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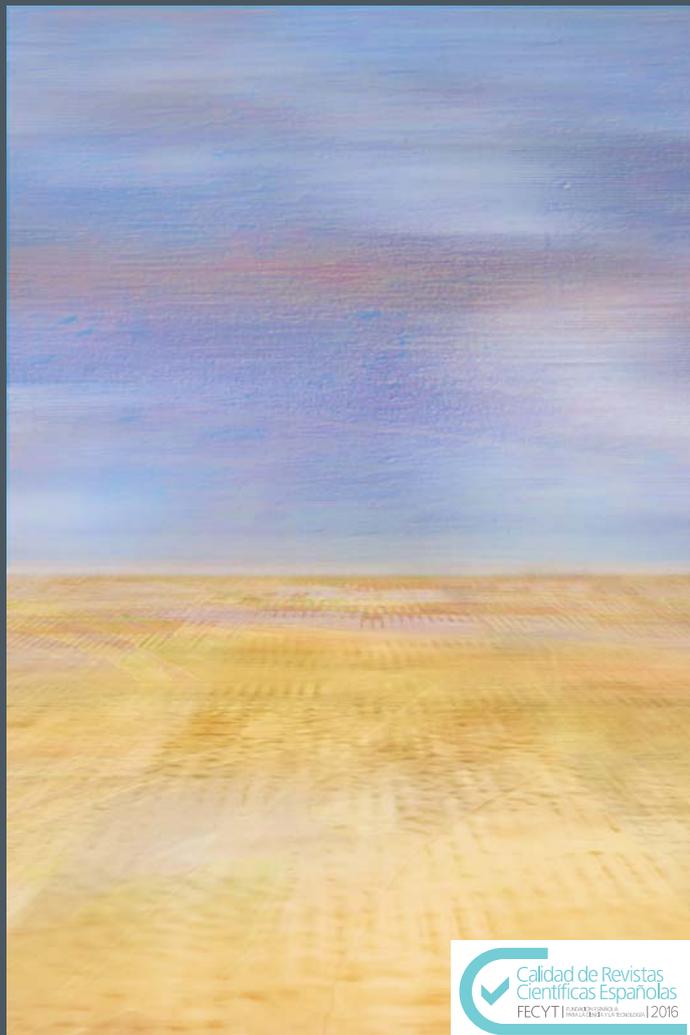
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Características de eficacia docente desde las perspectivas del profesorado y futuro profesorado de secundaria

In-service and preservice teachers' perceptions of characteristics of effective secondary school teachers

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Abstract

Adequate teaching practice is one of the key drivers for improving teaching quality and students' academic achievement and motivation. Official reports both at local and international level highlight the importance of the figure of the teacher, and show that there is still concern about the results of Compulsory Secondary Education. However, recent researches continue to point out the need to know what currently constitutes effective teaching among the European population (Meng et al., 2015). In fact, more than 50% of the studies conducted so far have focused on American populations and on educational levels other than Secondary Education (Klassen et al., 2011). For this reason, in our study, using a multistage mixed-method analysis, teachers' perceptions of the characteristics of effective teaching were assessed in a sample of 358 in-service and pre-service Spanish teachers of Secondary School, with the aim of identifying the characteristics, and determining their importance and interrelations in each group of participants. Results showed that the two groups agree on the eight most relevant characteristics: domain knowledge, planning and organization, classroom management and development, educational innovation, transmission of knowledge, interpersonal relationship, personal ethics, and professional commitment. In particular, in both groups, personal relationship was identified

as the most important skill, whereas ethics and educational innovation were the least mentioned. The knowledge of effective teaching qualities allows us to clarify the specific domain of teaching effectiveness adapted to our culture and the educational level of Secondary Education, and also will help with the development of new and appropriate assessment instruments and future intervention programs that to meet educational challenges.

Keywords: teacher effectiveness; perceptions; secondary education; Spain/Spanish teachers; in-service teachers; pre-service teachers

Resumen

La adecuada práctica docente es una de las claves para la mejora de la calidad de la enseñanza, el rendimiento y motivación del alumnado. Informes oficiales a nivel nacional e internacional destacan la importancia de la figura del profesor, y muestran como aun existe preocupación ante los resultados obtenidos en Educación Secundaria Obligatoria (ESO). Sin embargo, investigaciones recientes siguen señalando la necesidad de conocer qué se entiende por profesor eficaz, hoy en día y entre la población europea (Meng, Muñoz, y Wu, 2015). La evidencia muestra que más del 50% de los estudios realizados hasta el momento han focalizado su atención en poblaciones Americanas y en niveles educativos diferentes a Educación Secundaria (Klassen, Tze, Betts, y Gordon, 2011). Por ello en el presente estudio, a partir de un análisis multietapa de método mixto, se examinó las percepciones sobre las cualidades del profesor eficaz de 358 profesores y futuros profesores españoles de Educación Secundaria, con el objetivo de identificar las categorías de eficacia docente en la ESO, y conocer como éstas se organizan e interrelacionan entre ambos grupos de participantes. Los resultados mostraron que ambos grupos coinciden destacar ocho categorías: conocimientos en el dominio; planificación y organización; gestión y desarrollo de las clases; innovación educativa; transmisión de conocimientos; relación interpersonal; ética personal; y compromiso profesional. En concreto, se ha identificado en ambos casos que las relaciones personales son las competencias más destacadas, mientras que la ética e innovación educativa son las que obtienen menores tasas de mención. Conocer esta doble percepción de eficacia docente, clarifica la especificidad del dominio de eficacia docente adaptado a nuestra cultura y al nivel educativo de ESO, y facilita la futura construcción de nuevos y adecuados instrumentos de evaluación y programas de formación continua e inicial, que ayuden a dar respuesta a los nuevos desafíos educativos.

Palabras clave: eficacia docente; percepciones; educación secundaria; España/profesores españoles; profesores en activo; futuros profesores

Introduction

Social changes demand constant adaptation of the educational systems. In recent years, 24.6% of the students in Spain do not finish Secondary Education (Ministry of Education, Culture and Sport [(MECD), 2015], and Spain is one of the eight countries of the European Union (UE28) that still exceeds the rate of early dropout from education (21.9%), which the European goal placed at 10% (Eurostat, 2015). Teaching secondary education has become a complex task, and there is clearly concern about the need to reflect on the factors that influence it (Torrecilla, Martínez, Olmos, & Rodríguez, 2014). It is evident that the teacher plays a relevant role in this situation. International reports have already indicated teachers' importance, like the one published by the OECD (Organization for Economic Cooperation and Development) (2005), entitled *Teachers matter:: Attracting, developing and retaining effective teachers*, or the one presented by Gordon et al. (2009), in which they identify the teacher as the main agent of possible changes. In addition, at the national level, the Ministry of Education (MECD, 2010), in its *Action Plan for 2010-2011: Educational goals for the 2010-2020 decade*, focuses on the assessment and initial and continuous training of the teaching staff to achieve effective teachers. However, data from recent research in Spain show that we are still faced with three types of difficulties: teachers' resistance to change, the lack of specific training, and the limitations of interdisciplinary work among teachers (Giménez, Sierra, & Rodríguez, 2013). Knowledge of the characteristics of the effective teacher constitutes the backbone for the elaboration of assessment instruments, intervention programs, and fulfillment of the continuous need for adaptation. An effective teacher is a teacher who presents special personal qualities that allows him or her to be successful and to have a significant impact on the students' lives (Walker, 2008). Therefore, it is important to clarify the domain of teacher effectiveness, identifying the tasks and behavioral factors that really influence it, and on which exercise some kind of control can be exerted (Bandura, 2006). However, in spite of the relevance on this topic, recent studies have shown diverse limitations and the need for more research in this area (Devine, Fahie, & McGillicuddy, 2013; Liu, Keeley, & Buskist, 2015; Meng et al., 2015).

Numerous studies have propose the characteristics of teacher effectiveness, drawing only on the existing literature (e.g., Murillo,

Martínez, & Hernández, 2011; Valdivieso, Autor, & Autor, 2013), and more than 70% of the investigations focused on identifying the profile of the effective teacher are of a quantitative nature (Klassen et al., 2011). We also highlight the scarce amount of research on the perceptions of the effective teacher in secondary school (e.g., Kodero, Misigo, Owino, & Simiyu, 2011), as less than 15% was carried out based on the opinions of the agents involved at this educational level and they were mainly focused on the perspectives of pre-service teachers (Klassen et al., 2011).

Some investigations focus on identifying the characteristics of the effective teacher from the perspective of university students or of pre-service teachers (see Liu et al., 2015; Pontes, Ariza, & Rey, 2010; Witcher et al., 2008). One of the most relevant investigations is the one developed by Schulte, Slate, and Onwuegbuzie (2008). Using a sequential mixed-analysis process, they studied the perceptions of 615 university students, predominantly Hispanic, of the characteristics of effective teachers of secondary school. Their analysis revealed the presence of twenty-four themes (from more to less relevant): expert, patient, attentive, understanding, teaches well, good communicative skills, makes students follow the rules, motivating, organized, good personality, passion for teaching, builds relationships, shows respect for others, equitable, flexible, helpful, adequate management of the classroom, creative, fun, knows how to listen, achieves the participation of others (students, parents), friendly, offers challenges to the students (with expectations), uses different modalities. Subsequently, these authors (Schulte, Slate, & Onwuegbuzie, 2011) followed the same procedure as in the previous study with 437 new university students, determining thirty-eight characteristics of the effective teacher. These themes coincided with the twenty-four presented in their first investigation, and fourteen new ones were identified: helps the students, open-minded, loves children, strong (in spirit and character), capacity of self-control, leader, professional, coherent with the students, makes learning interesting, sets clear goals, a good model to follow, responsible, works well with others, and attentive to diversity.

From the perspective of in-service teachers of Secondary Education, researchers like Chen (2007), Koutrouba (2012), Meister (2010), Meng, Muñoz, and Wu (2015), Onderi and Croll (2009), and Peng et al. (2014), using self-surveys with open questions, interviews, or direct observation in the classroom, have drawn up lists with factors that contribute to teacher effectiveness. A noteworthy contribution is that of Miller (2012),

who identifies ten characteristics of the good teacher: enthusiastic, creative, has a sense of humor, challenges the students, encouraging, patient, does not give up, is interested in the students, knows grammar well, is available to attend to the students, treats them well, is fair, and leaves his or her emotional baggage outside of the classroom. These are organized into four areas: affective characteristics, skills (creativity, open to new challenges), classroom management techniques, and academic knowledge.

Few investigations have concurrently studied and compared the perceptions of in-service teachers and pre-service teachers of secondary education. Walker (2008), carried out a qualitative 15-year longitudinal investigation, with more than one thousand teachers and pre-service teachers of the United States, Canada, Bermuda, and the Caribbean, as well as various students from Africa. By means of essays and debates, numerous themes emerged which led him to establish twelve personal and professional characteristics of effective teachers: prepared, positive, high expectations, creative, fair treatment and fair grades, accessible (with a personal touch), makes the students feel welcome and comfortable in his/her classes, compassionate, has a sense of humor, respect for the students and self-respect, knows how to forgive and how to acknowledge errors.

Nevertheless, in all these previous studies, the perceptions of teacher effectiveness are provided by populations of countries other than Spain (e.g., Kodero et al., 2011; Liu et al., 2015; Onderi & Croll, 2009; Peng et al., 2014). The conception of teacher effectiveness is context-dependent and, for this reason, cultural differences should be carefully considered (Liu et al., 2015). However, about 57% of the studies were carried out in the United States (Klassen et al., 2011), and current studies highlight the need for more research focused on the population of Western countries (Devine, Fahie, & McGillicuddy, 2013; Liu, et al., 2015; Meng et al., 2015).

Study goals

This goals of this study were, firstly, to identify the categories of teacher effectiveness and define its properties from a dual perspective, that of in-service and pre-service teachers of Compulsory Secondary Education (CSE) in Spain and, subsequently, to code and determine the possible

hierarchical organization of these categories of teacher effectiveness in the two groups of participants, individually and comparatively. With regard to the studied population, most prior studies focus on the stage of Primary Education, and on the perceptions of pre-service teachers, and only 18% were carried out with European population (Klassen et al., 2011). Therefore, in this case, we have focused on Spanish population of CSE teachers and the perceptions both of pre-service teachers and in-service teachers. With regard to the study methods, although more than 70% of the investigations are quantitative (Klassen et al., 2011), the guidelines and lines of research developed by authors like Woolfolk (2004) and Meng et al. (2015) indicate the need for more qualitative studies. It is necessary to start at the root of the construct on which one wishes to intervene, know it well and take into account its real and current context (Liu et al., 2015). Literature is limited and among the studies focusing on qualitative methods are found mainly lists of perceived characteristics of teacher effectiveness. Only three studies, based on the perceptions of pre-service teachers, offer a list of categories and code them, providing prevalence rates (Schulte, Slate & Onwuegbuzie, 2008, 2011; Witcher et al., 2008). We found no similar studies in Spain and very few at the international level. This study has allowed us to make a contribution, in view of the limitations found in the study of the domain of teacher effectiveness.

Method

Sample

A total of 358 participants, belonging to the two groups of interest (in-service and pre-service teachers), participated in this study. Of the initial sample of 376, the final response rate was 95.2%. The first group was made up of 200 in-service teachers (40.5% response rate), 104 women (52%) from 22 schools of Castilla y Leon, with a mean age of 44 years ($SD = 9.16$), and an average experience of 18.5 years ($SD = 9.89$). Concerning the schools, 58% of the teaching staff ($n = 116$) worked in public schools, and 42% ($n = 84$) in subsidized schools, 104 (52%) taught 1st grade of CSE, 122 (61%) 2nd taught grade, 115 (57.5%) taught 3rd grade, and 130 taught 4th grade (65%). With regard to pre-service teachers,

participants were 158 (64.8%) students enrolled in the Master's Degree in Teaching CSE and high school, vocational training and languages in the university centers of Valladolid, Segovia, Soria, and Palencia (94 women, 59.5%), with a mean age of 28.5 years ($SD = 6.20$). With regard to experience, 121 (76.6%) had never worked as teachers, and 37 students, with an average experience of 0.76 years ($SD = 1.86$), had taught other modalities or educational levels (e.g., extracurricular, unregulated adult education).

To obtain the sample, we selected a promotion from the Master's Degree and 60 public and subsidized centers of Secondary Education from Castilla y Leon, from the existing 199 centers. Of these 60 schools, 38 accepted to participate (63.3% response rate), and after random selection, 22 schools participated in the entire study.

Instruments

The questionnaire was used in prior research, which requested participants to identify three to six characteristics and definitions of the perception of an effective teacher (Onwuegbuzie et al., 2007; Slate, Onwuegbuzie, & Schulte, 2009; Schulte et al., 2011). For this study, the questionnaire collected demographic data (sex, age, years of teacher experience, type of center [public or subsidized], and grade and area taught) and also asked participants what characteristics they considered essential in an effective teacher. They were requested to list five and describe or define each one.

Procedure

We initially contacted the boards of directors and orientation departments of the schools and the coordinators and Master's Degree professors in the university to present the project and request cooperation. Subsequently, we informed all the teachers of 1st to 4th grade of CSE and the students of the Master's Degree of Secondary Education. Confidentiality of the data was guaranteed at all times by eliminating all the names and assigning a number to each participant for data treatment. Confirmations of acceptance were received personally or by electronic mail. The

questionnaires were applied in paper format to the pre-service teachers during classes and to in-service teachers in the weekly meetings with the school psychologist. The instructions (purpose of the study, demographic data, questions to be answered) were read out loud and any doubts were clarified, and participants had fifteen to twenty minutes to complete the questionnaires. We ensured at all times the suitability and adequacy of the information collected (Rodríguez, Gil, & García, 1996). The questionnaires were administered and the data analyzed in five and a half months, ending in 2013.

Data analysis

We conducted a mixed-method, qualitative-quantitative, sequential analysis in two stages (Onwuegbuzie, 2003; Tashakkori & Teddlie, 1998).

Two of the researchers carried out the first stage, which consisted of content analysis focused on identifying the characteristics of an effective teacher, drawing on the perceptions of the participants (Creswell, 2007, 2014; Goetz & Lecompte, 1984). We did not formulate any a priori hypotheses or expectations and obtained all the categories of the participants' words (Onwuegbuzie et al., 2007; Onwuegbuzie, Daniel, & Collins, 2009). The analysis followed six main steps (Colaizzi, 1978) including the method of reduction, which allowed us to obtain the final categories while respecting the initial context of the data (Onwuegbuzie & Teddlie, 2003). The first three steps focused on reading all the responses (Creswell, 2009), unifying them in the database (Glaser & Strauss, 1967), and identifying and coding the non-repetitive units of information using the horizontalization technique of data of Creswell (2007). For coding, we followed the method of constant comparison (Glaser & Strauss, 1967), where each new definition is compared with the previous codes, so that identical or similar definitions are assigned the same code (Strauss & Corbin, 2002). In the fourth and fifth steps, comparing and contrasting the previously coded data, units of information of similar content were organized to determine the final and unique emerging themes (Glaser & Strauss, 1967; Leech & Onwuegbuzie, 2009). Lastly, we validated and described the final categories. Cohen's kappa coefficient was calculated between the two researchers who had independently coded the responses, obtaining 92 and 87% inter-judge agreement and reliability, in

the final categories of the in-service and pre-service teachers, respectively (Constas, 1992). We compared all the original data with the final categories (Onwuegbuzie et al., 2007). We performed a process of peer review by two professors who are experts in the area and foreign to study, one from the University and the other from Secondary Education (Constas, 1992).

The second stage of analysis focused on the study of two indicators: the frequency of the categories as a function of the terms mentioned by the participants, and the position or hierarchical structure of the categories in the two groups of participants. These results were obtained from a data matrix—where 0 indicated the absence of a category and 1, its presence (Onwuegbuzie & Teddlie, 2003; Tashakkori & Teddlie, 1998)—and from calculating the manifest absolute frequency of each category (*absolute manifest effect size*) by dividing the total number of times the category was named by the total number of participants (Onwuegbuzie, 2003).

Results

Results - first stage

The participants provided a total of 1790 characteristics and definitions. Specifically, in the initial phase, 81 non-repeated characteristics were identified in the in-service teachers and 69 in the pre-service teachers, and 53 of them were common to both groups (see Table I). We obtained a total of 155 and 115 non-repetitive definitions, respectively.

TABLE I. Non-repetitive characteristics of teacher effectiveness according to the perceptions of in-service CSE teaching staff and of pre-service teachers

Common characteristics of in-service teachers and pre-service teachers			
Adaptable Assertive Attentive Authority Coherent Committed Communicator Competent Constant Creative Demanding Disciplined Dynamic	Educator Effective Empathetic Enthusiastic Expert Explains clearly Fair Firmness Flexible Friendly Fun Guiding Humility	Innovative Intelligent Knowledge Leadership Mediator Motivating Near Nice Orderly Organized Patient Pedagogical capacity Planning	Prepared Professionalism Punctuality Receptive Reflexive Respectful Responsible Teamwork Tolerant Training Trust Understanding Up-to-date Vocation
In-service teachers' characteristics		Pre-service teachers' characteristics	
Affectionate Available Balance Cheerful Companion Dedication Determined Dialogue Discipline Enthusiastic Faithful to his/her principles Hard-working Involvement Knows his/her students	Mature Model Motivated Nonconformity Optimistic Perseverance Reliable Rigorous Self-confident Serious Social skills Takes students into account Transmitter Young	Concise Feedback Impartial Is a referent Knows how to listen Neutral Objective Open Participatory Physical care Pleasant Provides variety Realistic Reasoner Sows Interest Strict	

Source: author elaboration

The in-service teachers mentioned each of these non-repetitive characteristics 1 to 58 times. The characteristics most frequently named were motivating, patient, near, communicator, clarity, dynamic and empathy (see Table II). Among the characteristics with fewer repetitions were practical and determined (once each), social skills and receptive (twice) and balance (three times).

TABLE II. Maximum frequencies of non-repetitive characteristics: In-service teachers

Characteristic	Example definition by in-service professors	n
Motivating	<i>Capable of stimulating and making students enthusiastic about what they're doing and learning. Encourages participation and involves them in the process E/A (P185.3)</i>	58
Patient	<i>Deals with setbacks, adversities, knows how to wait calmly for expected results, which may take a long time to achieve (P88.1)</i>	53
Near	<i>Can understand the students and make them feel that the teacher is not an enemy (P118.3)</i>	50
Communicator	<i>Knows how to explain the information and make him/herself understood (P1.3)</i>	46

Source: author elaboration

The pre-service teachers mentioned each of the 69 characteristics 1 to 55 times. The most frequently mentioned characteristics were communicator, clarity, near, motivating, dynamic and empathy (Table III). Among the characteristics with fewer repetitions were found assertive, variety, reasoner, energetic, physical care and teamwork, which were mentioned once.

TABLE III. Maximum frequencies of non-repetitive characteristics: Pre-service teachers of CSE

Characteristic	Example definition pre-service teachers	n
Communicator	<i>Having communicative skills, that is, expresses him -/herself adequately according to the students' ages and characteristics (C61.3)</i>	55
Clarity	<i>Explains the contents clearly and highlight the important concepts (C135.2)</i>	42
Near	<i>Trusts the students, not an extreme authority (C22.1)</i>	35
Motivating	<i>A teacher who motivates and makes the material useful (C74.2)</i>	36
Dynamic	<i>Knows how to express the material through exercises, examples, games... and not merely reading the book on the table (C110.4)</i>	29
Empathy	<i>Puts him-/herself in the place of the students and their circumstances and acts accordingly (C1.2)</i>	29

Source: author elaboration.

In both cases, we identified eight categories of the perceptions of the effective teacher: *interpersonal relationship* (e.g., cheerful, assertive, near, dialogue, knows how to listen, understanding); *classroom management and development* (e.g., discipline, demanding, motivating); *planning and organization* (e.g., orderly, organized, teamwork); *domain knowledge* (e.g., up-to-date, knowledge, prepared); *professional commitment* (e.g., vocation, perseverance, responsible, enthusiasm, physical care); *transmission of knowledge* (e.g., clear explanations, concise); *personal ethics* (e.g., fair, impartial, neutral); and *educational innovation* (e.g., open, creative, variety). Table IV presents the description for each of the categories and examples of definitions of each group of participants.

TABLE IV. Final definition of the categories of teacher effectiveness

Category	Description	Example definitions
Interpersonal relationship	Capacity to treat students individually in balanced way, open and accessible, showing him -/herself to be experienced and skilled in solving academic or personal problems.	<i>Being cheerful, warm, and affectionate with all his/her students (C53.2). Knowing how to listen and inspire trust in the students who dare to approach him/her (P6.5).</i>
Classroom management and development	He/she guides learning, attending to the general and particular needs of the students. The teacher-student relationship reveals the teacher's hierarchy but leaves space for mutual learning.	<i>Capacity to maintain order in class, have control (C10.1). To get the students to actively participate in class (P114.5).</i>
Planning and organization	Presents a useful work and didactic program adapted to the needs of the student. Capable of recycling his/her teaching methods to correct possible errors.	<i>Planning the explanation and tasks in order to achieve some goals (C105.5). Planning to adapt to the different levels and ages (P49.2).</i>
Domain knowledge	Shows him-/herself to be an expert in the material taught, which he/she enriches by constantly updating the contents, continuing his/her training to be able to anticipate questions about the new contents.	<i>Should know in depth and master the course that he/she teaches (C28.4). Should be up-to-date the material taught, recycle and not stagnate (P60.3).</i>
Professional commitment	He/she shows strong commitment to his/her profession, experiencing it as a social function and demonstrating this in every class by means of constant, serious, motivating, and tidy behavior	<i>Takes daily work seriously, both that with the students and with the rest of the teacher competencies (C51.5). Enthusiasm for the material he/she teaches, for teaching (P69.3).</i>
Transmission of knowledge	He/she shows mastery of the material, presenting it with a precise, fluid and attractive discourse. Capacity to focus and connect the basic ideas, avoiding irrelevant information.	<i>He/she must make clear presentations (C41.5), use an adequate tone of voice and language (P49.4).</i>
Personal ethics	He/she shows impartiality and independence in the individual treatment. There is coherence between what he/she transmits in the class and the content of the exams, as well as fairness in the evaluations.	<i>We must treat the student fairly, be neutral (P113.4). Do not get caught up in personal opinions, be fair in the evaluations (C39.5).</i>
Educational innovation	His/her teaching is versatile, accepting new techniques that promote learning and dynamize the classes.	<i>Use different methodologies and always seek resources so that the class will not always be the same (P145.5). Approach the new technologies (C154.3).</i>

Source: author elaboration.

In both samples, the external reviewers confirmed the eight categories in all the original data and the adequacy and reliability of the results.

Results second stage

For in-service teachers (see Table V), the key categories we observed after the analyses are: interpersonal relationship with 83.5% and classroom management and development with 79% of absolute manifest effect size of their responses. Next were planning and organization, domain knowledge and professional commitment, with a prevalence higher than 50% (68, 64, and 53%, respectively). The categories with a fewer number of mentions were transmission of knowledge, with only 36%, and personal ethics and educational innovation, with approximately 19%.

For pre-service teachers (see Table V), the categories with a higher percentage of mentions were: interpersonal relationship, classroom management and development, and transmission of knowledge, with a prevalence ranging between 60% and 80%. They were followed closely by domain knowledge, with 55.7%. Planning and organization and professional commitment, only presented 36.7 and 33.5%, respectively. The categories with the lowest prevalence rates among pre-service teachers were educational innovation (27.2%) and personal ethics (13.9%).

TABLE V. Distribution of frequencies of the categories of the characteristics of teacher effectiveness as perceived by the in-service and the pre-service teachers of CSE

Categories	NMT (N = 200)	AMES-T (%)	NMPT (N = 158)	AMES-PT (%)
Interpersonal relationship	167	83.5	117	74.1
Classroom management and development	158	79	116	73.4
Planning and organization	135	67.5	58	36.7
Domain knowledge	127	63.5	88	55.7
Professional commitment	106	53	53	33.5
Transmission of knowledge	72	36	103	65.2
Personal ethics	39	19.5	22	13.9
Educational innovation	38	19	43	27.2

Source: author elaboration. . Note: NMT = number of mentions by teachers; AMES-T = absolute manifest effect size of teachers; NMPT = number of mentions by pre-service professors; AMES-PT = absolute manifest effect size pre-service professors

The comparative analysis of the two groups, taking as inclusion criterion all the categories with a percentage of responses higher than 50% (absolute manifest effect size), shows that: (a) four categories of the pre-service teachers exceeded this prevalence (domain knowledge, classroom management and development, transmission of knowledge, and interpersonal relationship), whereas in the in-service professors, there were five (domain knowledge, planning and organization, classroom management and development, interpersonal relationship, and professional commitment); (b) both groups coincide in highlighting interpersonal relationship (83.5 and 74.1% for in-service and pre-service teachers, respectively), and classroom management and development (79 and 73.4% for in-service and pre-service teachers, respectively) as the two most important, and domain knowledge as the fourth most relevant (63.5 and 55.7% for in-service and pre-service teachers, respectively); and (c) the category transmission of knowledge obtained 65.2% in the pre-service teachers, in contrast to 36% in the in-service professors. The opposite occurred with planning and organization, which only exceeded 50% in the in-service professors (67.5% and 36.7% for in-service and pre-service teachers, respectively).

Discussion and conclusions

As presented above, the analyses led to the identification of eight categories, which, from the perspective of in-service and pre-service teachers, are considered to represent the characteristics of effective CSE teachers in Spain. Moreover, both groups agree that three of these categories are the most relevant, as their prevalence rates are higher than 50%: interpersonal relationship, classroom management and development, and domain knowledge.

Specifically, interpersonal relationship and classroom management and development are the two most important categories for in-service teachers (83.5% and 79%, respectively) and pre-service teachers (74.1% and 73.4%, respectively). These results are consistent with the studies of Chen (2007) with in-service teachers, where these two categories were identified with 80% and 70% of prevalence, or that of Schulte et al. (2011) with pre-service teachers, with 74.1% and 73.4%, respectively, of prevalence. We highlight communication, friendly, and respect towards the students

(Koutrouba, 2012; Meng et al., 2015), being near, understanding (Liu et al., 2015), and cheerfulness (Miller, 2012), as outstanding attributes of an effective teacher. These are the personal and intrapersonal qualities that concurrently configure our category of interpersonal relationship. Consequently, it is essential to train the teachers at the university in the acquisition of appropriate social skills and strategies that will favor this relationship with the developing student (Van Tartwijk, Brok, Veldman, & Wubbels, 2009). Specifically, one of the flourishing lines of research in the past few years is related to positive psychology. Authors like Beard, Hoy, and Woolfolk (2010) work in the field of teacher self-efficacy and classroom control, emphasizing teachers' academic optimism.

In the category of classroom management and development, as shown in other studies, teachers consider that actions and strategies performed during the classes, such as the capacity to achieve student participation (Chan, 2008), the use of reinforcements (Chen, 2007), being open to suggestions (Koutrouba, 2012; Witcher et al., 2008), motivating the students, and knowing how to adapt to the different situations are all very important (Meng et al., 2015; Skaalvik & Skaalvik, 2007). The more time teachers dedicate to fostering debate and discussion in small and large groups, the greater the positive effect on the students' progress (Killen, 2006). However, within this category, the participants of our study consider it is very important to control the students, especially to know how to resolve disciplinary problems (e.g., establishing rules and mediating in conflicts). These results are consistent with Chan (2008) and Miller (2012) domain of teaching efficacy called classroom management (e.g., managing disruptive behavior, requesting students to follow rules and regulations, and establishing systems of management, peace). The establishment of rules and routines for behavior and academic tasks helps to create the conditions that will allow the students to learn (Traver, Doménech, Odet, & Sales, 2006).

All these results support the importance of the characteristics associated with social and emotional competences (e.g., assertive, empathetic), and the psychopedagogical ones that promote motivation and discipline in the classroom (e.g., attentive, flexible, participatory, guiding, leader), which indicates the importance of properly training novel teachers in all these competences. However, Pontes et al. (2010) show that more than half of the pre-service teachers underestimate initial psychopedagogical training and focus on learning how to transmit

scientific knowledge. They consider knowledge of psychodidactics as innate qualities they already possess or will acquire with experience.

Thirdly, 67.5% of the in-service teachers highlight class planning and organization. Classes must be prepared on time (Chen, 2007), taking into account the characteristics of the class (Meng et al., 2015) and using teamwork strategies to achieve adequate coordination. It is essential to know how to coordinate with the near support networks and with coworkers (Meister, 2010). Likewise, studies of the perceptions of pre-service teachers underscore the need for organization, flexibility and the capacity for teamwork to properly plan the classes (Schulte et al., 2011). The more we prepare what is going to be worked on in the classroom, the greater will be our control of possible adversities and our capacity to guide the students to success (Devine et al., 2013). Along these same lines, Murillo et al. (2011) claim that teachers who spend more time preparing their classes manage to get their students to learn more. However, university students' deficit in the use of self-regulatory strategies is becoming increasingly evident (Rosário et al., 2010). Ignorance of their importance and their scarce use may be one of the reasons why only 40% of the pre-service teachers mentions the category of planning, which is the fifth most mentioned category.

For pre-service teachers, the third most relevant category is the transmission of knowledge, perceived as one of the competences that stands out as an initial training need. These results coincide with those of Schulte et al. (2011), who conclude that it is essential for secondary school teachers to learn to communicate new information correctly, clearly, fluidly, and accessibly for all the students, with special attention to the order and connection of the contents. Likewise, this category is highlighted among the in-service professors, although with less relevance, mentioned only by 36% of the participants. Previous studies of teachers also emphasize the capacity to present important aspects flexibly so that the diversity of the students will understand the explanations during the classes (Koutrouba, 2012; Skaalvik & Skaalvik, 2007).

Fourthly, with 63.5 and 55.7%, respectively, both in-service and pre-service teachers underscore the need for training or adequate and continuous updating of scientific, cultural, and didactic knowledge. Liu et al. (2015), Witcher et al. (2008) and Schulte et al. (2008) also identify this category among the most outstanding, and moreover, they note that, as the educational level advances, increasingly more importance is

granted to knowledge (Schulte et al., 2011). This outcome leads us to think that the association of the more didactic contents to Primary school teachers and the scientific contents to teachers of Secondary school and higher levels continues to be reinforced. However, at no time did our participants mention the need to learn other languages, in spite of this being an emerging demand to gain access to the schools, in order to integrate and generalize the creation of bilingual centers. Nevertheless, they noted the need to know the syllabus, the competences, and the minimum required contents for which they must set the teaching goals and tasks. Among the areas identified in the study of Miller (2012), she highlights academic knowledge, focusing on grammar and the teacher's honesty about questions he or she does not know how to answer.

The indicators related to professional commitment, professionalism, constancy, perseverance, enthusiasm, punctuality, fair treatment and assessment, the capacity to innovate and be dynamic and creative in the classroom obtained a lower number of mentions in both groups of participants. Although to a lesser degree in comparison with the previous categories, some perceptions concerned the importance of mastering creative teaching skills (Chan, 2008; Miller, 2012), the need to establish a commitment to the students that transcends academic achievements (Meister, 2010; Meng et al., 2015), being passionate and enthusiastic about teaching (Witcher et al., 2008), treating and evaluating the students fairly (Slate et al., 2009), and using different learning strategies (Schulte et al., 2008). However, according to perceptions of current in-service teachers, there were few mentions referring to dynamism in the classroom.

In turn, in line with the studies of Onwuegbuzie et al. (2007) and Onwuegbuzie et al. (2009), this study has allowed us to confirm the shortcomings in content and construct validity of the assessment instruments of teacher effectiveness in the University. In our case, we observed that some of the eight categories are not represented in the items of questionnaires of teaching self-efficacy. Specifically, scales used in Secondary Education such as: the Teacher Efficacy Scale (Bandura, 2006), the Teacher's Sense of Efficacy Scale (TSES; Tschannen-Moran & Woolfolk, 2001), the Norwegian Teacher Self-Efficacy Scale (NTSES; Skaalvik & Skaalvik, 2007), and the Teacher Self-Efficacy Scale (Chan, 2008) have no items referring to teaching tasks in the categories of domain knowledge and ethics and some of them do not reflect the categories transmission of knowledge and interpersonal relationship.

It is also important analyze some limitations of this study. In qualitative research, the reliability and validity of the data are closely linked to the rigor with which the research process was conducted, particularly, with the procedure used to collect and analyze data. In our study, one of the main limitations lies in the use of a sole source of information to obtain the participants' perceptions, by means of the questionnaires elaborated for this purpose. We recommend strengthening and corroborating the results obtained with new information gathered through interviews, focus groups, and direct observation in the classroom. We think it is important to complement the results with the perceptions of teacher effectiveness by other key members in the control and assessment of educational quality, such as headmasters of schools or education inspectors.

There are several contributions and lines of research that arise from this study: from a theoretical viewpoint, the identification, description, and hierarchical structure of the characteristics of an effective CSE teacher, from the perspective of pre-service and in-service teachers. We provide a more updated definition that is adapted to a Spanish sample, which therefore completes the existing information of research on identified definitions of effective teaching, but which is limited in its scope because it focuses primarily on non-European samples. This information is practical, the eight categories identified and shared by the different participants of this study can serve as a guide to elaborate new questionnaires of teaching self-efficacy; for teachers' self-reflection and self-assessment about their praxis through which they can review their teaching, analyze their strong points and weaknesses and try to improve; it is also a useful tool to develop support programs for initial and continuous training of teaching staff.

On the basis of our findings, in future studies, the goals will focus on the creation of instruments with solid psychometric properties to assess teaching self-efficacy of CSE teachers, and on the elaboration of intervention programs to help to teachers, mainly novel ones, to acquire the teaching skills necessary to teach effectively.

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