential analysis of the development of transversal competences according to the branch of knowledge

COMPETENCES	SEX	MEAN	STANDARD DEVIATION	U MANN WHITNEY SIG (P).
Teamwork	Male	3.35	.91	<.001
	Female	3.63	.93	
Social interaction	Male	2.95	1.03	<.001
	Female	3.19	1.03	
Ethical and social commitment	Male	3.32	.99	<.001
	Female	3.60	0.96	
Emotional control	Male	2.96	1.15	.132
	Female	2.83	1.11	

In a more detailed analysis of the competency units that integrate this competence dimension, the greatest development is perceived in the competition related to the assessment and respect of diversity and multiculturalism (X = 3.86), closely followed by *collaborative and cooperative work in multidisciplinary teams* (X = 3.85).

On the other hand, the less worked competence unit during the studying years corresponds to *tolerance to frustration and adversity* (X = 2.66) followed very closely by *stress management* (X = 2.67). These results are shown in detail in Figure 1.

Competence development also differs from one branch of knowledge to another in a significant way (p<.015) and depending on the student's sex (p = .000). These results show that the students of Social Sciences are the ones who perceive the highest development of the competence of *teamwork* as opposed to the students of Experimental Sciences, who have the lowest degree of development. On the other hand, in the *social interaction* competence, the Health Sciences students stand out with the highest development during their training, while the Engineering students obtain the lowest score. The same happens with the competence of *social ethical commitment*, but in this case the Social Sciences students stand out again for the highest development. Finally, the students of Engineering are the ones who exhibit a higher development of the *emotional control* competence (X = 3.37) compared to the rest of the degrees that show an average value that does not exceed 3 in any case and very close to each other (see Table 2).

Regarding the sex of the participants, it is women who perceive a superior development in all competences (p = .000), with the exception of *emotional control*, where no statistically significant differences have been found between sexes (p <.132). Table 3 shows the statistics obtained.

Strengths and weaknesses of training in transversal competences

The strengths and weaknesses of this process are identified after the analysis of the transversal competences' development. Firstly, the main aspects that favor the training in transversal competences in the university classrooms are determined. Figure 2 shows the network of relationships between the units of analysis built from the opinion of the students themselves.

The codes are merged in three categories or conceptual families: on one side, **the student himself** with its *effort, personal interest, and self-taught work*[1], besides the *personal abilities* referred to the competence background that they have acquired before joining the university, obtained due to different social spheres and ins-

1 The text in italics corresponds to the participants' textual quotations.

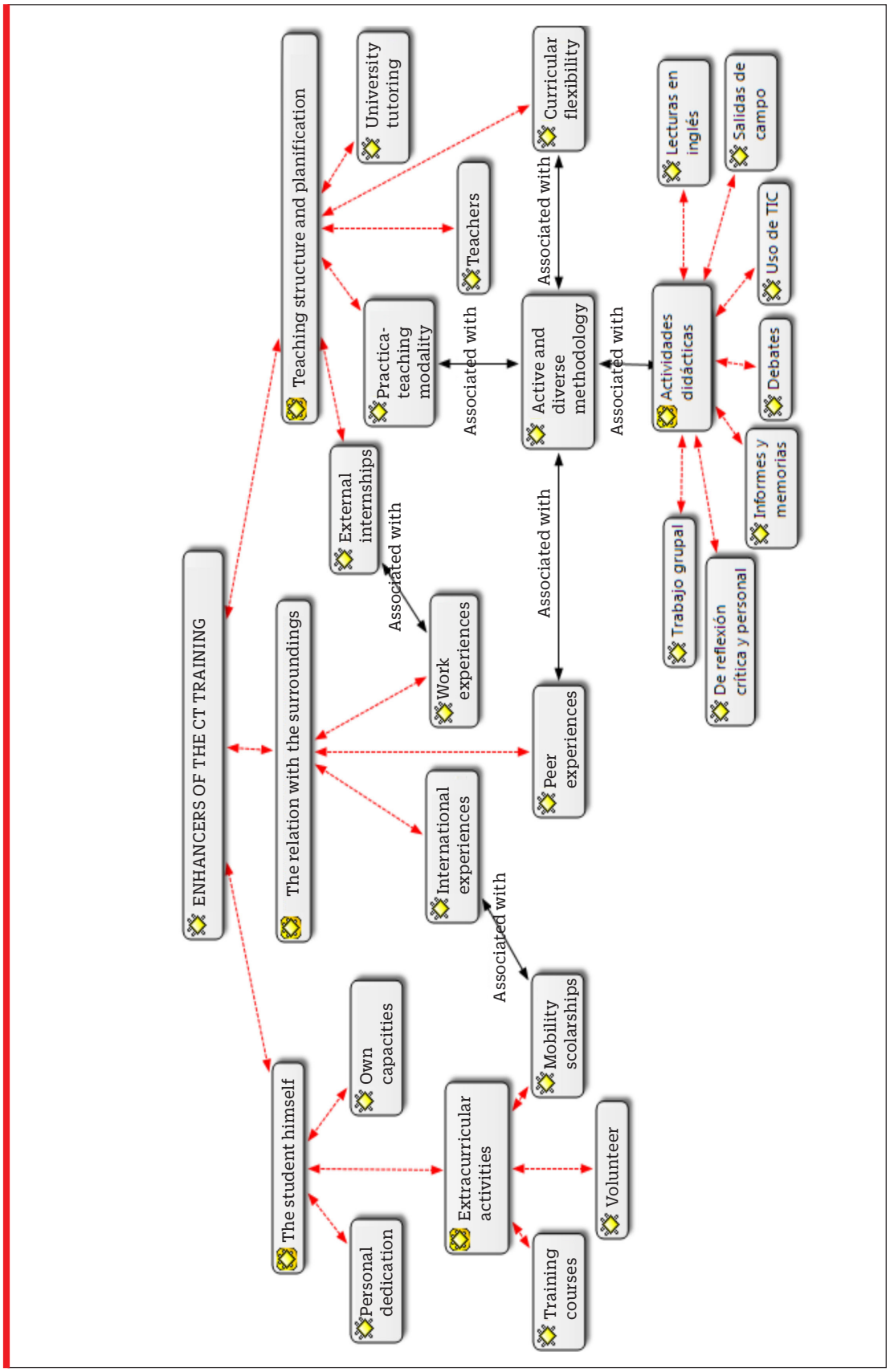

Figure 2. *Content network of the transversal competences' strengths training.*

titutions of interaction.

Another relevant aspect is the implementation of extracurricular activities of their own volition as *training courses*, participating in *mobility scholarships or carrying out some type of volunteering.* All of them are activities that strengthen the student's preparation in transversal competences.

On the other hand, and as a result of some of these activities, are the experiences that the student acquires in **relation to their environment** (subcategory 2) both those that *occurred in the classroom* (experiences with their peers), as well as those provided by *mobility programs that facilitate studying in other countries or having internships abroad* (international experiences). We must add those that come from the workplace to these experiences. In this case, coming from the combination of studies and work, but fundamentally of the *completion of external internships.*

The curricular internships are one of the subjects that make up the curriculum of most of the degrees that were analyzed, classified within the third subcategory (**structure and teaching planning**) with a connection function between subcategories 2 and 3. The students of the area of Social Sciences mentioned that in *school internships you learn and have experiences that are never given in the university, they also allow you to learn about the future profession in a direct way.*

Along with this subject, students emphasize the practical modality of teaching to develop the transversal competences in the classroom, they show their suitability to *learn to link the theory with the practice.* To do this, they consider appropriate the use of active methodologies due to their ability to encourage students' participation and peer interaction, in the words of the students themselves, *to generate dynamic classes and practice together with peers*; in addition to the diversity of methodological strategies that favor, on one side, to grasp the curriculum from different perspectives and interpretations, which also allow the extrapolation of the contents to different situations, and, on the other hand, to address the diversity of learning styles. Hence, this code is associated to the *curricular flexibility* that the student perceives to *attend to their individualities* and to the *variety of activities and exercises* that the students of the different branches of knowledge observe as enhancers of training based on transversal competences. Specifically, there are seven didactic activities that they perceive as the most appropriate for the development of these competences: *teamwork, oral presentations, exercises supported by ICTs (Videos), readings in English, debates, debates and preparation of reports and memories, field trips (excursions and visits) and exercises of critical and personal reflection.*

Finally, students also consider tutoring sessions, both *individually* and as a *group*, as a space that favors the communication between teacher and student, it shortens distances between them and enhances said training.

In relation to the aspects that the students consider that make it **hard** to integrate the transversal competences, they can be grouped into three subcategories (figure 3).

The first of them integrates obstacles at an **institutional level** such as the scarce *financing of universities to implement the Bologna reforms due to the current crisis situation.* The second merges limitations of the training at a **center level,** which allude both to the structure of the curriculum of the bachelor's degrees and to the generalized teaching approach in these educational programs. Students recognize the overlapping between subjects with *repeated content* and, even, *fill-in subjects that do not contribute much;* a shortage of time to develop all competences, besides an *inappropriate distribution of schedules and subjects in the different courses, with little time and dedication in some occasions to the transversal competences and subjects that are fundamental in the program (they do not measure the time and they give us a lot of stuff very quickly).*

On the other hand, they think that they carry out few external internships which leads them to consider a disengagement of the theory or received training with the professional practice. The reduced hours of external internships are one of the main limitations that the student finds in the development of transversal competences, which can be extended to all branches of knowledge. The competences are developed with the action, living and experimenting and as such, they miss the training practical sense considering that they have *a curriculum not in sync with reality (...),*

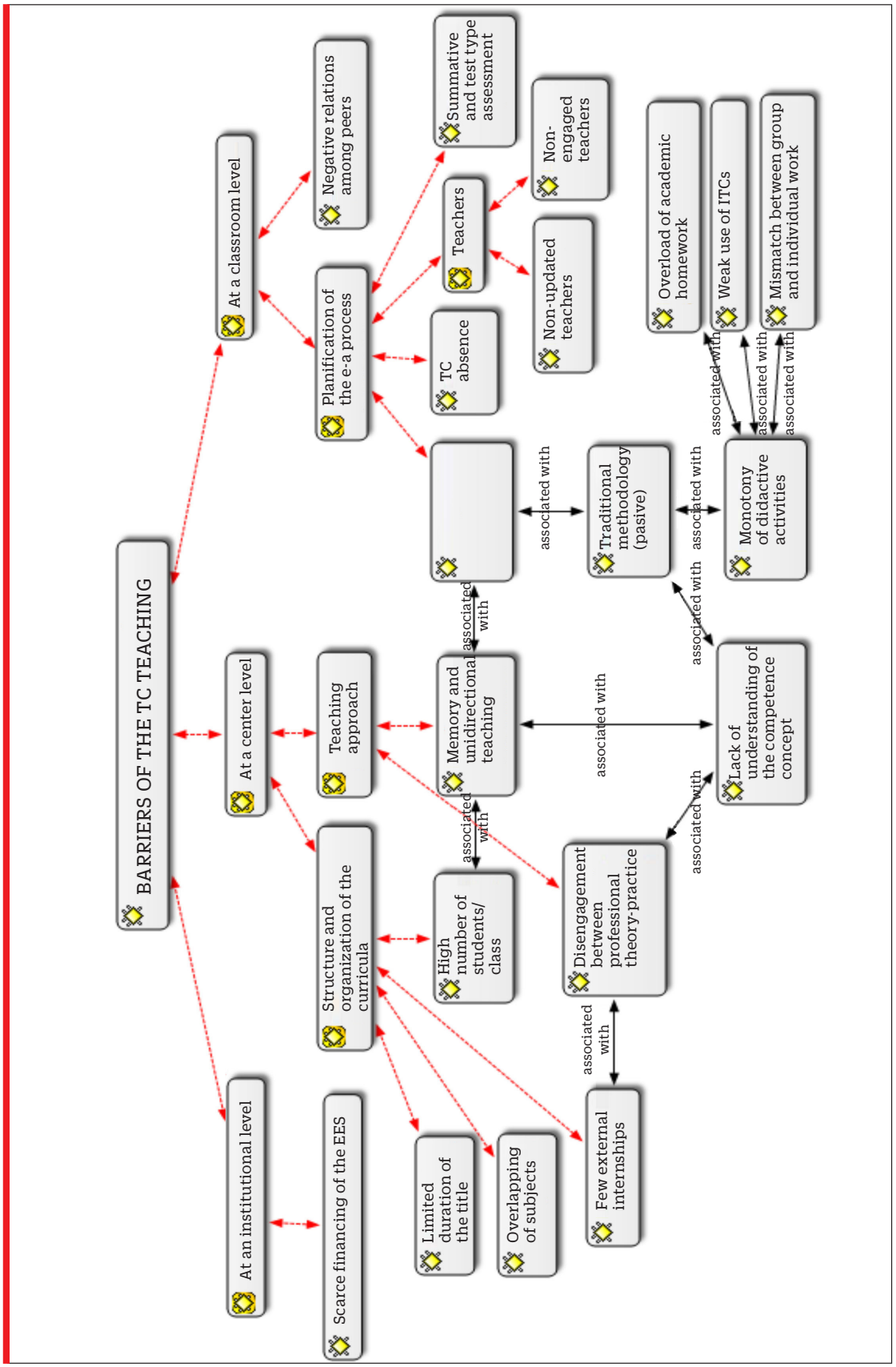

Figure 3. *Content network of the transversal competences training weaknesses.*

which does not prepare (...) for real problems.

This limitation, along with the student's perception of the high number of students per class, reflects the misunderstanding of the competence concept in the university education with *teachers who do not understand or share this type of training,* being this one another of its obstacles. Students perceive *too many students* in the classroom that implies carrying out the unidirectional and memorial teaching approach, something counterproductive in a competency-based training. This last code behaves as a link with the third subcategory that includes limitations at a **classroom level.**

Among the aspects related to the planning of the teaching-learning process, the most used by students is the theoretical teaching modality, along with a traditional methodology based on the master's lesson. The students consider that *the master classes prevent them from fomenting their capacity to do some research, to create and to learn in a general way, besides being something problematic (...) that becomes an obstacle that does not let you think.*

Associated to this unit of analysis is the student's perception of the monotony of didactic works and activities, *always the same and with little creativity on the teachers' side.* A low use of audiovisual materials is perceived, in addition to the *same homework year after year*, in which group work predominates. Regarding this, there is an excess of group work that disrupts the weight of independent work, as suggested by the EHEA (*overuse of cooperative work*).

Although the educational paradigm changes, it seems that teachers continue to use their traditional methodology and activities that are away from the current educational philosophy. For this reason, it is not surprising that students perceive, on one hand, a general absence of transversal competences in the classrooms, *they are barely named and worked in class,* and on the other hand, outdated teachers and not so involved in such training (*many teachers do not know how to work with them properly*). This last aspect has been widely shared by the students, to which we can add, the strategies or evaluation system that was used. Emphasis is placed on an exclusive interest in the exam grade, without appropriate tools for the assessment of said competences. According to the students, little importance is given to their assessment in the subjects, there is *a lack of mechanisms to evaluate competences and the test type exam (...) is considered the only assessment instrument.*

Finally, the negative relationships among students, such as the *competitiveness* associated with a lack of *companionship*, is another aspect that, according to the student, hinders the development of transversal competences in university classrooms.

Improvement proposals for training in transversal competences in Higher Education

Once the coding of the strengths and weaknesses of the training in transversal competences has been achieved, which focuses on relating all the codes around central categories in search of a narrative-interpretative line in which all the information units are contemplated, the next step consists of interpreting the improvement proposals categorization given by students following the same line of argument.

Three large subcategories that group the units of analysis (codes) according to their extension (*institutional level, center or classroom*) converge in the improvement proposals. All of them collected, in a general and common way in all the analyzed Degrees, in the following content network (see Figure 4).

The first subcategory refers to proposals for improvement at **an institutional level.** In this case, the most common proposals are aimed primarily at increasing the offer of extracurricular activities in the university that enables the student to complete their training in transversal competences through *training courses, cultural or social activities and volunteering.* Concretely, the students propose that *the university can offer specific courses for the teaching* of transversal competences and be enriched by the *experiences of volunteering or exchanges.* On the other hand, students emphasize the importance of enhancing *professional guidance* in all degrees in two senses: to *announce professional opportunities explaining how the job market really works and the options we have once the Degree is finished and to help plan the student's professional future.*

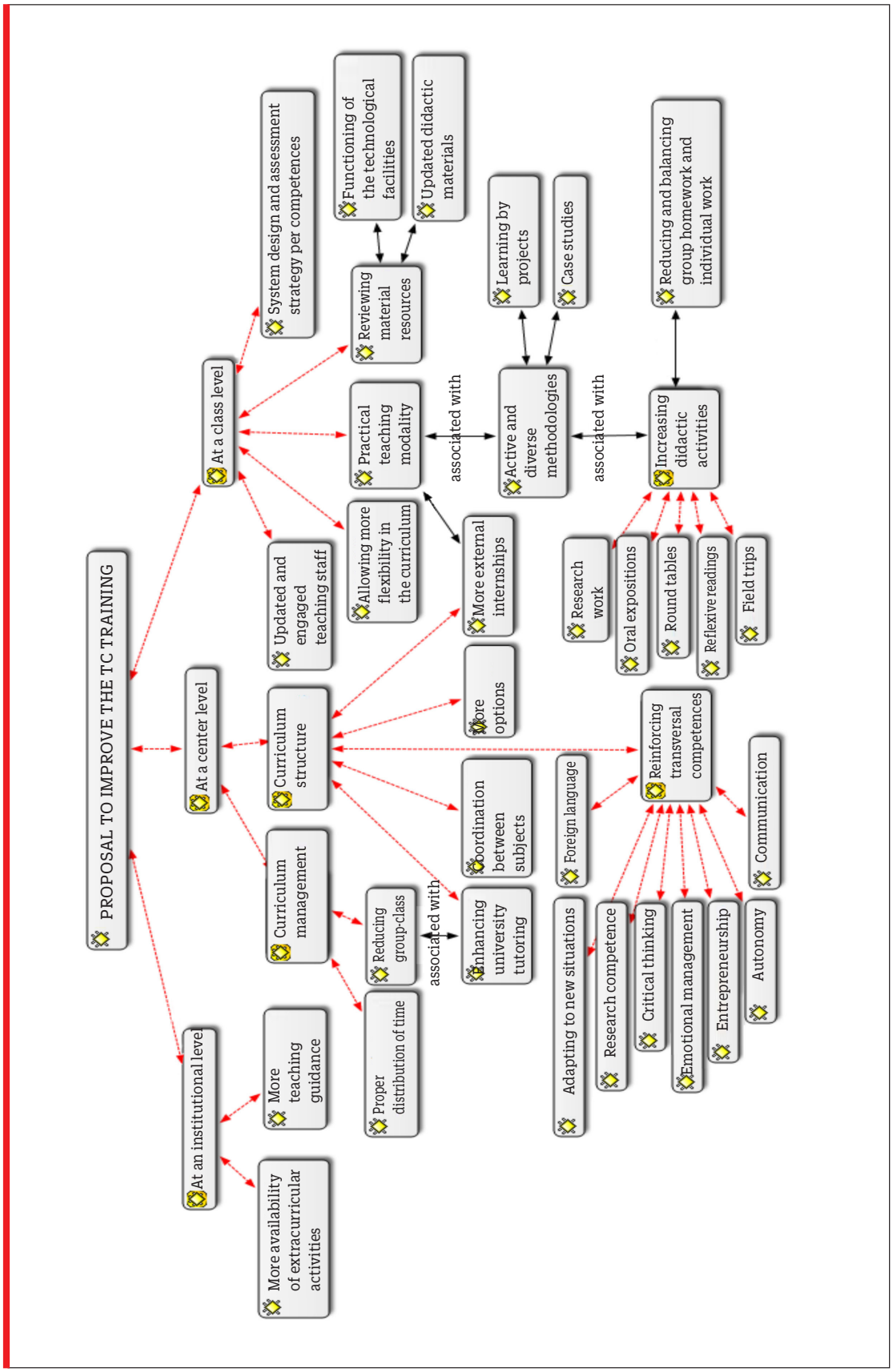

Figure 4. *Content network of the improvement proposals in transversal competences training.*

The second subcategory includes proposals for improvement at a **faculty or center level.** This subcategory includes different categorical families that deserve a special mention. This is the case of the proposals that revolve around the curriculum management, such as the review of the degrees and subjects' duration to be able to develop all these competences, and at the same time, that the subjects with especially relevant content for the professional future insertion can be attributed with more credits in the curriculum. Another proposal of this part is the reduction of the number of students per classroom to obtain *a more personalized teaching and attention and according to the Bologna approaches (to really fulfill what the Bologna Plan proposes and not to make a shabby interpretation of this).* We add the value that the student confers to *university tutoring* to this affirmation for the development of these competences, proposing to enhance it both individually and as a group. This code corresponds to the subcategory called structure of the curriculum, with a linking function between both.

The structure of the curriculum bundles the proposals referred to enhance external internships, increasing the amount and duration of them, *since that is where we truly learn to interact (...) and to develop our transversal competences, while allowing us to face the students to the social reality so that we know how to act;* in addition to developing a university curriculum with a wider choice of electives (*I would seek a greater offer of internships and options adapted to the interests of the students).* With this, the student proposes *to include specific subjects and contents for the development of transversal competences*, such as, for instance, the knowledge of a *foreign language*. Likewise, the student also points out the need to improve *coordination* between subjects, *promoting collaboration, communication and cooperation among teachers so that all departments can work in the same direction and more efficiently.* Likewise, avoid, on one hand, the *overlapping of contents* and, on the other hand, training gaps, so that the time devoted to each subject can be used to reinforce others that were less developed in the classrooms, as is the case of the contents next to the transversal competences. Specifically, the participants point out that it is necessary to reinforce the competences of *adaptation to new situations, the research, critical thinking, emotional control, entrepreneurship, communication and the foreign language.*

Finally, at a **classroom level**, different improvement proposals are indicated. A large part of them incur mainly in the teachers' training and their motivation to develop them through their continuous training update and the *recognition of their value* in the graduates' training.

Working with transversal competences is a way to *improve their training both academically and professionally.* Bringing the student closer to their work reality is one of the most cited proposals by the participants. Among the most appropriate way to do it is to *focus the teaching more on to practice*, that is, to promote the modality of practical teaching based on active and innovative methodologies such as *case studies and learning by projects.* They also allude to cooperative learning strategies, but always from *the balance with autonomous work and with meaning and coherence.*

Sometimes they perceive an excess of work that they propose to redirect towards the accomplishment of other activities like *oral expositions, round tables, related readings, trips or excursions and, even, research homework.* All of them offer a wealth of perspectives that make the curriculum more flexible and favor the development of transversal competences among the diversity of the students.

In order to carry out this diversity of didactic activities, it is necessary for the teacher to rely on *updated material* resources and technological facilities in good conditions.

Finally, students add the need to develop an assessment system by competences based on *reflexive rather than memorial exams* and on the design of concrete tools to evaluate them. In addition to *having the personal and social aspects of the student's development more into account when putting the final grade.*

Debate

Given the relevance of transversal competences in the labor market, this work has aimed to know its development in the University of Mur-

cia classrooms, from the perception of one of its main protagonists: the students.

As it can be seen in the result section, the development of transversal competences is susceptible to improvement with an average valuation around the value of 3. These results are in line with some other studies (Alonso, Fernández & Nyssen, 2009; CEDEFOP, 2014; Clemente & Escriba, 2013; De la Iglesia, 2011; Mir, 2008), that not only focus their attention in the students' perspective, but also in the teachers' and employers' perspective. In all of them, a university education focused on the development of specific competences is highlighted, while the transversal ones take a back seat despite being contemplated in the teaching guides of the subjects. However, this study highlights the competence of teamwork as the most developed (especially by the Social Science students) and emotional control as the least developed (although Engineering is the branch of knowledge in which the latter one is boosted).

Ironically, students perceive teamwork as a weak point of the transversal competences training in the University of Murcia classrooms. Which leads us to think that it is not enough to work cooperatively, if you haven´t been taught how to do this type of work previously. Miró (2010) states that the achievement of transversal competences requires prior training, not being different from the others in this aspect. For students to work as a team, it is not enough to group them together, "this is ineffective at best and often counterproductive" (p.3). According to the students' opinion, their predominance is excessive, even this way of proposing the performance of didactic activities and homework is abused, which results in an imbalance between group and autonomous work.

It can be seen, therefore, a lack of understanding of the concept of competence. As Solanes et al. (2008) points out, although they aim to the acquisition and development of these during the training process, it is not always carried out in an explanatory, intentional and controlled manner, especially in relation to the most generic, as is the case of the transversal ones. Its addition in the curriculum requires planned and inclusive academic approaches.

This lack of understanding when dealing with transversal competences in the classroom is also reflected in the assessment systems established by the teaching staff, seen as another weak point for the students and for the results of the research of Blanco (2009) and Cobo and Moravec (2011). According to these authors, it is very hard for an assessment to reflect the acquisition of competences in which only the acquired knowledge is valued. They require more reflective and action systems where they can be demonstrated and put into practice (Robledo et al., 2015).

Regarding the weaknesses pointed out by the students in relation to the center, the main ones focus on the structure and organization of the curriculum and how, by maintaining a high number of students per class, a disengagement between theory and work practice is encouraged due to the predominance of a memorial and unidirectional teaching, leaving aside more innovative and coherent methodologies with the principle of learning by doing that raises the European convergence.

These opinions validate the work of Michavila et al. (2016) who detect an excessive predominance of the master class in the university, "not very adequate for the current educational paradigm" (p.47), as it minimizes the possibilities of developing an active and dynamic learning, and according to the current training based in competitions in which the learning, practice and its application become basic premises, as defended by Gargallo, Garfella, Sahuquillo, Verde and Jiménez (2015), Robledo et al. (2015). This lack of methodological innovation may be due, at the same time, to a lack of involvement and/or teacher training in relation to the new conception of the competency-based teaching. This weakness can be exposed in the work of Martín (2009), that detects some difficulty in order to incorporate the teachers' culture to the current vision of the university training.

At the same time, students also point out the little contact with the reality of the profession as a weakness, considering low the credits granted to external internships. As Tejada (2012) points out, the development of competences is inseparable from their application or implementation, so students refer to the internship period as one of the most appropriate scenarios for the development of transversal competences, as well as said by Freire et al. (2013) and Mir (2008) when showing it with the results of their work.

Lastly, the students find the scarce funding received by the universities a weakness when it comes to implement a reform of such depth in the Spanish university system. Michavila (2012) consider that the change posed by European convergence has not been produced, only at a conceptual level, and financing is one of the main factors that hinder the depth of the changes that must take place.

On the other hand, among the strengths pointed out by the students of the University of Murcia for training in transversal competences, their own dedication and abilities stand out, as well as certain extracurricular activities such as training activities, volunteering and mobility scholarships. The latter are related to different types of experiences: international, with peers, and work-related, which highlights the importance of the alternation of contexts in the development of transversal competences, as the studies of Accentura and Universia (2007) and Martínez Clares y González Morga (2018c) conclude.

The value given by the student to university tutoring is new to personalize their training process and, consequently, offer a response more adjusted to their needs. The benefits of this guiding process, as well as its involvement in the quality of university education, can be seen in multiple jobs, such as the one by Álvarez and Álvarez (2015), Lobato and Guerra (2014) or Perez Cusó, González Lorente, Martínez Juárez y González Morga (2017). Mentoring takes on special relevance in a teaching-learning approach based on competences, in which the teacher acquires an accompanist role to ensure the integral training of the students. That is why it is situated very close to the development of transversal competences and, therefore, as a means to consolidate the current training system.

The participants in this study also make proposals that can help in the development of transversal competences at the University of Murcia This is the case of increasing the supply of extracurricular activities, since its link with the acquisition of transversal competences is a highlighted fact in researches such as those by Carrasco (2012), Cobo and Moravec (2011) or Rodríguez (2015).

Enhancing professional orientation is also among their priorities, since one of their main purposes is to facilitate the development of competences that promote employability, as well as to prepare students so that they are be able to manage their professional and life projects. This proposal matches with the measures proposed by Eurydice (2014) to improve the graduates initial training.

Like Martín and Bobb (2011), the students highlight the distribution of credits by subject, given the importance for their professional profile, and they encourage the reduction of the number of students per class as a necessity for the implementation of a training system based on competences.

University tutoring is once again revealed as a space to foster the personal growth of students, their academic performance and the generation of community and interpersonal relationships, as underlined by the investigations of Pérez Cusó et al. (2017) and Sanz (2012).

Hoping to achieve coherence, monitoring and control in learning, the participants propose maximum coordination between subjects, whose positive implications are indicated in works such as those from Rue and Lodeiro (2010) or Velasco, Rodríguez, Terrón and García (2012).

In contrast to the weaknesses pointed out by the students, they propose, on one hand, more presence of external internships in the study plans. The practical dimension in the development of competences has an unquestionable importance, which is why it is considered that the bachelor's degrees should increase the number and duration of external internships, as well as making the offer of centers more flexible to favor a choice more in line with the participants professional interests. Tejada (2012) highlights the relevance of this matter for the acquisition of competences, as they are inseparable from their development.

On the other hand, students propose a greater use of a more practical teaching modality and active learning methodologies. Gil and Ibanez (2013) positively values these methodologies in order to better understand the theory and face and solve practical and real situations. In this line, Carrasco (2012, p.228) states that "the acquisition of skills by the student requires putting into play a coherent and coordinated set of methodological strategies, using different activities and training

spaces." This way of working approaches the teaching-learning process to the demands of the professional life.

Following the previous statement, other proposals made by students appear, such as: the increase and alternation of didactic activities, the curricular flexibility, the material resources review, the assessment system adequacy, and the updating and commitment of teachers. In relation to this last aspect, and again in the words of Carrasco (2012, p.225), "any change in educational paradigm requires the update of teachers and encouraging innovation", considering teacher training one of the main issues to pay attention to, as the responsibility of the development of competences in the students falls directly there, and not only those of a more specific nature.

As it can be seen, having the students' perception serves as a reference to reflect on the most effective actions in favor of the development of competences, in order to enhance the quality of the training process, although the commitment of the entire university community is also necessary to favor a practice in tune with the new educational paradigm and the requirements of the labor market (Hargreaves and Fullan, 2014). There is an urgent need for a new educational shift to develop those transversal competences that can allow learning and adapting to a rapidly changing labor market world, it will be the decisive challenge of our time.

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