

The initial teacher training in attitudes toward cultural diversity. Validation of a scale

La formación inicial del profesorado en las actitudes hacia la diversidad cultural. Validación de una escala

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Summary

The purpose of this investigation was to confirm the scale of Attitudes toward Cultural Diversity (ADC). The instrument comprises 7 dimensions: positive intentions, negative intentions, positive beliefs, negative beliefs, positive behavior, negative emotions and support capacity. The sample consisted of 508 students of the Faculty of Education at the University of Cordoba. The results of the ADC show that this scale is a reliable and valid scale for measuring attitudes toward cultural diversity. Furthermore, it was shown that future teachers have positive attitudes to cultural diversity and the teacher's training received had a positive influence in reducing negative attitudes.

Keywords: attitudes, cultural diversity, higher education, confirmatory factor analysis and scale.

Resumen

El propósito de esta investigación ha sido confirmar la escala de Actitudes hacia la Diversidad Cultural (ADC). El instrumento consta de 7 dimensiones: *intenciones positivas, intenciones negativas, creencias positivas, creencias negativas, conductas positivas, emociones negativas y capacidad de apoyo*. La muestra está compuesta por 508 estudiantes de la Facultad de Ciencias de la Educación de la Universidad de Córdoba. Los resultados obtenidos de la escala ADC muestran que esta escala es fiable y válida para medir las actitudes hacia la diversidad cultural. Además, se demuestra que los futuros docentes presentan actitudes positivas ante la diversidad cultural y la formación docente recibida, influye positivamente en la reducción de actitudes negativas.

Palabras clave: actitudes, diversidad cultural, educación superior, análisis factorial confirmatorio y escala.

INTRODUCTION

Cultural diversity is a constant feature that is becoming more visible every day in the European Union. For example, there are currently 4.5 million foreign residents in Spain, with an equal percentage of men and women, and where more than 400 thousand are minors in compulsory school ages (INE, 2018). This diversity is observed in the constant number of immigrants in society's day-to-day (Gómez-Quintero and Fernández-Romero, 2014), the evident emergence of a second-generation school population, and the continuous migratory flux (legal or illegal) that began long ago (Llorent, Llorent-Bedmar, Mata, Messina, 2013, Plaza del Pino, 2012), which despite the economic crisis, has yet to continue. Recent data show that more than 200 thousand people arrived in Spain in this last year (INE, 2018). Tourism should also be considered, which has become less of a seasonal activity over the years, resulting in permanent stays, normally from other European countries. Also, the globalized nature of work has provoked international travels for work reasons, and, with a special mention due to its social and media impact, the refugee population that has been created by the political instability in Syria and Iraq, and who are on their way to Europe (CEAR, 2016), with all of them comprising a great population with clear religious and cultural differences in the Spanish context. All of these factors have had, and will have, a great impact on the school and the school system, when seen as a reflection of the society we live in (Sánchez, Santos and Lorenzo, 2012; Solí and Martínez, 2014; Solórzano, 2013).

The schools and the school system, from their theoretical approaches, wager for an inclusive model, where equal opportunities are given to the entire student body (Abós, 2015; Muntaner, 2010). In this regard, the teacher, as the ultimate responsible for providing high-quality education (Fernández, 2006; Vázquez-Alonso and Manassero-Mas, 2015) without discrimination for the entire student body, should be trained to face this new reality (Dainez and Naranjo, 2015; Llorent and López, 2012; Louzada *et al.*, 2015).

The teacher, as the provider of inclusive education in the reality of school, has been the subject of study due to his or her training and attitudes and perceptions when faced with cultural diversity. Numerous research studies have been conducted on the attitudes towards diversity and inclu-

sion of the teachers undergoing initial training (Campbell, Gilmore and Cuskelly, 2003; Llorent-Bedmar and Llorent, 2012; Taylor and Ringlaben, 2012), as well as currently-active teachers (MacFarlane and Woolfson, 2013; Mauerberg-de Castro *et al.*, 2013; Vaz *et al.*, 2015).

The review of the recent studies on the training of teachers and their attitudes towards diversity and inclusion, has established key variables such as gender, age, previous experience or contact, and of course, the academic year they are currently in.

The study of the gender variable offers contradictory results at first sight, as the research studies have provided data that point to three different directions. On the one hand, some studies have mentioned that students with different university degrees related to diversity did not show differences according to gender (Martínez, and Bilbao, 2011; Moreno, Rodríguez, Saldaña and Aguilera, 2006). In contrast, the research studies by Batsiuo, Bebetos, Panteli and Antoniou (2008) and Abellán (2015) indicated that there were significant differences, with the currently-active male teachers having a more positive attitude than women. However, there is a greater number of research studies that suggest that women have a greater sensibility towards inclusion than men (Eichinger, Rizzo and Sirotnik, 1991; Izuzquiza, Echeita, and Simón, 2015; López and Hinojosa, 2015; Muñoz, Novo and Espiñeira, 2013; Novo, Muñoz and Calvo, 2015; Vaz, *et al.*, 2015), whose data completely differ from the first two studies. It is this last perspective, regarding gender, which supports the hypothesis of the present research.

Another variable included in the studies on the attention to diversity or inclusion, was the age of the future teachers. Forlin (1995) stated that the younger students had a greater level of positive attitudes and were pre-disposed towards inclusive practices, as opposed to teachers who were older, as confirmed by Vaz *et al.* (2015). On the other hand, Carroll, Forling and Jobling (2003) highlighted that no differences were found as for age when the teachers were actively teaching, due to their permanent training. However, in a study by Izuzquiza *et al.* (2015), the students who were older than 26 years of age had a more positive evaluation about diversity than younger participants. Following this study, a hypothesis is posited that the older the teacher is, the greater the scores on the attitudes towards cultural diversity.

The variable previous experience has been one of the most-studied variables by scholars. In fact, there are many research works that state that the best strategy for reducing prejudices is contact with people from other

religions, cultures or nationalities (Allport, 1954; Calvo, Pérez and López, 2015). All the research studies are in agreement in that for active teachers (Avramidis, Bayliss and Burden, 2000; Brownlee and Carrington, 2000), as well as future ones (Abellán, J. 2015; Campbell *et al.*, 2003; Izuzquiza *et al.*, 2015; Polo, Fernández and Díaz, 2010), or even students from other academic levels (Moreno *et al.*, 2006; Olaleye *et al.*, 2012; Polo and López, 2006), contact with people who have a specific need, leads to better results as compared to the professionals or students who have not had this contact, with this being the starting hypothesis of the present research study.

The academic year is a key variable to examine if one is to identify the impact of the initial training on the future educators. In the study by Moreno *et al.* (2006), who studied the attitudes of Teaching, Psychopedagogy and Psychology students, showed that the students in the last academic year (5th year) had a more positive attitude than the students from the lower academic years (2nd year Special Education Teacher, 1st year Psychopedagogy and 4th year Psychology). The authors showed that the more advanced students obtained better results due to the possibility of broadening their training that referred to the subject of inclusiveness, a conclusion that supports another hypothesis of the present work.

In summary, all the research works cited hold data on diversity or inclusion in general, and general data on disability, which has been the most-studied variable. The explanation components of the attitudes are not exclusive, and do not contain all the explanatory factors despite sharing some elements (Ajzen, 2001; Gázquez, Pérez, Carrión, Luque and Molero, 2015; Marín, 2002; Martínez, 2008; Muñoz and Encinar, 2015; Sales and García, 1997). This is why Llorent and Álamo (2016a and 2016b) proposed creating a scale to exclusively and precisely measure the attitudes towards cultural diversity, which has been referenced in other measurement scales (Alonso, Navarro and Vicente, 2008; Llorent and Álamo, 2018; Muñoz *et al.*, 2013; Novo *et al.*, 2011).

The present study will try to validate and construct a definite model of the ADC scale, and will also try to study the attitudes towards cultural diversity of the students from the Faculty of Education at the University of Cordoba.

METHOD

Participants

The sample was composed by a total of 508 students from the Faculty of Education at the University of Cordoba, Spain. It was comprised by

367 women (72.2 per cent) and 141 men (27.8 per cent). This gender distribution has become common in the faculties of education, where the population is largely female, with the study sample being representative of this aspect. The average age of the students was 21.33 years of age ($SD = 3.585$), with a minimum value of 18 and a maximum value of 57. As for the degree, 22.2 per cent were enrolled in the Early Childhood Education Degree, 74.6 per cent were enrolled in the Primary Education Degree, and 3.1 per cent belonged to the Masters in Inclusive Education. As for the academic year, 35.4 per cent were in their first year, 32.9 per cent on their second, 1.6 per cent on their third year, and 26.8 per cent on their fourth. The Master's students were in a higher academic year, and will be defined as 5th year students in the present research. Lastly, 0.2 per cent of the students did not answer this question.

A key characteristic of the sample that should be highlighted is that 74 per cent of the participants had previous experience with persons who had a different religion, culture or nationality, as opposed to 20.9 per cent who did not have it, and 5.1 per cent of the students who did not answer this question.

Instruments

The Attitudes towards Cultural Diversity (ADC) questionnaire, created ad hoc, was used to measure the attitudes of the subjects when faced with cultural, religious or nationality differences of persons around them. Previous exploratory studies have been conducted with this scale, starting with the dimensions: emotions, behaviors, beliefs and intentions, following the theoretical foundation. After the corresponding exploratory analysis (Llorent and Álamo, 2016a), a scale was obtained which was comprised by 28 items grouped into seven factors (*positive intentions, negative intentions, positive beliefs, negative beliefs, positive behaviors, negative emotions and support capacity*).

Each item offers a degree of agreement or disagreement in a Likert-type scale with five response options (from 1 “completely agree” and 5 “completely disagree”).

Procedure

The university professors helped with accessing the student sample, and they were previously informed about the object of the study. An explanation of the research was provided for each group of students, and their voluntary collaboration and complete sincerity was asked of them, which was

protected by the anonymity of the questionnaire. The scale was applied collectively, with an approximate duration of 10-15 minutes.

Data analysis

To validate the ADC scale, diverse statistical analyses were conducted. In first place, a descriptive study was performed of all the items: mean, standard deviation, kurtosis and asymmetry. For the study of the scale, the response categories were inverted, so that all the data had the same positive sense. The internal consistency was measured with Cronbach's Alpha. The parameters of the exploratory factorial analysis were estimated using the method of Principal Component Analysis with Varimax rotation, and the confirmatory factorial analysis was performed with the parameter of maximum likelihood (Lloret-Segura, Ferreres-Traver, Hernández-Baeza, Tomás-Marco, 2014). Lastly, the goodness-of-fit was analyzed through comparative fit index (CFI), non-normed fit index (NNFI), goodness-of-fit index (GFI), root mean square error of approximation (RMSEA) and the standardized root mean residual (SRMR). A goodness-of-fit was considered to be acceptable when values above .90 were obtained in the case of CFI, NNFI and GFI, and values below 0.8 in SRMR and RMSEA (Hair, Anderson, Tatham and Black, 2001; Vieira, 2011). The confirmatory statistical analysis were conducted with the EQS 6.2 software program.

For the inferential analysis of the study –Levene's test, Student's t test, one-way ANOVA, Welch's ANOVA and post hoc multiple comparison (Bonferroni and Games-Howell) and Pearson's correlation-, the software program SPSS v. 23 was used. In the case of these analysis, the categories were not inverted.

RESULTS

Descriptive results and internal consistency of the scale

The results obtained from the ADC scale indicated an average score of 4.01 (SD = 0.55) of all the items, and with the knowledge that the range of scores oscillated between 1 and 5, this was considered a high score. As shown in Table 1, the negative dimensions, such as *negative intentions* (M = 4.26, SD = 0.78), *negative beliefs* (M = 4.21, SD = 0.84) and *negative emotions* (M = 4.15, SD = 0.86); were the dimensions that obtained the highest means. This was followed by the dimension *support capacity*, with a mean of 4.12 (SD = 0.81), which was also considered high. Lastly, the following were also found to be above the mean of 3: *positive behaviors*

($M = 3.84$, $SD = 0.75$), *positive beliefs* ($M = 3.83$, $SD = 0.82$) and *positive intentions* ($M = 3.49$, $SD = 1.10$). Table 1 also shows the data on asymmetry (As) and kurtosis (K) of each item, for a more detailed description of the scale.

The internal consistency was calculated with Cronbach's Alpha (Table 1), with a total of .88 obtained for the entire scale, which was considered to be high. The reliability of each dimension of the ADC scale showed a high internal consistency of the data in the dimensions *negative intentions* and *support capacity*. For the rest of the dimensions, the reliability was considered to be adequate (Orozco, Labrador and Palencia, 2002, Schmitt, 1996).

Confirmatory factorial analysis

To validate this scale, a confirmatory factorial analysis (CFA) was conducted. As already indicated in the introduction section, the different exploratory models were analyzed. Three different models were tried (Table 2). In first place, the theoretical model (Model 1) was tried, which was composed by four factors (beliefs, behaviors, intentions and emotions), however, its statistical results were not satisfactory.

Thus, an exploratory factorial analysis was performed in order to construct a new model (Model 2). The four initial factors of Model 1 were duplicated, and given the negative and positive duality of each dimension, this resulted in eight factors.

After an adequate fitting of the scale according to the theoretical foundations and the contributions from the exploratory statistical analyses, a model was achieved that was composed by 28 items grouped into seven factors (*positive intentions*, *negative intentions*, *positive beliefs*, *negative beliefs*, *positive behaviors*, *negative emotions* and *support capacity*). After performing a factorial model through structural equations, the first two models were rejected, and Model 3 was confirmed (Llorent and Álamo, 2016a). Thus, the scale was finalized with 28 items ($\alpha = 0.88$), with a total explained variance of 63.56 per cent, whose goodness-of-fit indexes were optimal (Figure 1).

Table 1: Descriptive results and analysis of reliability of the ADC scale

Factor	α	Item	M	SD	As	K
Negative intentions (Inverted)	0.88	18	4.30	1.10	-1.53	1.37
		19	3.84	1.16	-0.67	-0.50
		20	4.35	1.03	-1.58	1.66
		22	3.89	1.16	-0.72	-.50
		24	4.48	0.93	-1.90	3.08
		25	4.55	0.98	-1.42	6.66
		26	4.53	0.93	-2.07	3.55
		28	4.11	1.14	-1.09	0.23
		Total	4.26	0.78	-1.57	2.50
Factor	α	Item	M	SD	As	K
Positive intentions	0.60	15	3.89	2.63	17.07	349.31
		16	3.54	1.07	-0.28	-0.53
		21	3.43	1.12	-0.16	-0.73
		17	3.12	1.17	-0.05	-0.73
		Total	3.49	1.10	4.10	52.96
Factor	α	Item	M	SD	As	K
Positive beliefs	0.77	10	3.55	1.09	-0.41	-0.35
		27	3.88	1.05	-0.75	0.09
		12	4.02	1.09	-0.90	-0.01
		14	3.88	1.05	-0.90	0.71
		Total	3.83	.82	-0.70	0.60
Factor	α	Item	M	SD	As	K
Negative beliefs (Inverted)	0.78	8	4.48	.88	-1.74	2.41
		9	4.29	1.04	-1.40	1.09
		13	3.86	1.11	-0.71	-0.23
		Total	4.21	.84	-1.26	1.26
Factor	α	Item	M	SD	As	K
Negative beliefs (Inverted)	0.69	3	4.05	1.16	-1.05	0.17
		6	4.15	1.08	-1.22	0.71
		11	4.26	1.04	-1.44	1.35
		Total	4.15	.86	-0.93	0.39
Factor	α	Item	M	SD	As	K
Positive behaviors	0.68	2	3.78	1.02	-0.64	0.01
		23	4.10	0.82	-0.74	0.39
		4	3.62	1.02	-0.47	-0.14
		Total	3.84	0.75	-0.44	0.38
Factor	α	Item	M	SD	As	K
Support capacity	0.84	5	4.18	0.93	-1.29	1.72
		7	4.17	0.93	-1.09	0.92
		1	4.02	0.93	-0.72	-0.14
		Total	4.12	0.81	-1.06	1.35

Source: Author created.

Table 2: Structural models of the ADC scale according to CFA

Models	χ^2	DF	χ^2/df	CFI	NNFI	GFI	SRMR	RMSEA
Model 1	2150.283	344	6.252	0.71	0.68	0.71	0.11	0.10
Model 2	1752.205	712	2.460	0.89	0.88	0.85	0.05	0.05
Model 3	643.821	328	1.962	0.95	0.94	0.92	0.05	0.04

Source: Author created

ADC according to gender

Next, the inferential results of the variable gender, as related to the ADC scale, are shown in Table 3. Significant differences were observed in the dimensions *positive intentions* ($d = 0.23$; 95% CI = 0.03-0.42) and *positive beliefs* ($d = 0.30$; 95% CI = 0.09 - 0.49) between men and women, where the women answered with a higher score. In the case of *negative beliefs* ($d = 0.32$; 95% CI = 0.12-0.51), just as in the *negative emotions* ($d = 0.50$; 95% CI = 0.30-0.69), the women obtained a lower mean than the men. As for the dimensions *support capacity*, *positive behaviors* and *negative intentions*, no differences were found according to gender.

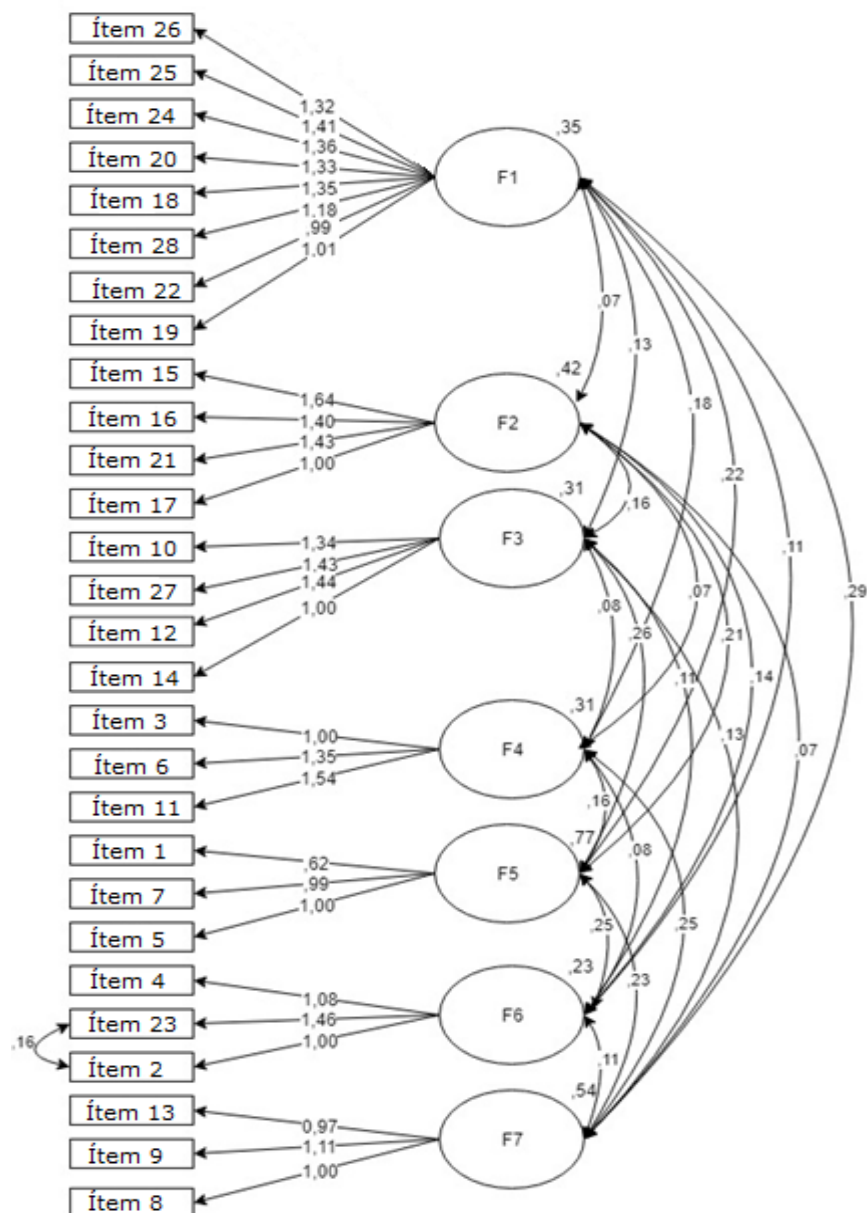
ADC according to age

A Pearson's correlation analysis was conducted in order to know if there was a relationship between age (continuous variable, without category) and the attitudes towards cultural diversity. The results showed a positive correlation with the dimensions *positive intentions* ($r = 0.137$, $p < 0.01$), *positive beliefs* ($r = 0.124$, $p < 0.01$), *support capacity* ($r = 0.154$, $p < 0.01$) and *positive behaviors* ($r = 0.105$, $p < 0.05$), while they showed a negative correlation with *negative intentions* ($r = -0.153$, $p < 0.01$).

Afterwards, the data were categorized by intervals of age (18-19, 20-21, 22-23, 24-25, 26 or older). For this analysis, an ANOVA was performed, except in the case of the dimensions *negative intentions* and *positive beliefs*, given that the result obtained with Levene's test was significant ($p < 0.05$), so that a Welch's ANOVA was performed.

The results from the analysis of the variable age showed that there were no significant differences in the average scores according to age in the dimensions *positive intentions* ($F = 1.668$, $p > 0.05$), *positive behaviors* ($F = 0.690$, $p > 0.05$) (although in both there was a correlation with age as a continuous variable), *negative beliefs* ($F = 0.725$, $p > 0.05$), *positive beliefs* ($F = 2.372$, $p > 0.05$) and *negative emotions* ($F = 2.128$, $p > 0.05$).

Figure 1: Structural model of seven factors of the ADC scale



Source: self made.

Table 3: Descriptive statistics of the variable gender in each dimension of the ADC, and the results from the Student's t test (t)

VD	Gender	M	SD	t
Positive intentions	Male	3.31	0.92	-2.26*
	Female	3.56	1.16	
Positive beliefs	Male	3.70	0.86	-2.75*
	Female	3.93	0.75	
Support capacity	Male	4.05	0.84	-0.81
	Female	4.08	0.77	
Positive behaviors	Male	3.87	0.75	0.63
	Female	3.82	0.75	
Negative intentions	Male	1.89	0.92	2.77
	Female	1.65	0.66	
Negative beliefs	Male	1.97	1.01	2.87*
	Female	1.7	0.76	
Negative emotions	Male	2.14	0.93	4.70**
	Female	1.72	0.8	

*Note: $p < .05$ **Note: $p < .001$

Source: author created

On the other hand, significant differences were found in the other dimensions: *negative intentions* ($F = 5.57$, $p < 0.05$), and *support capacity* ($F = 3014$, $p < 0.05$), with this two also correlating when age was analyzed as a variable without a category. The posterior *post hoc* comparisons of these two factors confirmed the differences in the means between the age groups.

For the *post hoc* comparison of the dimension *support capacity*, a Bonferroni test was performed, obtaining differences between the 18-19 group ($M = 3.91$, $SD = 0.85$), with the group 26 or older ($M = 4.39$, $SD = 0.92$) [$d = 0.56$; 95% CI = 0.15 - .96].

As for the dimension *negative intentions*, a Games-Howell comparison was conducted. In this comparison, differences were also found between the 18-19 group ($M = 1.87$, $SD = 0.85$) with the 22-23 group ($M = 1.58$, $SD = 0.62$) [$d = 0.25$; 95% CI = 0.01 - 0.50]; between the group 18-19 ($M = 1.87$, $SD = 0.85$) with 26 years or older ($M = 1.41$, $SD = 0.42$) [$d = 0.57$; 95% CI = 0.16 - 0.98] and the group 20-21 ($M = 1.73$, $SD =$

0.73) with 26 or older ($M = 1.41$, $SD = 0.42$) [$d = 0.46$; 95% CI = 0.06 - 0.86], where the older students had lower scores in *negative intentions* as compared to the younger students.

ADC according to experience

In the variable experience, as related to the ADC scale, the null hypothesis was accepted in the cases *positive intentions and positive behaviors* (see Table 4), where no significant differences appeared between the subjects who had or not previous experience with people who had another religion, culture or nationality.

Table 4: Descriptive statistics of the variable experience in each dimension of the ADC, and the results from the Student's t test (t)

VD	Experience	Mean	SD	t
Negative intentions	Yes	1.65	0.71	-3.06*
	No	1.90	0.78	
Positive intentions	Yes	3.48	0.92	-.08
	No	3.50	1.64	
Positive beliefs	Yes	3.91	0.78	2.43*
	No	3.70	0.79	
Negative beliefs	Yes	1.71	0.80	-2.42*
	No	1.93	0.88	
Support capacity	Yes	4.14	0.75	3.62**
	No	3.83	0.86	
Positive behaviors	Yes	3.86	0.74	1.54
	No	3.73	0.80	
Negative emotions	Yes	1.79	0.81	-2.36*
	No	2.04	1.01	

*Note: $p < 0.05$

**Note: $p < 0.001$

Source: author created

However, in the other dimensions such as *negative intentions* ($d = 0.34$; 95% CI = 0.12 - 0.56), *positive beliefs* ($d = 0.26$; 95% CI = 0.04 - 0.48), *negative beliefs* ($d = 0.26$; 95% CI = 0.05 - 0.48), *negative emotions* ($d = 0.29$; 95% CI = 0.07 - 0.51), and *support capacity* ($d = 0.40$; 95% CI = 0.17 - 0.62), significant differences were found between the groups (see Table 4). Thus, the subjects who did have previous contact with persons

who had another religion, culture or nationality had significantly higher scores in positive attitudes, and low scores in negative attitudes, as opposed to the group without experience.

ADC according to degree

For the analysis of the variable degree, a Levene's test was used, with the results showing homogeneous variances in all the dimensions, with an ANOVA performed for the comparison of means of the groups, except for *negative beliefs*, for which a Welch's ANOVA was utilized.

According to the student's university degrees, the results revealed differences in the dimensions *positive intentions* and *negative beliefs*, as shown in Table 5. However, the comparison between the degrees with post hoc tests only corroborated differences in the *negative beliefs* between the Early Childhood Education Degree with the Primary Education Degree ($d = 0.29$; 95% CI = 0.09 - 0.51), where the Early Childhood Education Degree students had a lower mean than the Primary Education Degree students.

ADC according to academic year

In the variable academic year, Levene's test applied to the dimensions *negative intentions*, *positive beliefs*, *negative beliefs* and *negative emotions*, showed significant data ($p < 0.05$), thus, for these dimensions, a Welch's ANOVA was performed, while for the rest of the dimension, a one-way ANOVA was utilized.

The results revealed significant differences in the means of the dimensions *support capacity* ($F = 3.91$, $p < 0.05$), *positive beliefs* ($F = 4.02$, $p < 0.05$) and *negative intentions* ($F = 5.71$, $p < 0.05$).

In the Bonferroni *post hoc* comparisons in the dimension *support capacity*, differences in means were found in the groups 1st year ($M = 3.90$, $SD = 0.88$) with 2nd year ($M = 4.16$, $SD = 0.78$) [$d = 0.31$; 95% CI = 0.09 - 0.52]; and 1st year with 4th year ($M = 4.17$, $SD = 0.68$) [$d = 0.33$; 95% CI = 0.11 - 0.56].

For the dimensions that were analyzed with Welch's ANOVA, a Games-Howell *post hoc* test was performed. While differences were found in *negative intentions* between the 1st year with 2nd year students ($d = 0.41$; 95% CI = 0.20 - 0.63), with 4th year ($d = 0.49$; 95% CI = 0.26 - 0.72) and with 5th year/Masters students, the 1st year students ($M = 1.95$, $SD = 0.91$) obtained a lower mean with respect to the academic years 2nd ($M = 1.61$, $SD = 0.69$), 4th ($M = 1.57$, $SD = 0.53$) and 5th/Masters ($M = 1.53$, $SD = 0.44$).

Table 5: Descriptive statistics of the variable gender in each dimension of the ADC, and the results from the ANOVA (*F*)

VD	Degree	Mean	SD	<i>F</i>
Negative intentions	Early Childhood Education Degree	1.59	0.68	2.54
	Primary Education Degree	1.76	0.77	
	Postgraduate (masters and other courses)	1.53	0.44	
Positive intentions	Early Childhood Education Degree	3.70	1.54	3.50*
	Primary Education Degree	3.42	0.94	
	Postgraduate (masters and other courses)	3.82	0.85	
Negative beliefs	Early Childhood Education Degree	1.58	0.63	6.11*
	Primary Education Degree	1.83	0.90	
	Postgraduate (masters and other courses)	1.95	0.76	
Negative emotions	Early Childhood Education Degree	1.75	0.74	1.19
	Primary Education Degree	1.87	0.89	
	Postgraduate (masters and other courses)	1.66	0.86	
Support capacity	Early Childhood Education Degree	4.11	0.77	1.67
	Primary Education Degree	4.05	0.80	
	Postgraduate (masters and other courses)	4.41	0.57	
Positive behaviors	Early Childhood Education Degree	3.78	0.72	0.45
	Primary Education Degree	3.85	0.76	
	Postgraduate (masters and other courses)	3.91	0.70	
Positive beliefs	Early Childhood Education Degree	3.97	0.83	2.22
	Primary Education Degree	3.82	0.77	
	Postgraduate (masters and other courses)	4.09	0.79	

*Note: $p < 0.05$

Source: author created

As for the dimension *positive beliefs*, there were also differences between the 1st and 2nd year ($d = 0.35$; 95% CI = 0.13 - 0.56) and 1st and 4th years ($d = 0.41$; 95% CI = 0.18 - 0.64), with the 1st year ($M = 3.67$, $SD = 0.84$) obtaining a lower mean with respect to the 2nd year ($M = 3.96$, $SD = 0.82$) and the 4th year ($M = 3.97$, $SD = 0.63$).

DISCUSSION

The research conducted previously showed that the attitudes were important elements for future teachers, due to their importance for the educational attention towards cultural diversity (MacFarlane and Marcas, 2013; Maurerberg-de Castro *et al.*, 2013; Vaz *et al.*, 2015). And this was the reason behind the present research study, the preoccupation about an adequate teachers' training when they face with diversity. The creation of an instrument will allow us to know the profile of future teachers, in order to improve it and in order to know how to do this. Thus, the main objective of this study was to validate the ADC scale by Llorent and Alamo (2016a & 2016b), and to construct an exploratory model of the different factors that shape the attitudes towards cultural diversity. Also, the study sought to identify the attitudes towards cultural diversity of the students from the Faculty of Education at the University of Cordoba.

In first place, the ACD scale was comprised by 28 items, with a high reliability obtained for the entire scale ($\alpha = 0.88$). After the theoretical and exploratory study, a scale with seven factors was finally obtained, named: *positive intention*, *negative intentions*, *positive beliefs*, *negative beliefs*, *negative emotions*, *support capacity* and *positive behaviors*. This new model had adequate fit indexes ($\chi^2 = 643.821$ $p < 0.001$; NNFI = 0.94 CFI = 0.95, GFI = 0.92, SRMR = 0.05, RMSEA = 0.04).

In second place, the profile of the teachers in training from the University of Cordoba was found. The subjects of this study obtained an overall score that was medium-high in the scale, with which to consider the attitudes towards cultural diversity of the students from the Faculty of Education at the University of Cordoba, as positive.

By observing each of the dimensions in the ADC scale, it was shown that *negative intention*, *negative beliefs*, *negative emotions* (with the value of their items inverted), and the *support capacity* were the dimensions with the best scores. Once the general studies related to the scale were finished, the conclusions obtained for each variable, independent of the different dimensions of the ACD scale, were also found to be interesting.

As for gender, the women had better scores in *positive intentions* and *positive beliefs*, at the same time that they were more in disagreement with the men in *negative beliefs* and *negative emotions*. These results are in agreement with other research conducted previously (Eichinger *et al.*, 1991; Izuzquiza *et al.*, 2015; Muñoz *et al.*, 2013; Novo *et al.*, 2015; Vaz *et al.*, 2015).

The conclusion extracted from age showed that the younger students had low scores with respect to the older students. This result was not in agreement with the studies from Forlin (1995) and Vaz *et al.* (2015); but it was in agreement with the study by Izuzquiza *et al.* (2015), which clearly stated that the students who were 26 or older had a more positive score, greater will to help people from other cultures, nationality or religion, while also showing a rejection of negative intentions.

In the studies conducted on the attitudes towards diversity and inclusion, the student's previous experience with people who had other religions, cultures or nationalities, was a key element, and this had already been confirmed in numerous studies, where it was shown that this experience had an influence on the re-enforcement of positive attitudes and a rejection of the negative ones (Abellán, 2015; Campbell *et al.*, 2003; Izuzquiza *et al.*, 2015; Polo *et al.*, 2010). Proof of this is that the students who participated in the present research revealed a rejection against *negative intentions*, *negative beliefs* and *negative emotions*, and they also had a greater *support capacity* and more *positive beliefs* towards people who had a different religion, culture or nationality.

The student's degree was also another variable studied, and according to the results, the data were not very relevant. Differences were only found in *negative beliefs* in the two Education Degrees, and this with a low size effect. This could be explained as both of the degrees belong to the Faculty of Education, where a common pedagogic position, a coherent curriculum and professors are shared.

As for the academic year of the students in the study, relevant data was found. The results of this research confirmed the study by Moreno *et al.* (2006), where it was shown that the students who were enrolled in the later years had more positive attitudes and rejection towards negative attitudes as compared to the students enrolled in the first years of the degree. Thus, it can be concluded that the training received from the Faculty of Education was useful for the positive change of attitudes towards cultural diversity, but also these results could be caused by age. So, more analyses will be done to reach in-depth knowledge about this topic.

Ultimately, this study has allowed validating a reliable instrument for measuring the attitudes towards cultural diversity of the university students. Also, it was possible to identify that the future teachers had positive attitudes towards cultural diversity, and that the training received implied an improvement in the elimination of negative attitudes, at the same time that it created positive attitudes towards inclusion. For future lines of re-

search, it would be interesting to be able to implement the ADC scale in other universities. This would allow obtaining a greater guarantee of the reliability and the validity of the scale, and overall it would be more interesting and recommended for knowing and understanding the impact of university training on the students/future teachers of new generations.

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ANNEX

Questionnaire on the attitudes towards cultural diversity

1. I feel able to support and help anyone who has a different nationality
2. I am very observant when I interact with people from other cultures
3. I dislike foreign people who mix many languages when they talk
4. I tend to wait before making an impression of persons from another ethnicity
5. I am able to help someone from another culture
6. I dislike sharing with people who do activities that are very different from what I usually do
7. I am able to help someone who has another religion
8. The people from other cultures do not like making friends
9. The way of thinking of my culture is more modern
10. The national policies should protect the immigrant
11. I dislike being around people who look different, or act differently
12. The people with other ethnicities should have the same employment opportunities as any other person
13. The people from other cultures do not have an open mind
14. It could be said that the problems related with immigration affect us all in some way, although we do not endure it
15. I would like to participate in aid programs of social inclusion
16. If my university proposed aid programs for immigrants, I would sign up
17. I would like to translate my notes for a classmate who has a different nationality during my hours of relaxation
18. I would not accept opinions from people who have a different culture than mine
19. My grades would be negative affected if I had to do a work in class with an immigrant student who does not speak my language well yet
20. I would enter a club, even though they do not let one of my friends in because he or she has a different nationality
21. My wish is to participate in organizations that support people who are at risk of exclusion
22. I would feel uncomfortable in a bar where most of the people had a different ethnicity than mine
23. I try to learn when I interact with people from different cultures
24. I would try to stay far away from an immigrant
25. I would feel uncomfortable if a person from a different culture sat next to me in class
26. I would not present a person who had a different religion to a friend
27. The social minorities should not demand their rights
28. I would not like a friend who has a different nationality as much as a friend with the same nationality as mine