

Teacher credibility and learner engagement in traditional and nontraditional education university students

Credibilidad docente y engagement académico en estudiantes tradicionales y no tradicionales de Ciencias de la Educación

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Abstract

Teacher credibility and learner engagement are factors associated with academic performance of university students. In the case of nontraditional students, defined as those who join the university over 24 years old or combine studies and work, teacher credibility and learner engagement are factors that are especially relevant for their integration and permanence in the university. The aim of this study was to describe nontraditional students' perceptions of teacher credibility and their learner engagement and compare them with these same traits in traditional students. The sample included 483 students, of which 353 were traditional students and 130 nontraditional students. They were administered the

Credibility Scale in University Professors and the Classroom Engagement Scale. The construct validity and reliability have been assessed through confirmatory factor analysis and the calculation of Cronbach's alpha. The analysis has been supported by descriptive statistics and the contrast of means through the multivariate analysis of variance. The results show high levels of perceived teacher credibility in nontraditional students, although lower levels of learner engagement. In addition, a superiority of nontraditional students is confirmed in all dimensions of teacher credibility (competence, goodwill and trustworthiness) and in agentic engagement. The differences in cognitive, behavioral and affective engagement are not significant. The results lead us to reflect on the importance of these variables for the success of nontraditional students at university and allow us to derive practical recommendations to support it.

Keywords: Teacher credibility, learner engagement, nontraditional students, higher education, students' perceptions, teachers' behavior, teaching-learning process.

Resumen

La credibilidad docente y el engagement académico son factores asociados al desempeño y al rendimiento académico del alumnado universitario. En el caso del alumnado no tradicional, definidos como aquellos que se incorporan a la universidad con más de 24 años o compaginan estudios y trabajo, credibilidad docente y engagement académico son factores que resultan especialmente relevantes para su integración y permanencia en la universidad. Con este trabajo se pretende describir la percepción de credibilidad docente y el engagement académico del alumnado no tradicional, y compararlos con estos mismos rasgos en el alumnado tradicional. Se ha contado con una muestra de 483 estudiantes, de los cuales 353 eran estudiantes tradicionales y 130 estudiantes no tradicionales. Se aplicaron la Escala de Credibilidad en Profesores Universitarios y la Escala de Engagement en el Aula, cuya validez de constructo y fiabilidad han sido valoradas mediante análisis factorial confirmatorio y el cálculo de alfa de Cronbach. El análisis se ha apoyado en estadísticos descriptivos y en el contraste de medias a través del análisis multivariante de la varianza. Los resultados muestran en el alumnado no tradicional niveles altos de credibilidad docente percibida y algo menores en engagement. Además, se constata una superioridad del alumnado no tradicional en todas las dimensiones de credibilidad (competencia, buena voluntad y confianza) y en el engagement agéntico. Las diferencias en engagement cognitivo, conductual y afectivo no son significativas. Los resultados llevan a reflexionar sobre la importancia de estas variables para el éxito del alumnado no tradicional en la universidad y permiten derivar recomendaciones prácticas para favorecerlo.

Palabras claves: Credibilidad docente, engagement académico, estudiantes no tradicionales, educación superior, percepciones del alumnado, comportamiento del profesorado, proceso de enseñanza-aprendizaje.

Introduction

For several decades, the number of students who enter university has been increasing, while their personal traits have diversified significantly compared to previous times. The profile of students who enroll university immediately after finishing high school, with full dedication and being economically dependent on their families, used to characterize a vast majority of new students. The situation has been changing over time, in such a way that it is possible to identify other types of students in post-secondary education who have received the name of nontraditional students (Jenkins, 2009). This term includes a broad and diverse group of students who do not fit the traditional profile, since they are students who begin their studies after being separated from the educational system for a while, have not completed secondary education and enter university through exams for those over a certain age, work and have dependents under their care, or enroll only in some subjects (Suárez-Cretton & Castro-Méndez, 2022). These and other characteristics have allowed to extend this nontraditional group to other groups of non-majority students since they belong to the first generation in their families that enters university, are part of immigrant families that come from other cultural contexts or belong to an ethnic minority. Despite this diversity of features that could serve to identify this group, age and the combination of studies and work are the most used criteria when defining nontraditional students, since they include a broad group of students who access post-secondary education at a later age and through alternative routes, or have family and professional responsibilities (Chung et al., 2014; de-Besa & Gil Flores, 2019). Currently, according to the Data and Figures report elaborated by the Ministry of Universities (2021), 22.9% of the students enrolled in Spanish university studies in the 2019-2020 academic year were 26 years or older, which means more than 300,000 students. These data reflect a significant percentage of students who have

been considered a vulnerable group and prone to having a higher probability of dropping out of their university studies (Sánchez-Gelabert & Elías, 2017; Tuero et al., 2018).

Although university professors are, above all, purveyors of knowledge (Esteban Bara, 2022), other factors such as their attitudes and their relationship with students have been associated with nontraditional students permanence (Mitchell & Hughes, 2014). In this sense, the results of the study by Bolh et al. (2017) showed that the professors' accessibility and responsiveness influenced nontraditional students permanence by making it easier to face academic challenges. Furthermore, as Landrum et al. (2001) pointed out, nontraditional students appreciated their interactions with their professors, and the concern and care expressed by their professors in those interactions, more than traditional students.

According to various studies, positive relationships between teachers and students favor student learning (Awoniyi & Butakor, 2021; Chamizo-Nieto et al., 2021; Paschal & Mkulu, 2021; Pervin et al., 2021). Thus, student perceptions of teacher behavior in the classroom acquire great relevance (Xie & Derakhshan, 2021), with teacher credibility being one of the most relevant elements within the teacher-student relationship (McCroskey et al., 2004). According to McCroskey (1992), teacher credibility refers to the student's perception of whether the teacher is credible or not. McCroskey and Teven (1999) define the multidimensional nature of the teacher credibility construct, establishing three dimensions. On the one hand, the competence dimension refers to the perception of knowledge or mastery of the subject taught by the teacher. On the other hand, the goodwill dimension indicates to what extent the students perceive the interest teachers show for their well-being. Finally, the trustworthiness dimension refers to the perception of the teacher's reliability and kindness towards their students.

The study of teacher credibility in the university environment has shown results that indicate a significant influence on the teaching-learning process (Finn et al., 2009), playing a fundamental role in classroom dynamics and becoming a necessary requirement for effective instruction (Russ et al., 2002). In this sense, various studies indicate that teacher credibility is related to the willingness of students to attend class (Pishghadam et al., 2019, 2021; Zheng, 2021) and to the intention of the students to continue with their university studies (Wheless et al., 2011; Witt et al., 2014). Therefore, the role of teacher credibility is highly relevant, espe-

cially in this group of nontraditional students. As a result, university institutions need to develop teacher awareness programs on the challenges faced by nontraditional students and on how to adapt to their needs when they enter university (Conlan et al., 2001; Kenner & Weinerman, 2011).

Likewise, one of the variables linked to the teaching-learning process that is affected by teacher credibility is the student's academic engagement (Derakhshan, 2021; Imlawi et al., 2015; Rezvani & Miri, 2021; Zheng, 2021). The academic engagement of university students has become an essential component of their well-being and academic performance (Benito Mundet et al., 2021). Academic engagement has been conceptualized as the degree of active participation of the students in the different activities proposed for the learning development (Skinner et al., 2009). Martin (2008) identifies this concept as the energy and momentum that students develop to carry out academic tasks related to participation and learning, with the purpose of reaching their maximum potential.

Academic engagement has been identified as a multidimensional construct, made up of four components that respond to behavioral, emotional, cognitive, and agentic aspects (Jang et al., 2012); each of them acquire its own role in the internal dynamics of engagement development. (Skinner et al., 2008). Skinner et al. (2009) associate behavioral engagement with behaviors such as attention to the task, effort, and persistence. Likewise, emotional engagement is associated with the presence of interest and enthusiasm, and inversely with the absence of anxiety or boredom in class tasks. Walker et al. (2006) relate cognitive engagement with the use of learning strategies (deep or surface), active self-regulation, etc. Agentic engagement would refer to actions carried out by the student towards the teacher, such as raising questions, requesting clarification, or communicating interest, expression of preferences and opinions (Reeve & Tseng, 2011). Considering that nontraditional students are at greater risk of dropping out of their studies, various studies highlight that academic engagement can be considered a protective factor to prevent student dropout (Janosz et al., 2008; Wang & Fredricks, 2014).

In previous studies, it has been verified that the characteristics of the students constitute determining factors of their perceptions of teachers, as well as of their assessments of the learning process (Hatfield & Coyle, 2013; Hejase et al., 2014). However, in the Spanish university context, no research has been found that focuses on analyzing student perceptions of teacher credibility and their academic engagement, considering traditional

and nontraditional students. In the present work, this issue is addressed by setting out the objective to describe the perception of teacher credibility and the degree of engagement in traditional and nontraditional students, analyzing possible differences between both groups. This will allow us to advance in the knowledge of the way in which nontraditional students face their university experience, serving as a basis to formulate recommendations in order to favor this group's permanence and academic success.

Method

A quantitative approach has been adopted, resorting to an ex-post facto cross-sectional research design, based on descriptive methods and group comparison. Considering the way in which the data is collected, the study falls within the survey methods.

Sample

483 students from the University of Cádiz have participated in the study. They were studying a degree at the Faculty of Educational Sciences during the 2021-2022 academic year. The students are mostly women (87.1%) aged from 17 to 60 years, with an average of 20.79 years ($SD = 4.74$). It is therefore a non-probabilistic sample, selected with accessibility criteria. Considering students who combine their university studies with work, or who are 25 years or older, the sample was divided into two groups, consisting of 353 traditional students and 130 students that were consider non-traditional.

Instrument

In order to analyze student perceptions of teacher credibility, the Spanish version of the *Credibility Scale in University Professors* (Froment et al., 2019) was used. This instrument presents 18 bipolar adjectives, six for each dimension (competence, goodwill and trustworthiness). The students have to indicate their perception of the professor according to a

range of values that go from 1 to 7, taking into account that the closer the number is to the adjective, the greater certainty there will be in the assessment made by the student. The three-factor structure proposed by the authors of the original scale (McCroskey & Teven, 1999) and confirmed for the Spanish version (Froment et al., 2019), was contrasted with the data obtained from the sample used in the present study. For this, a confirmatory factor analysis was carried out, estimating the parameters through the method of unweighted least squares. The goodness of fit of the three-factor model is supported by the values reached in the root mean square residual (RMR=.059), the goodness of fit index (GFI=.993), the adjusted goodness of fit index (AGFI=.991), the normed fit index (NFI=.991) and the relative fit index (RFI=.990). All these values satisfy the levels required to consider a good fit of the model (Byrne, 2016). The factor weights of the items in each of the factors were between .54 and .84 for the competence factor, between .60 and .86 for goodwill, and between .72 and .81 for trustworthiness. The reliability of the scale was analyzed, obtaining the following Cronbach's alpha values: .94 for the global scale, .87 for competence, .88 for goodwill and .90 for trustworthiness.

The measurement of the academic engagement of the students was carried out by applying the version adapted by Núñez and León (2019) of the *Classroom Engagement Scale* (Jang et al., 2012). This instrument is made up of 12 items, three for each of its four dimensions (agentic engagement, behavioral engagement, emotional engagement, and cognitive engagement). To respond to the items, participants have to select values ranging from 1 (totally disagree) to 7 (totally agree). Using the data collected in this study, the construct validity and reliability of the scale have been assessed. The confirmatory factor analysis, using the unweighted least squares estimation method, has allowed to validate the structure of the scale in four factors or dimensions, according to the values obtained in the goodness-of-fit indexes for the model (RMR=.057; GFI=.995; AGFI=.992; NFI=.991; RFI=.990). The standardized weights of the items in their respective sub-scales have been above .77, with the sole exception of the cognitive engagement factor, where two items registered weights of .63 and .69. In the internal consistency analysis, the following Cronbach's alpha values were obtained: .88 for the global scale, .85 for agentic engagement, .84 for behavioral engagement, .85 for emotional engagement, and .77 for cognitive engagement.

Based on the results described, it can be concluded that the construct validity is confirmed for both instruments and that both have acceptable

levels of reliability, since Cronbach's alpha values were higher than .70 (Nunnally & Bernstein, 1994).

Procedure

Data collection took place at the end of the first quarter of the 2021/2022 academic year. Professors who taught at the Faculty of Educational Sciences of the University of Cádiz were previously contacted to request their collaboration. At the time of the survey, participants were informed of the purpose and nature of the study. The participating students voluntarily completed the two scales and were guaranteed both the anonymity and the confidentiality of their responses. The instruments were administered by the researchers in the classroom, in pencil and paper format, presenting them in the following order: *Credibility Scale in University Professors* and *Classroom Engagement Scale*. The approximate duration for the application of the two instruments was 25 minutes.

The conduct of the study has the authorization of the University of Cádiz, according to the criteria established by the Bioethics Committee of aforesaid university, in terms of guaranteeing respect for the dignity, integrity and identity of the individuals participating in the study.

The data analysis began with the calculation of the mean descriptive statistics and standard deviation for each of the dimensions of teacher credibility and engagement. The comparison of the values achieved in these dimensions by traditional and nontraditional students was conducted through the multivariate analysis of variance (MANOVA). First, the dependent variables were taken together and then separately. In all cases, the effect size was estimated using the partial eta squared statistic. Taking into account the large size of the samples, a possible violation of the assumption of normality would not significantly affect the MANOVA results.

Results

Table 1 shows descriptive statistics for the perception subscales on teacher credibility and the engagement of the participating students, distinguishing 2 groups based on their traditional or nontraditional nature. These results

show that nontraditional students attribute high credibility to their professors, since the average values corresponding to competence, goodwill and trustworthiness are above 6 on a 7-point scale. In the three aspects considered, these scores exceed those obtained from traditional students. In other words, if we compare traditional students with those students who are at least 25 years or who combine work (either part-time or full-time) and studies, the latter perceive their professors to be more competent, more interested in their well-being, more reliable and kinder.

TABLE I. Descriptive statistics for credibility and engagement in traditional and nontraditional students

	Traditional students		Nontraditional students	
	M	D.T.	M	D.T.
Teacher credibility				
Competence	6.27	.75	6.50	.60
Goodwill	5.68	1.11	6.04	1.07
Trustworthiness	6.09	.90	6.42	.75
Engagement				
Agentic engagement	4.23	1.44	4.88	1.33
Behavioral engagement	6.21	.88	6.08	1.07
Emotional engagement	6.12	.95	6.08	1.22
Cognitive engagement	5.86	.97	5.91	1.05

Source: compiled by author

Regarding engagement, the means recorded for both types of students in Table 1 are quite close in the dimensions related to behavioral and cognitive engagement, while they differ more clearly with regard to agentic engagement (4.23 in traditional students and 4.88 in nontraditional students). That is, nontraditional students raise more questions, request more clarifications, show more interest or express their preferences and opinions in class more regularly.

In order to check whether the differences in perception of teacher credibility and engagement between the two groups of students are significant, multivariate analyses of variance (MANOVA) were carried out, considering the sets of variables linked to each construct as dependent variables and taking the cohort as a factor. These analyses have been fol-

lowed by tests for intersubject effects, with the purpose of assessing the differences in each of the dependent variables considered in the previous MANOVA once the existence of significant differences between the two groups has been confirmed.

Table 2 includes the results related to the perception of teacher credibility. According to these, the values reached for the Pillai trace, Wilks' lambda, Hotelling trace and Roy's largest root statistics ($F=4.686$; $p<.01$) allow us to affirm the existence of significant differences between traditional and nontraditional students taking globally the set of measures on teacher credibility. The partial eta squared value ($\eta_p^2=.029$) indicates, however, a small effect size due to the traditional or nontraditional nature of the students. Considering the tests carried out for each variable separately, the F values confirm that the differences in favor of nontraditional students are equally significant for the three subscales, with $p<.01$ in the case of perceptions of competence and goodwill of the teacher, and $p<.001$ when the trustworthiness generated is contrasted.

TABLE II. Contrast statistics for the MANOVA analysis of the teacher credibility variables and subsequent univariate analyses.

	Effect	Value	F	Sig.	Partial eta squared
Traditional/non-tradicional	Pillai Trace	,029	4,686	,003	,029
	Wilks' Lambda	,971	4,686	,003	,029
	Hotelling Trace	,029	4,686	,003	,029
	Roy's largest root	,029	4,686	,003	,029
	Dependent variable	Mean square	F	Sig.	Partial eta squared
Traditional/non-tradicional	Competence	4,932	9,686	.002	,020
	Goodwill	11,810	9,698	.002	,020
	Trustworthiness	10.019	13.372	.000	,027

Source: compiled by author

For engagement, the differences observed are significant ($F=7.309$; $p<.001$), according to the MANOVA results (see table 3). In this case, the size of the effect due to belonging to traditional or nontraditional students is medium ($\eta_p^2=.058$). When analyzing each of the variables, it is verified that the differences found result from agentic engagement ($F=20.508$; $p<.001$; $\eta_p^2=.041$), which alludes to a more active participation

of nontraditional students, requesting information or expressing opinions. On the other hand, the dimensions of behavioral, emotional and cognitive engagement do not allow distinction between traditional and nontraditional students, as the values obtained for the descriptive statistics in both groups already foreshadowed.

TABLE III. Contrast statistics for the MANOVA analysis of the engagement variables and subsequent univariate analyses

Effect		Value	F	Sig.	Partial eta squared
Traditional/non-tradicional	Pillai Trace	,058	7,309	,000	,058
	Wilks' Lambda	,942	7,309	,000	,058
	Hotelling Trace	,061	7,309	,000	,058
	Roy's largest root	,061	7,309	,000	,058
	Dependent variable	Mean square	F	Sig.	Partial eta squared
Traditional/non-tradicional	Agentic_engagement	41,016	20,508	,000	,041
	Behavioral_engagement	1,456	1,674	,196	,003
	Emotional_engagement	,106	,101	,751	,000
	Cognitive_engagement	,208	,213	,645	,000

Source: compiled by author

Conclusions

This study has been aimed at increasing knowledge about the characteristics of university students, with special emphasis on those known as nontraditional students, exploring their perception of teacher credibility and their academic engagement. In addition, it has been attempted to analyze the differences they present regarding these characteristics in contrast to traditional students.

A first result indicates that the levels of teacher credibility perceived by both groups of students are high in terms of competence, goodwill and trustworthiness. Considering the positive pole of the paired bipolar attributes used to measure teacher credibility, university students consider that their professors are intelligent, trained, experienced and, ultimately, competent. In addition, they trust their goodwill, perceiving that they are sensitive, understanding, take their interests into account and care

about them. Finally, they inspire confidence, since they are perceived as honest, sincere and reliable.

These results are relevant considering the importance that teacher credibility has in terms of performance and the results achieved by university students. In this sense, teacher credibility is a variable that influences both attendance and student permanence (Pishghadam et al., 2019, 2021; Wheelless et al., 2011; Witt et al., 2014; Zheng, 2021). Likewise, teacher credibility affects other variables such as academic motivation (Froment et al., 2021; Kulkarni et al., 2018), academic satisfaction (Gaffney & Gaffney, 2016; Zhu & Anagondahalli, 2018), affective learning (Henning, 2010; Vallade & Kaufmann, 2021) and cognitive learning (Carr et al., 2013; Gray et al., 2011) of university students.

The results obtained here also indicate that these high ratings from nontraditional students regarding teacher credibility are significantly higher than those made by traditional students. Nontraditional students value more positively the behaviors and characteristics of their professors. They perceive them to be more competent, interested in their well-being, trustworthy, and kinder than traditional students do. This more positive perception may be based on greater maturity, which has an impact on taking their professors more seriously. In this sense, Landrum et al. (2001) already found that nontraditional students valued interactions with their professors more positively than traditional students, considering that professors care about them.

The role of teacher credibility is even more important in the case of nontraditional students. As previously pointed out, students with a nontraditional profile have been considered more likely to have difficulties in facing their university studies successfully. Previous literature has indicated that this type of student, due to its characteristics, constitutes a vulnerable group prone to premature dropout (Sánchez-Gelabert & Elías, 2017; Tuero et al., 2018). The high levels of teacher credibility perceived by nontraditional students, which have been verified in this study, place it as one of the protection factors that may be contributing to the permanence of these students.

Having verified the perception of teacher credibility as a strength of nontraditional students, which allows to establish certain differences in contrast to traditional students, it is necessary to point out the important role that professors will have as a central agent of the strategies that universities adopt to promote nontraditional students' integration into university life and the continuity in their studies. Professors must manage

their credibility to increase student learning (Myers & Martin, 2018), so it is worth considering the need to reinforce a positive attitude and the relationship of professors towards nontraditional students who present more academic needs due to their characteristics, without neglecting, nonetheless, traditional students. As indicated by Bohl et al. (2017), the accessibility and responsiveness of professors towards their students are directly related to their permanence in higher education, justified by the help they receive to meet academic demands.

Regarding academic engagement, the levels found in university students are moderately high, with a somewhat lower level in regard to agentic engagement. However, this type of engagement is responsible for the differences observed between traditional and nontraditional students. Considering their superiority in agentic engagement, nontraditional students raise more questions, request more clarifications, show more interest or express their preferences and opinions more regularly than traditional students. A possible interpretation of these differences could be that nontraditional students show a greater interest in taking advantage of class time because they probably have a more limited schedule, as a consequence of combining studies and work or due to their family situation. As Manthei and Gilmore (2005) point out, nontraditional students highlight the lack of time as a problem to combine studies with work, whether full or part-time. Thus, our results could be linked to a tendency among nontraditional students to waste less time, a fact that was already identified by Robotham (2012), as well as presenting greater communication and socialization skills. In addition, the superiority of nontraditional students in agentic engagement could be attributed to a better perception of teacher credibility, a circumstance that has also been revealed in this work. In this sense, Hospel and Garland (2016) pointed out that many of the differences between the levels of academic engagement of students body are due to the teacher.

In short, this study has revealed singularities that nontraditional students present in contrast to traditional students: higher levels of teacher credibility and, especially, agentic engagement. However, the levels of agentic engagement of both groups of students can be improved, since they are below behavioral, emotional or cognitive engagement.

In relation to these results, it is worth recommending professors to be more open with both groups of students and, taking into account the relationship between credibility and engagement, to establish and

maintain their credibility throughout the entire academic year in order to increase academic engagement. Especially, the case of nontraditional students should be taken into account due to the greater problems of persistence, so it is important to maintain and reinforce these high levels in their perception of teacher credibility and engagement, and even to increase them in order to avoid dropout.

Some general recommendations to serve both groups of students are derived from the results of this study. In this sense, following the recommendations formulated in the work of Froment et al. (2020), for teachers to be perceived as credible professionals, they must, among other behaviors, use an argumentative verbal style, share relevant personal information, support and value student involvement, and avoid behaving inappropriately or using verbal aggression. In the same way, students' perceptions of the teacher's behavior in the classroom affect their academic engagement (Havik & Westergård, 2020; Jiang & Zhang, 2021), so that, for students to commit to their learning, teachers must show closeness (Derakhshan, 2021; Dixson et al., 2017) and be clear in their explanations about the content to be taught and be clear in their explanations about the content to be taught (Brckalorenz et al., 2012; Zheng, 2021).

From the results of this study we have gathered some practical implications that have been commented on in previous paragraphs. However, when assessing these results, the limitations of this work must be taken into account. In this sense, it is necessary to point out those that are inherent to the instruments used, based on self-report techniques, which may be subject to problems of sincerity or bias in the responses. In addition, the non-probabilistic nature of the sample reduces the possibilities of generalizing the results. Although the sample is large, only students from the field of Educational Sciences participated in the study, where there is also traditionally a predominance of women.

In answer to some of these limitations, future studies could consider students from different degrees, and aim to examine whether there are significant differences by gender and by academic degree both in perceptions of teaching credibility and academic engagement. Other lines of future research could be aimed at continuing to increase knowledge about the differentiating features of nontraditional students, when compared to traditional ones. For that purpose, attention could be paid to variables associated with student learning, such as satisfaction, academic interest or work fatigue. In the same way, the study of their percep-

tions about clarity, closeness, inappropriate behaviors or self-disclosures, which refers to the personal information that the teacher shares with the students, would contribute to a better knowledge of the singularities of nontraditional students. Analyzing how nontraditional students perceive the behavior of teachers will make it possible to better understand their expectations, needs, and desires (Goldman et al., 2017) and will make it possible to enhance the effectiveness of teaching, increasing the academic success of students (Myers et al., 2018).

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