Universidad de Oviedo

Aula Abierta

Volumen 51, número 3, julio-septiembre, 2022/págs. 237-244

Psychometric properties of a Questionnaire on Teaching Difficulties in Undergraduate and Master Teacher Degree Students

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ABSTRACT
Detecting the difficulties that students perceive in their first contacts with the profession is essential in order to adapt their training. For this reason, this article aims to confirm the validity of the Teaching Problems Inventory (Jordell, 1985) for a sample of undergraduate and master degree education students. The sample is made up of 352 students, divided into 130 undergraduate students in Early Childhood Education, 89 undergraduate students in Primary Education, and 89 students in Master's Degree Education. For this purpose, confirmatory factor analysis (CFA) of the Teaching Difficulties Scale were performed to confirm that the theoretical structure proposed by previous studies fit our data. The goodness of fit was good overall, indicating that the four factors proposed by Cañón (2012) fit the data appropriately. Additional factors revealed a strong relationship of the items to each factor, as well as the lack of collinearity between these. Reliability analysis indicated that the items produced reliable scores in each factor as well as in the total score. Finally, sensitivity analysis showed that the scale was sensitive enough to capture different ratings with different age groups.

Keywords: Factor structure, Internal Consistency, Confirmatory Factor Analysis, Teaching Difficulties.

Propiedades psicométricas de un Cuestionario sobre Dificultades de Enseñanza en Estudiantes de Magisterio y Máster de Formación del Profesorado

RESUMEN
Detectar las dificultades que los estudiantes perciben en sus primeros contactos con la profesión es esencial para adaptar su formación. Por ello, este artículo pretende confirmar la validez del Inventario de Problemas de Enseñanza (Jordell, 1985) para una muestra de estudiantes de Magisterio y de Máster del Profesorado. La muestra está compuesta por 352 alumnos, divididos en: 130 de Educación Infantil, de Primaria y 89 de Máster. Para ello, se realizaron análisis factoriales confirmatorios (AFC) de la Escala de Dificultades para la Enseñanza para confirmar que la estructura teórica propuesta por estudios anteriores se ajustaba a nuestros datos. La bondad del ajuste fue buena en general, indicando que los cuatro factores propuestos por Cañón (2012) se ajustan adecuadamente a los datos. Los adicionales revelaron una fuerte relación de los ítems con cada factor y la ausencia de colinealidad entre factores. El análisis de fiabilidad indicó que los ítems producían puntuaciones fiables en cada factor, así como en la puntuación total. Por último, el análisis de sensibilidad mostró que la escala era lo suficientemente sensible como para captar diferentes puntuaciones con distintos grupos de edad.

Palabras clave: Estructura factorial, Consistencia interna, Análisis factorial confirmatorio, Dificultades de enseñanza.

ISSN: 0210-2773
DOI: https://doi.org/10.17811/rifie.51.3.2022.237-244

1.- Introduction

For years, the European Commission (2015) has been encouraging member countries to establish educational policies that attract the brightest and most competent Secondary school students to teaching, thus improving the social prestige of the profession. These policies include rethinking the conditions for access to teaching studies, initial and in-service training (Day, 2019; Hattie, 2017; Hattie & Yates, 2018) and the mechanisms for selecting teachers for professional practice. The current school reality is complex (Cantón & Tardif, 2018), as it has to respond to an inclusive education in increasingly diverse contexts and whose purpose is the development of competencies. All this from the vision of an uncertain, unknown and disturbing future (Bauman, 2017; Gerver, 2018; Perkins, 2016) and a growing social pressure -families, media, politics- questioning the work of teachers and their professionalism (Day, 2019; Imbernón, 2016).

To address this challenge, it is necessary to review teacher training (Prats, 2016). It is important to review both the initial training process of future teachers and the training needs of current professionals and the procedures for updating their competencies.

There are studies (Marcelo, 1993; Montilla et al., 2018; Veenman, 1984) that account for the difficulties and fears that some teachers have in their first years of teaching and that hinder their professional performance. These difficulties and fears provoke, during the first year of practice, what Veenman (1984) called "reality shock". This shock has been corroborated by more recent research in different educational realities and contexts (Henry et al., 2011; Ingersoll & Strong, 2011; Kidd et al., 2015; Saka et al., 2013).

With the aim of reducing the impact of "reality shock", tutoring or mentoring processes of expert teachers on novice or trainee teachers have been proposed (Bressman et al., 2018; Cañón et al., 2017; Marcelo & López-Ferreira, 2020; Marent et al, 2020; Maturana & Cieza, 2021; Orland-Barak, 2021); thus, connecting initial training with initiation to teaching (Feiman-Nemser, 2012) and favouring the construction of a strong professional teaching identity.

There are multiple theories on the construction of this personal and professional identity. That of Bolivar et al. (2014) proposes three critical moments in its construction: previous experiences as a student within the educational system, initial university training -through the contents of the different subjects and practices in educational centers- and the first experiences as teachers (Figure 1). There is, therefore, a clear link between previous experiences -as a student in non-university education and as a student at the university itself- and the subsequent start of teaching as a practicing teacher. Thus, it is interesting to analyze the possible distorted images that may arise during their training period prior to professional practice.

Teacher identity is a multidimensional and complex concept, which has given rise to multiple approaches. Following Saavedra (2016) it would be configured from interactions with peers, the transmission of knowledge and their identification in the educational institution itself. When teachers enter the education system as professionals, all these experiences come to the surface and this identity is called into question.

The Teaching Problems Inventory (Jordell, 1985) was devised to measure the difficulties encountered by teachers in their new incorporation into the profession. The difficulties that appeared at that time focused mainly on aspects related to motivation and interactions with families and colleagues (Britton et al., 1999; Serpell, 2000). In other studies, difficulties also appeared around content mastery and connection with students (Escartín, 2008), as well as classroom management and discipline (Ávalos, 2016). Finally, difficulties related to the management team, the organisation of classroom work, the mastery of different teaching methods and the detection of students with Special Educational Needs (SEN) (Cañón et al., 2017) have also appeared in other research.

There are also other questionnaires that measure the difficulties faced by teachers in terms of: coexistence (Muñoz et al., 2014), inclusive education (Zamora, 2021), their competence for online teaching (Luna-Serrano & Hernández-Villafaña, 2020) or their knowledge, attitudes, skills, subjective norms, behavioural intentions and teaching behaviours for teaching (López-Lujan & Sanz, 2021).

With regard to research focused on student teachers and students of the Master's Degree in Teacher Training -the subject of this article- there are different instruments that focus on:

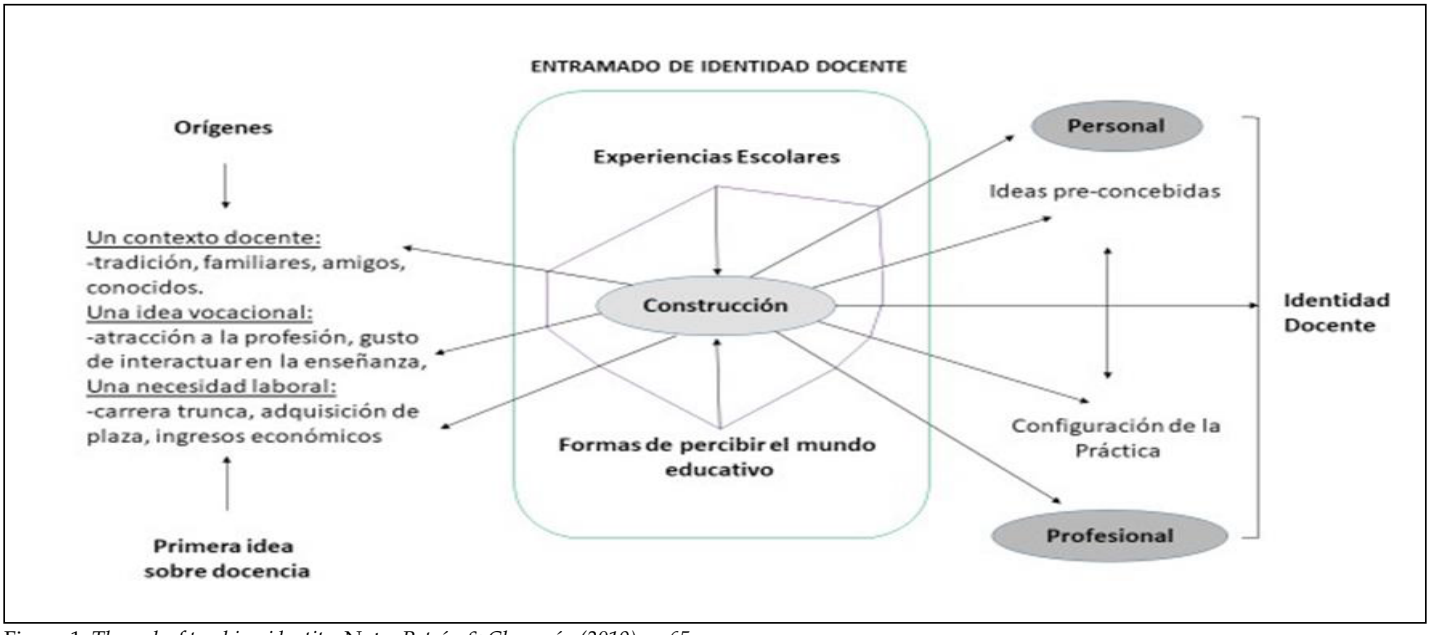

Figure 1. *The web of teaching identity.* Note. *Patrón & Chagoyán (2019), p. 65.*

the analysis of teaching practices (Serrano & Pontes, 2017), on their pedagogical training (Cantón, et al., 2013), on their training needs based on the practicum and the contribution of the different subjects to the acquisition of teaching competences (Fuentes et al., 2008), on their training in values (Soto et al., 2021), on their perception of their professional competences once they have graduated (Arribas et al., 2016; Hortigüela et al., 2014; Santos et al., 2012) or on the professional competence to be an "inclusive teacher" (Izuzquiza et al., 2015). As can be seen, there is no specific instrument that focuses on the analysis of the difficulties and fears of Master's Degree or Teacher Training students prior to their incorporation into the professional world.

Detecting these difficulties and fears that students perceive in their first contacts with the profession through their internships (Kennedy, 1999; Marcelo, 2009) is essential in order to adapt their training (Fullan, 2002) and propose modifications to the curricula and the "modes" of training university students (Martínez & Villardón, 2015).

Therefore, this article aims to confirm the validity of the theoretical model of the Teaching Problems Inventory (Jordell, 1985) -adapted by Marcelo (1993) and Cañón (2012)-, for a sample of college students from the Bachelor's Degree in Teaching and the Master's Degree in Teaching. We hypothesize that the factor structure and internal consistency of the scores does not vary with student respondents of the present study.

2. Method

2.1. Participants

Participants of the present study were 352 undergraduate and master teacher degree students, selected through a non-probabilistic convenience sampling method. Students were recruited from private Valencian university with in-person teaching. The sample is distributed as follows: 79.4% female and 20.6% male, similar to the international (TALIS, 2019), national and regional reality. Regarding the age of the students, 33.3% were between 18 and 20 years old; 34.5% between 21 and 23; 19.9% between 24 and 30; and 12.3% over 30. In terms of studies, 37.1% are studying Early Childhood Education; 32% are studying Primary Education; and 25.2% are studying for a Master's Degree in Teaching. Of the teacher training students, 79.1% are in the 1st and 2nd years and 20.9% in the 3rd and 4th years. It should be borne in mind that teacher training students at this university divide their placements between all the degree courses. Finally, by specialisations of the Master's Degree in Teaching: Educational Guidance, 21.2%; 17.9%, Mathematics; 19.9%, Biology-Geology; 22.5%, Physical Education; and the remaining 18.5%, Health branch.

2.2. Instrument

The Teaching Problems Inventory (Jordell, 1985), translated and adapted by Marcelo (1993), was used. In this adaptation, the number of items was reduced to adapt it to the Spanish context, dividing it into 8 dimensions: teaching, planning, evaluation, relationships, initiation activities, school resources, relationships with parents, perceptions of the school environment, professional satisfaction, and time spent teaching. Subsequently, Cañón (2012) carried out a new revision and established 4 dimensions: Academic, Organisational, Social and Material-Technological difficulties. In our study, the classification by Cañón (2012) is followed, with 5 levels of response: 1 = No difficulty, 2 = Little difficulty, 3 = Medium difficulty, 4 = Quite a lot of difficulty, and 5 = Great difficulty. The relation item-dimension is presented in Table 1.

Table 1
Relation of items according to the factors.

Organizational Difficulties (F2)	1. Maintain proper academic organization in the classroom.
	2. Organize some activities in class (e.g.: group work, theater, ...).
	12. Being pressured by the time in which the contents have to be covered.
	13. Deciding how much content to teach
	14. Scheduling a lesson for one day
	16. Organizing the daily work of the class
	28. Not having enough free time to devote to the students
	40. Having insufficient information about school rules and routines
	42. Having encountered more difficult working conditions than other professionals in the school (larger class sizes, worse, heavier teaching loads)
	45. High number of students in class
	46. Shortage of departments and reading areas in school
	47. Finding time to prepare materials
	48. Finding time to read professional books and journals
	51. Distance of the school from my home
Academic Difficulties (F1)	3. Motivate students in their schoolwork.
	4. Explaining lessons to students
	5. Introducing new teaching-learning activities.
	6. Treating students in a differentiated and individualized way.
	7. Be creative in teaching
	9. Know what students already know
	10. Know at what level to present the content
	11. Knowing what content to emphasize or break down further.
	18. Making content mistakes when I am explaining
	19. Not having enough knowledge of the subject(s) I am teaching.
	20. Taking exams
	21. Assessing the learning level of the students
	22. To know if my teaching is effective
Material-technological Difficulties (F4)	8. Choose textbook
	17. Use of teaching aids (slides, videos, newspapers, computers...)
	27. Encountering rejection by students when I carry out teaching methods they are not used to using.
	33. Encountering resistance or skepticism from parents when trying new teaching methods.
	39. Having insufficient information on how to locate teaching materials
	41. Arousing skepticism or resistance from peers or principal when attempting to develop new teaching methods
	44. Shortage of teaching materials in the school.

Social Difficulties (F3)	23. Defining my role as a teacher
	24. Knowing if the students like me
	25. Making personal contact with the students
	26. Having to be stricter with the students than I would like to be.
	29. Discipline problems with students/groups of students.
	30. Not having enough information about the students and their home environment.
	31. Relationships with parents
	32. Finding parents indifferent
	34. Disagreements in relations with parents
	35. Cooperating with peers
	36. Having the opportunity/time to talk to peers
	37. Feeling poorly integrated professionally in school and among classmates
	38. Professional disagreements with peers
	43. Disagreements in relations with the school principal
	49. Finding time to spend with family and friends
	50. Keeping my private life separate from the school
	52. Establish new relationships in the school environment.
	53. Limitations of the work location with respect to cultural activities, services, communications, etc.
	54. Quality of accommodation
	55. Being preoccupied with day-to-day teaching

2.3. Data Analysis

Descriptive statistics and reliability analysis were conducted using SPSS v.25.0 (SPSS; IBM, 2017). In addition, JASP software v0.16 (JASP Team, 2021) was used for confirmatory factor analysis (CFA) in order to confirm that the theoretical structure proposed by previous studies (Cantón, 2012) fit our data. We checked the sample size, normality, linearity, and correlation between variables assumptions for factor analysis (Tabachnick & Fidell, 1989). Fit indices for the CFA were Chi-square, the root mean square error of approximation (RMSEA), the comparative fit index (CFI) and the Tucker-Lewis index (TLI). A non-significant chi-square test indicates an adequate fit to the data. A near-zero RMSEA and a CFI and TLI close to 1.0, indicate an excellent fit to the data (Hu & Bentler, 1999). Finally, in order to test for sensitivity, analysis of variance (ANOVA) was conducted to assess whether the factors and the total score were sensitive enough to capture different ratings with different groups of age. A 95% Confidence Interval (CI) was set as a reference value. In addition to *p* values, effect sizes were calculated through eta squared (η^2) to interpret the relevance of results. Values of .10, .25 and .37 indicate small, medium, and large effect sizes, respectively (Goss-Sampson, 2020). Finally, Bonferroni correction was applied to avoid type I error for multiple testing in post-hoc analysis. Probability values were interpreted after correction with attention to Cohen's d effect size values, corresponding with .20, .50 and .80 for small, medium, and large effect sizes, respectively.

3.- Results

The overall score was (M = 2.55, SD = 0.55). The four dimensions also showed a score with mean values around 2.5 on a scale of 5. Specifically, Academic Difficulties (F1) had an average score of 2.40 (SD = 0.645), Organizational Difficulties (F2) was 2.57 (SD = 0.61), Social Difficulties (F3) was 2.55 (SD = 0.62), and Material-technological Difficulties (F4) was 2.74 (SD = 0.65).

3.1. Reliability

Cronbach's Alpha was, for F1 = .85 (average interitem correlation = .30 [.25 to .34]), and the correlation of all items with the factor were high (average item-factor correlation = .50). Factor 2 showed a Cronbach's Alpha =.84 (average interitem correlation = .28 [.24 to .32]), and the correlation of all items with the factor were high (average item-factor correlation = .48). Factor 3 showed a Cronbach's Alpha = .88 (average interitem correlation = .28 [.24 to .32]), and the correlation of all items with the factor were high (average item-factor correlation = .50). Finally, F4 showed a Cronbach's Alpha = .69 (average interitem correlation = .24 [.19 to .28]), and the correlation of all items with the factor were high (average item-factor correlation = .24).

Fit measures of single-factor model fit also indicated a strong association between the items withing each factor. Fit measures for F1 were (χ^2 (65) = 366.33, p<.001), for F2 were (χ^2 (77) = 497.21, p<.001), for F3 (χ^2 (170) = 1265.51, p<.001) and for F4 were (χ^2 (14) = 34.43, p= .002). Additional fit measures were calculated on F4 due to the obtained low Alpha value. Appropriate values were found, however, indicating a good fit (RMSEA= .06, SRMR= .076) and that all items worked together good enough in F4.

3.2. Confirmatory Factor Analysis

Results of the CFA revealed factor weights between .34 (item 18) and .90 (item 7) in F1; between .36 (item 51) and .72 (item 47) in F2; between .39 (item 54) and .71 (item 50) in F3; and between .15 (item 8) and .72 (item 39) in F4. Estimates were statistically significant in all cases.

The goodness of fit was good overall, indicating that the four factors proposed by previous studies fit the data appropriately: χ^2 = 2835.989; df = 1371, p < .001, CFI= .931, TLI = .928, IFI = 932, RMSEA = .059 [.056 to .062]. Table 2 presents factor loadings for the CFA, showing the confirmed four-factor solution.

Factor covariances were statistically significant in all cases, as shown in Figure 2. Covariances between F1 and F2 were (b = .78, SE= .021, z = 36.87, p <.001). Between F1 and F3 were (b = .77, SE = .018, z = 41.96, p <.001). Between F1 and F4 were (b =.64, SE = .030, z = 21.59, p <.001). Between F2 and F3 (b = .88, SE = .019, z = 45.07, p < .001). Between F2 and F4 (b = .89, SE= .035, z = 25.54, p <.001). And between F3 and F4 (b = .88, SE= .032, z = 27.72, p < .001).

3.3. Correlation analysis

As the next step, we calculated the correlations between factors. We found statistically significant correlations between factors in all cases. Differences were high, but did not indicate collinearity. This indicated that factors were strongly associated but still measured different components (Table 3).

Table 2
Factor loadings from the CFA for each scale dimension.

						95% CI								95% CI	
Factor	Indicator	Estimate	SE	z	p	Lower	Upper	Factor	Indicator	Estimate	SE	z	p	Lower	Upper
F1	Item3	0.742	0.025	29.937	< .001	0.694	0.791	F3	Item23	0.577	0.020	29.079	< .001	0.538	0.616
	Item4	0.445	0.020	22.429	< .001	0.406	0.484		Item24	0.642	0.021	30.272	< .001	0.601	0.684
	Item5	0.535	0.020	26.476	< .001	0.495	0.574		Item25	0.511	0.020	25.613	< .001	0.472	0.551
	Item6	0.622	0.025	24.591	< .001	0.573	0.672		Item26	0.502	0.020	24.700	< .001	0.463	0.542
	Item7	0.897	0.033	26.829	< .001	0.831	0.962		Item29	0.598	0.020	29.988	< .001	0.559	0.637
	Item9	0.454	0.019	23.989	< .001	0.417	0.491		Item30	0.490	0.019	25.987	< .001	0.453	0.527
	Item10	0.551	0.020	28.038	< .001	0.513	0.590		Item31	0.663	0.023	28.386	< .001	0.617	0.709
	Item11	0.594	0.022	27.416	< .001	0.552	0.637		Item32	0.444	0.019	23.591	< .001	0.407	0.480
	Item18	0.336	0.020	16.929	< .001	0.297	0.375		Item34	0.487	0.019	25.469	< .001	0.449	0.524
	Item19	0.616	0.022	27.444	< .001	0.572	0.660		Item35	0.530	0.021	25.410	< .001	0.489	0.571
	Item20	0.459	0.021	21.653	< .001	0.418	0.501		Item36	0.573	0.019	29.512	< .001	0.535	0.611
	Item21	0.631	0.023	27.406	< .001	0.586	0.677		Item37	0.642	0.023	27.574	< .001	0.596	0.688
	Item22	0.762	0.023	32.652	< .001	0.716	0.808		Item38	0.538	0.020	26.445	< .001	0.498	0.578
F2	Item1	0.520	0.020	26.561	< .001	0.481	0.558		Item43	0.480	0.020	23.574	< .001	0.440	0.520
	Item2	0.473	0.018	25.995	< .001	0.437	0.508		Item49	0.589	0.023	25.171	< .001	0.543	0.635
	Item12	0.610	0.022	28.353	< .001	0.568	0.653		Item50	0.707	0.024	28.873	< .001	0.659	0.755
	Item13	0.523	0.018	28.934	< .001	0.488	0.559		Item52	0.515	0.020	25.598	< .001	0.476	0.555
	Item14	0.513	0.019	26.451	< .001	0.475	0.551		Item53	0.512	0.017	29.306	< .001	0.478	0.547
	Item16	0.511	0.019	27.597	< .001	0.474	0.547		Item54	0.390	0.021	18.272	< .001	0.348	0.432
	Item28	0.631	0.021	29.441	< .001	0.589	0.673		Item55	0.590	0.021	27.798	< .001	0.549	0.632
	Item40	0.621	0.022	28.676	< .001	0.579	0.664	F4	Item8	0.152	0.022	6.849	< .001	0.109	0.196
	Item42	0.563	0.019	29.252	< .001	0.526	0.601		Item17	0.361	0.021	17.381	< .001	0.320	0.402
	Item45	0.584	0.021	27.749	< .001	0.543	0.625		Item27	0.622	0.025	24.747	< .001	0.573	0.671
	Item46	0.420	0.020	21.345	< .001	0.382	0.459		Item33	0.615	0.024	25.272	< .001	0.567	0.663
	Item47	0.723	0.022	33.285	< .001	0.680	0.765		Item39	0.724	0.028	25.716	< .001	0.668	0.779
	Item48	0.504	0.021	23.883	< .001	0.463	0.546		Item41	0.690	0.027	25.619	< .001	0.637	0.743
	Item51	0.363	0.023	16.087	< .001	0.319	0.407		Item44	0.508	0.025	20.688	< .001	0.460	0.556

Note: F1 = Academic difficulties, F2 = Organizational Difficulties, F3 = Social Difficulties, F4 = Material-technological difficulties, SE = Standard Error

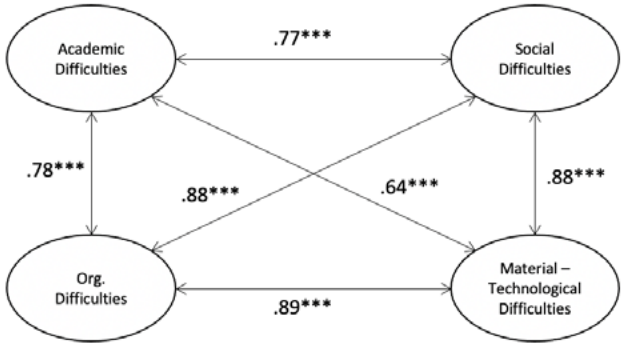

Figure 2. *CFA's Unstandardized factor covariates.*

Table 3
Correlations between factors.

Factor	1	2	3	4
1. Academic Difficulties	—			
2. Organizational Difficulties	0.679 ***	—		
3. Social Difficulties	0.686 ***	0.774 ***	—	
4. Material-techno-logical Difficulties	0.554 ***	0.710 ***	0.713 ***	—

* p < .05, ** p < .01, *** p < .001

3.4. Sensitivity Analysis

Finally, sensitivity analysis was conducted with the four-factor solution. The students' ratings of Teaching Difficulties were compared among age groups. Students were grouped in four age groups: Group 1, from18 to 20 years old (n = 117); group 2, from 21 to 23 years old (n = 121); group 3, from 24 to 26 years old (n = 69), and group 4, with students older than 27 years old (n = 43). Assumptions for variance analysis were met. ANOVA results revealed statistically significant differences in F2, F3 and Overall score with age group "4" scoring higher than group "2" in all cases, and higher than group "1" in F2. These differences had medium effect sizes. No differences were found in F4 between age groups (Table 4). The fact that F1 showed statistically significant differences and post hoc tests did not reveal relevant paired comparisons was due to Bonferroni correction for multiple testing of our *p* value. The effect size, however, was medium (Cohen's d= .50) in F2, also between age group 4 and 2 This result showed that older students were more concerned about Organizational aspects. Thus, the scale was sensitive enough to capture different scores in different groups of students.

4. Discussion

The validity of the theoretical model of the Teaching Problems Inventory is confirmed for a sample of university students of the Bachelor's Degree in Teaching and the Master's Degree in Teaching. The Teaching Difficulties Questionnaire, as shown in the Results, presents a solid validity in all its Factors and in the Questionnaire as a whole. In this way, its correct functioning is validated in order to evaluate the difficulties and fears perceived by undergraduate and master degree students with regard to their future teaching. The added value of this research, which gives it novelty, is the sample to which it is addressed. Previous research using this questionnaire has focused on novice practicing teachers, with less than 5 years of professional experience. However, this study focuses on undergraduate and graduate students of Education in order to detect their possible difficulties, allowing to anticipate, prevent, and work on them prior to their incorporation into the professional world.

Therefore, this questionnaire can become an essential tool for implementing improvements in the study plans of Bachelor's and Master's degree students, detecting their training, pedagogical and personal needs, difficulties and shortcomings. In this way, their incorporation into the world of work and their professional competence can be improved.

Table 4
Differences between age groups on the scale factors and the overall score.

Age group	*M*	*SD*	*df*	Mean Square	*F*	*p*	η^2	Post hoc direction of effects
F1								
1	2.37	0.63	3	1.31	3.25	**0.022**	0.03	No relevant *p* after
2	2.31	0.65						Bonferroni Correction,
3	2.54	0.66						but Group 4 > 2 (*d* = 0.50)
4	2.59	0.56						
F2								
1	2.51	0.62	3	1.64	4.58	**0.004**	0.04	Group 4 > 1 (*p* = .007)
2	2.50	0.59						Group 4 > 2 (*p* = .005)
3	2.64	0.65						
4	2.86	0.46						
F3								
1	2.56	0.66	3	1.10	3.00	**0.031**	0.03	Group 4 > 2 (*p* = .02)
2	2.48	0.55						
3	2.53	0.67						
4	2.80	0.44						
F4								
1	2.76	0.66	3	0.69	1.67	0.174	0.01	—
2	2.74	0.66						
3	2.64	0.68						
4	2.92	0.49						
Overall								
1	2.53	0.57	3	0.98	3.31	**0.020**	0.03	Group 4 > 2 (*p* = .01)
2	2.48	0.54						
3	2.57	0.60						
4	2.78	0.39						

Note: F1 = Academic difficulties, F2 = Organizational Difficulties, F3 = Social Difficulties, F4 = Material-technological difficulties

In addition, it offers the opportunity to use the complete Questionnaire, that is, analysing its 4 Factors, as a whole; or to establish measures between those specific Factors that may be of interest at a given moment. Thus, the Questionnaire has different modalities: Complete Questionnaire (4 Factors) or Questionnaire by Factor: Academic Difficulties; Organisational Difficulties; Social Difficulties; and Material-Technological Difficulties. This analysis by independent Factors also allows comparisons to be made with other similar research that addresses only one of the Factors of the Questionnaire. For example, comparisons could be made in terms of Academic difficulties with the studies of Escartín (2008), which analyses the difficulties that future teachers perceive in relation to the teaching of certain disciplinary content.

The results could also be compared with the work of Ávalos (2016), which detects the difficulties of Master's Degree students in classroom management and the establishment of discipline, and Cañón et al. (2017), which focuses on the difficulties of student teachers in terms of mastering different teaching methodologies and detecting possible students with learning difficulties. In terms of organisational difficulties, it allows a comparison to be made with the study by Cañón et al. (2017), which analyses the difficulties of student teachers in organising their work in the classroom and in the school. On the other hand, with regard to social difficulties, it allows comparisons to be made in terms of relationships with students (Escartín, 2008) and with colleagues and management teams (Cañón et al., 2017).

Finally, with regard to the Material-technological difficulties of students in Teacher Training and the Master's Degree in Teaching, comparisons can be made with the work of Fernández et al. (2020), in which they analyse Galician Teacher Training students and propose that the more training they have, the more confident they are in the use of ICT. Along the same lines, the results can be compared with the work of Gutiérrez-Martín et al. (2010), who define the difficulties encountered by student teachers in the pedagogical use of ICT, as well as with the work of Cabero et al. (2016), which focuses on the difficulties in attending to students with disabilities through the use of ICT.

The main limitation of this research is the impossibility of making full comparisons with other similar research, as there are, to our knowledge, no previous studies analyzing the difficulties perceived by teacher training and teacher training master's degree students with regard to their teaching. It also has limitations in terms of sample size and type of sampling, which could limit the generalizability of the results. Finally, future lines of research could compare the difficulties presented by future teachers and novice teachers (Henry et al., 2011; Ingersoll & Strong, 2011; Kidd et al., 2015; Saka et al., 2013; Veenman, 1984), as well as future teachers and active teachers with years of experience (López-Luján & Sanz, 2021). This information can help to modify the content of university students' initial training curricula, adapt their training practices and guide proposals for in-service teacher training.

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