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The influence of personality on learning outcomes and attitudes: The case of discussants in the classroom

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ABSTRACT

This article covers an academic gap concerning the role of personality in the context of a teaching methodology based on discussions in the classroom. Specifically, we analyse the effects of the students' personality on perceived learning outcomes and students' attitude toward either playing a discussant or a discussed role. We also aim at identifying different profiles of students depending on their personal characteristics, such as empathy, proactivity and motivation to lead. The discussant activity was carried out in a business course in a higher education institution where students are required to join a team and develop a marketing research project. The students had to answer a survey before and after the activity. Then, the data was analysed through partial least squares (PLS) and cluster analysis. The results show that the three personality traits considered in the study affect either perceived learning outcomes or students' attitudes toward discussing their classmates' work and being discussed by their peers. Moreover, three different profiles of students are identified, namely, 'proactive emphatic leader', 'speculative leader' and 'passive follower'.

1. Introduction

Higher education demands new teaching methodologies focused on satisfying the need of students to be active agents in the learning process (Pawar, 2022). In this sense, user-centered active learning processes are gaining great interest and have remodelled the roles of the teacher and the student, promoting the sharing of responsibility for learning (Belanche et al., 2020). Thanks to active learning activities, students attach more value to the subject contents and better evaluate courses (Wright, 2011).

Higher education is increasingly oriented to the introduction of teaching methodologies that encourage students to acquire skills demanded in the labour market. One of these methodologies is the figure of the discussant in debates, which allows students to strengthen their learning process by improving their critical thinking skills to assess their own and their peers' work (Fandos et al., 2015). It is based on collaboration rather than on competition, which is assumed to improve learning outcomes. (O'Leary & Wood, 2019). Learning outcomes are generally subject-specific and refer to those outcomes that initially articulate what students should know, be able to do, or value as a result of taking a course. Previous literature has thus shown the pedagogical utility of debates across

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different fields such as science (Vo & Morris, 2006). It has also been acknowledged the role of discussants to encourage interactions (Davidson, 2003).

As a classroom activity, discussions imply a double role in which students can make comments to other students about their assignments (role as 'discussant', hereinafter) or answer those comments about their own work (role as 'discussed', hereinafter). Students' attitude toward a discussion activity may vary depending on whether they take the role of discussant or discussed, which will affect their general perceptions about the activity (Fandos-Herrera et al., 2019). In fact, the success of the activity could be also determined by the personality of the students, as proposed in the current study.

Individuals tend to act in situations where they can express their personality, traits and values, by systematically developing social environments in line with their abilities (Davis et al., 1999; Snyder, 1983; Snyder & Ickes, 1985). In the case of higher education students, their personal characteristics play a significant role in the outcomes of the classroom activities (Pawlowska et al., 2014), especially for those requiring an active role. Chan and Drasgow (2001) and Judge et al. (2002) suggest that students' individual differences are directly related to their performance as well as to their training process, leadership effectiveness and the motivation to lead in specific circumstances (Niehoff, 2006). Thus, students with greater empathy are more likely to achieve higher academic performance (Davis et al., 1999). Also, proactive students, -those who are willing to change their environment and capable of anticipating actions-have a greater capacity to detect potential problems and act to prevent them (Bateman & Crant, 1993). Furthermore, the motivations to be the leader of a workgroup may differ among students and affect their effort (Judge et al., 2002). For all these reasons, it seems that the different personality traits of the students should be taken into account by teachers when designing the learning activities that will be carried out in the classroom.

Despite the importance of using active learning activities, e.g., debates in the classroom to improve the students' skills, research is scarce in examining the relationship between personality and the discussant role. Similarly, to other settings, students' personality influences social participation in learning environments (Caspi et al., 2006). However, a question that requires research attention is to what extent students' personality can affect the success of the discussant activities developed in management higher education courses. As online and hybrid education models spread across the world, discussions are more important than ever due to their power to engage students (Wolverton, 2018).

Therefore, in general, our research aims to better understand how the personality of the students is key in the design of the activities carried out in the classroom. Specifically, the aim of this research is twofold: first, to analyse the effects of the students' personality on their learning outcomes and their attitude toward the discussant activity, taking into account two potential roles: discussant and discussed; second, to investigate the role of personal traits (empathy, proactivity and motivation to lead) in attitudes and perceptions.

There is ample research showing how to carry out effective team projects (Guinalíu & Jordán, 2016; Bravo et al., 2019; Urionabarrenetxea et al., 2021; Tuzlukaya et al., 2022; etc.). However, the literature about projects that require a formal discussion between students is scarce, especially concerning the role of personality. In this sense, our work goes one step further, considering how students' personality characteristics influence not only intra-teamwork but also inter-teamwork in the specific context of the discussant activity. Ultimately, this research attempts to highlight the relevance of personality to the success of the discussant activity and propose some insights for academics and educators alike. Social skills are essential to succeed in the labour market, so it is important to design appropriate tools that may enhance social learning in management studies and motivate students to attend class.

In the next section, we introduce the research background about the role of discussants in the classroom. Then, we explain the hypotheses underlying an empirical model. Then, we explain the methodology and the findings obtained. The paper concludes with a series of implications and recommendations.

2. Research background and hypotheses

Technological advances and digitalization are causing huge changes in teaching practices, forcing the academic world to evolve from the traditional style of one-way teaching and learning as acquisition or even consumption and reproduction (Belanche et al., 2021). One of the latest signs of such change is the attention to active learning activities among academics and practitioners (Castilla-Polo et al., 2022; Li et al., 2021). Active learning is understood as and instruction that significantly engages students in learning through increased participation in activities (Shekhar et al., 2019). Thus, active learning processes are considered user-centered processes that reconfigure the role of the teacher by promoting shared responsibility with the student in the learning process (Belanche et al., 2020). Active learning strategies include classroom-based activities designed to engage students in their learning through answering questions, solving problems, discussing content, or teaching others, individually or in groups (Nguyen et al., 2021; Prince & Felder, 2007).

Researchers characterize active learning with two dimensions, the first as a generalized instructional process to build knowledge and the second to deepen engagement (Lombardi & Shipley, 2021). In this way, students may see greater value in the content and better evaluate the courses (Wright, 2011). Previous research on active learning methods suggests that active learning increases major perceived learning outcomes such as students' understanding of new concepts and meanings. It helps students understand how to do things, rather than simply memorizing facts. It supports knowledge transfer from general to specific contexts and it improves communication skills (Michael, 2006).

It must be noted that this study focuses on perceived learning outcomes rather than traditional learning outcomes such as the final grade or grade point average. Perceived learning outcomes better explain student satisfaction than traditional outcomes (de Hei et al., 2018), which makes us think that they could better predict other attitudinal variables such as the attitude toward the discussant activity. Moreover, this approach also facilitates comparison across different studies (Tran-Duong, 2022).

2.1. The figure of the discussant as a teaching innovation strategy to encourage debate

In academic conferences, the discussant role is commonly used to encourage debates among participants (Davidson, 2003). Colleagues are required to read and assess their peers' work and prepare critical and constructive comments to be discussed during the public expositions. By bringing this activity to the classroom in a higher education context, a teacher can encourage debate in the classroom and enhance the interaction between students, which may influence positively their learning process. It can be an effective tool for encouraging students to actively participate both in online and offline classes (Wolverton, 2018).

In practice, this procedure implies that all the students taking part in the activity will be sometimes 'discussant' and sometimes 'discussed'. As discussants, they are required to help their peers by reviewing their assignments and highlighting both strengths and weaknesses. As discussed, they will have to be ready to respond rationally and politely to their peers' comments orally or in writing (Fandos-Herrera et al., 2019).

The educational context represents an adequate environment to apply the discussant activity. In the classroom, there is no difference in prestige or status between the discussant and the discussed, which usually occurs in conferences (Davidson, 2003). However, the development of this teaching activity may be influenced by the differences in students' personality. Despite the pedagogical value of debates (Vo & Morris, 2006), students may show rejection to avoid peer confrontations or unknown situations (Goodwin, 2003). The barriers to the success of debates may be even higher if we consider that classrooms are sometimes overcrowded and discussions may either harm the classroom climate or lead to 'non-aggression', collusive behaviours.

As shown in the next section, students' personalities can influence not only their attitude toward the discussant activity but also perceived learning outcomes. Previous research has focused on the relationship between personality (e.g., the Big-Five model) and academic achievement (Swanberg & Martinsen, 2010; Woods et al., 2016; etc.). Based on the effects of personality on human perceptions, we can also expect a link between students' personality and perceived learning outcomes in the specific context of the discussant activity.

2.2. The role of personality in the discussant activity

Students' success in learning activities does not only depend on their degree of cognitive ability but also on their personality (Messick, 1984; Lakhal et al., 2012). For example, students with an open mind tend to be more creative and can manage their learning of new knowledge (Vermetten et al., 2001; Dörrenbächer & Perels, 2016). Affable students are more likely to attend classes regularly than less affable students (Lounsbury et al., 2003). In the context of teamwork, the composition of the group plays a critical role in the development of the activity (Ickes et al., 1997). The personalities of the team members determine their learning objectives and may affect the team performance (Moreland et al., 2013).

According to Kleinmuntz (1967), personality is defined as "the unique organization of factors which characterize an individual and determine his pattern of interaction with the environment" (p. 9). This research focuses on the three personality traits that can have the greatest influence on the success of the discussant activity: empathy, proactivity and motivation to lead. Empathy is broadly defined as the ability to comprehend another's feelings and to re-experience them oneself (Salovey & Mayer, 1990, p. 194) and it can be conceptualized as a trait, as a state, as communication and as a relationship (Berkovich, 2020). Empathy is a positive trait within the work team (Guinalíu & Jordán, 2016), and the ability to work as a member of a team is a core competence to succeed in the labour market (Judge et al., 2004). Previous literature posits that empathy is critical for learning within organizations, workplaces or classes (Mezirow, 2000). A high degree of empathy may predispose the student positively to the tasks developed within the discussant activity. When discussed, the students with a high level of empathy will perceive the suggestions made by their peers as constructive and helpful comments. Furthermore, when discussing their classmates' work, high empathic students will be able to put themselves in their position.

We adopt Davis' multidimensional approach that merges affective with cognitive perspectives and considers empathy as a set of constructs that include the psychological processes of putting oneself in someone's shoes (Davis, 1996). Therefore, the students' comments can be directed to enrich the work of their classmates, rather than simply to highlight errors. Based on Cooper's research (2010, 2011), we expect empathic students, regardless of their role as a discussant or a discussed, to be aware of the utility of the activity, thus improving perceptions of the acquisition of learning outcomes, such as learning the fundamentals of a subject, to carry out, individually or in groups, activities and projects related to a research field, and to communicate, both orally and in writing, ideas and conclusions. Similarly, empathy will have a positive influence on the attitudes toward both roles of the activity. Hence:

H1. The student's empathy will have a positive influence on a) the perceived learning outcomes, b) the attitude toward the discussant role and c) the attitude toward the discussed role.

A proactive personality has been defined by Bateman and Crant (1993) as a stable disposition that causes changes in the environment of the individual. This trait makes the person able to search for and take advantage of opportunities (Kickul & Kickul, 2006). Proactivity is also considered an important indicator of success within a work team (Cooper-Thomas et al., 2011) and helps acquire other key skills for the labour market, such as autonomy. Proactivity has become a relevant subject within organizational psychology but has received very little attention in the higher education context (Geertshuis et al., 2014). Students with proactive personalities will work harder either as a discussant or a discussed. Thus, we propose that proactivity is positively related to the perceptions of learning with the activity. We also expect proactivity to positively affect attitudes toward both roles since the activity allows proactive students to demonstrate their mastery of the subject (Hong et al., 2015; Raub & Liao, 2012). Hence:

H2. The student's proactivity will have a positive influence on a) the perceived learning outcomes, b) the attitude toward the discussant role and c) the attitude toward the discussed role.

Leadership is usually approached from the motivation to lead (MTL henceforth), which is an individual construct affecting people's decisions to assume a leadership role, resulting in their effort and persistence as a leader (Chan & Drasgow, 2001). Several authors recognize the importance of each individual's differences in determining a leader's behaviour, as well as the multidimensional nature of this trait (Hofmann & Jones, 2005; Ng et al., 2008). Student leaders may be born or made during their training (Komives et al., 1998), which justifies the interest in leadership in higher education settings (Robinson et al., 2008).

Hendricks and Payne (2007) identify three types of MTL: affective-identity MTL, which reflects people who like to lead, enjoy being leaders and see themselves as leaders; social-normative MTL which is given by the sense of duty or responsibility; and non-calculative MTL, in which individuals do not weigh the benefits versus the costs involved in leading, assuming that all leaders have to pay costs or responsibilities derived for their role. In this regard, the opposite may also occur and a calculative MTL relates to the desire to lead with self-benefitting purposes (Chan & Drasgow, 2001; Williams, 2014).

Overall, we expect that students motivated to lead will be attracted to the discussant activity, regardless of their specific motivations. Students with a motivation to lead will make an effort to prepare for the debate, ultimately affecting perceived learning outcomes (Leskiw & Singh, 2007). The activity allows students to exercise their leadership skills, both within the team, in the preparation of comments, and in the debate in which the leader will have greater participation. These effects can occur either when the student plays a discussant or a discussed role:

H3. The student's motivation to lead will have a positive influence on a) the perceived learning outcomes, b) the attitude toward the discussant role and c) the attitude toward the discussed role.

2.3. Effects of perceived learning outcomes on attitudes

The discussant activity is based on constructive and autonomous learning, based on reflection and peer-to-peer judgment. Students are the active subject of their performance (Pawlowska et al., 2014) so the perceived learning outcomes derived from this activity may influence the students' attitudes.

As previously stated, the discussant activity allows the students to share opinions and points of view with their peers. They are forced to offer reasoned arguments to defend and refute their ideas. This mental exercise will result in enhanced learning of the course contents. When preparing for the discussant activity, the student has to study the contents to offer quality comments (discussant) and defend from peers' queries (discussed). In short, the activity will favour the perceptions of learning outcomes. Furthermore, Vo and Morris (2006) point out that students have a positive attitude toward debates as a way to improve their understanding and learning of a topic, analyse real cases and achieve better marks. Sims (2003) argues that interactive teaching tools have a strong effect on the students' engagement with the subject, which is directly related to positive attitudes (Qureshi et al., 2016). In this way, we propose that if students perceive an improvement in their learning thanks to the discussant activity, this perception will influence their attitudes toward the activity, reflected in the two roles (discussant and discussed) that can be adopted:

H4. The student's perceived learning outcomes will have a positive influence on the attitude toward a) the discussant role and b) the discussed role.

3. Method

3.1. Research context – learning outcomes and activities

The empirical study took place in a business degree course at a major university in Europe. Students who enrol in this course are required to learn the fundamentals of market research, to carry out, individually or in groups, activities and projects related to market research, and to communicate, both orally and in writing, ideas and outcomes of the activities and projects carried out. In addition to these learning outcomes, students must acquire some specific and transversal competences such as learning to issue consulting reports about specific market situations and the ability to analyse and search for information from diverse sources.

In order to achieve the described learning outcomes, students must participate in several learning activities including lectures, practice sessions, tutorials and seminars. The main practical activity of the course consists of the development of a real marketing research project in groups (four to six people) who have to complete five assignments concerning different research techniques. Each assignment includes a written report and an oral presentation in class. The teams submit their assignment -electronic files-to the teacher the day before the public presentation. After the submission, the teacher forwards an assignment to a team of students who, for that session, will take on the role of discussants. This team 'the discussant team' will be in charge of reviewing and preparing a list of critical but constructive comments to discuss during the second part of the class. On the other hand, 'the discussed team' must defend its proposal by giving a reasoned answer to each of the comments of 'the discussant team'. During this debate, both teams play their role, opening the debate to the whole class.

The market research project in general and the discussant activity in particular require students to think critically and to interact with other students. They also need to master theoretical concepts to defend their assignments in front of the teacher and other students. This is the reason why the discussant activity may be a key activity to strengthen the learning outcomes of the course.

3.2. Data collection and measurement

We gathered survey-based data to test the hypotheses. Specifically, we carried out two separate questionnaires to minimise common method bias. The first questionnaire, conducted in the middle of the course, collected information about the students' personality. At the end of the teaching period, once the discussant activity had finished, students answered a second questionnaire regarding perceived learning outcomes and attitudes toward the activity. This procedure allowed us to obtain a total of 174 valid questionnaires.

The Appendix shows the scales used in the questionnaires. As for personality measures, we adopted two dimensions of empathy from Davis (1980, 1996): empathic concern and perspective thinking. We adapted six items from Bateman and Crant (1993) and Seibert et al. (2001) to measure students' proactivity. Finally, the items to measure the affective-identity, social-normative and calculative dimensions of the students' MTL were taken from Chan and Drasgow (2001).

We also adopted previously validated scales to measure perceived learning outcomes and attitudes toward the discussant and the discussed roles. The items to measure learning outcomes were obtained from the official university report of the degree in business management (bit.ly/3xzOnpg), the teaching guide of the course (bit.ly/3b6vvXw) and similar questionnaires (Orús et al., 2016). The scales to measure attitudes (like/dislike, perceived difficulty, enjoyment, etc.) were adapted from previous studies on different disciplines: music teaching (Saygi, 2010), collaborative learning in accounting (Borthick & Jones, 2000), smart boards (Sad, 2012) and ICT in teaching (Sagin, 2008). All the scales used seven-point Likert-type items.

3.3. Analytical procedure

We used the PLS methodology with the software SmartPLS 3.0 to test the model. First, we checked the validity and statistical reliability of the factors; second, we estimated the structural model (Ringle et al., 2015). The PLS technique is widely used in the social sciences and is especially recommended when samples have normality problems or when sample size is small compared with the number of parameters to be estimated (Chin & Newsted, 1999; Stan & Saporta, 2005). However, before estimating the model with the PLS methodology, we carried out an exploratory analysis with IBM SPSS Statistics 26 to test the reliability and dimensionality of the scales.

4. Results

4.1. Analysis of the measurement model

First, we carried out an analysis of reliability with IBM SPSS software. One item was deleted from the scales of calculative MTL, attitude toward the discussant and attitude toward being discussed because it showed an item-total correlation below the cutoff of 0.3 (Norusis, 1993). Partial least squares structural equation modelling (PLS-SEM), with SmartPLS software, was used to analyse the research model and test the hypotheses. The first analysis suggested removing five additional items with non-significant weights (90% confidence level) and outer loadings below 0.5 (Hair et al., 2016).

After this initial procedure, we examined the unidimensionality of the constructs through factor analyses (main components and varimax rotation; Hair et al., 1999), and the psychometric properties of the scales. Table 1 shows the results corresponding to the Cronbach's alpha ($\alpha > 0.7$), the composite reliability coefficient (CRC > 0.7) and the extracted variance analysis (EVA > 0.7). All these indexes present good values except for the social-normative MTL factor ($\alpha = 0.599$) and perspective thinking ($\alpha = 0.681$). In any case, the CRC and AVE indices were adequate, and 0.6 may be considered an acceptable reliability level (Miquel et al., 1996). Therefore, we retained the scales for the model analysis.

As for discriminant validity, the EVA coefficients for attitude toward being discussant (0.597) and being discussed (0.582) were lower than the squared correlation (0.672), as requested by Fornell and Larcker (1981). However, taking into account the clear conceptual difference and our research interest in analysing the effects of personality on both variables, we discarded the possibility of building a second-order construct.

Table 1
Composite reliability and validity of the measurement model.

				Correlations between factors								
	α	CRC	EVA	F1	F2	F3	F4	F5	F6	F7	F8	F9
Empathy – per. thinking (F1)	0.721	0.826	0.544	1								
Empathy – emp. concern (F2)	0.681	0.807	0.515	.44	1							
Proactivity (F3)	0.821	0.868	0.523	.25	.26	1						
Affective-identity MTL (F4)	0.916	0.936	0.785	−.01	.03	.37	1					
Social-normative MTL (F5)	0.599	0.787	0.553	.06	.04	.36	.47	1				
Calculative MTL (F6)	0.822	0.913	0.840	−.26	−.07	.01	.20	.22	1			
Learning outcomes (F7)	0.962	0.966	0.687	.17	.12	.38	.07	.21	.00	1		
Attitude discussant (F8)	0.929	0.941	0.596	.22	.16	.29	.05	.19	.10	.73	1	
Attitude discussed (F9)	0.927	0.938	0.582	.27	.22	.25	.00	.24	.12	.61	.82	1

4.2. Analysis of the structural model

The PLS program was used to estimate the structural model. We used a bootstrap technique with 2000 samples, considerably higher than the sample size (174), which minimizes the risk of obtaining an erroneous estimation of standard errors (Chernick, 2011). It is important to note two differences between the estimated model and the one proposed in Fig. 1. First, the empathy construct was modelled as a second-order factor formed by the dimensions of empathic concern and perspective thinking. Second, the three dimensions of MTL were modelled as completely independent factors, since they were weakly correlated and exhibited opposite effects in some exploratory estimations. Table 2 shows the coefficients obtained in the estimation and their statistical significance. It also includes the values of the R^2 (>0.1) and the Q^2 (>0) indicators for the dependent variables (Hair et al., 2016).

Overall, the analysis confirmed that the students' personality influences perceived learning outcomes, attitude toward being discussant and attitude toward being discussed. However, the results obtained depend on the personality trait considered. In this way, empathy exerted a significant influence on both the attitude toward the discussant role and toward being discussed, but it did not affect perceived learning outcomes. Thus, we find support for H1b and H1c, whereas we must reject H1a. The opposite occurred with the effects of proactivity. As predicted in H2a, proactivity had a significant direct effect on perceived learning outcomes but the effect on attitudes failed to reach statistical significance at 90%. H2b and H2c must be rejected. Finally, we found different effects of the three dimensions of MTL on the dependent variables. First, the affective-identity MTL had negative effects on all the dependent factors in the model, although neither was significant. Second, the social-normative MTL had the predicted influence only on the attitude toward being discussed. Third, the calculative MTL positively affected attitudes, but the effect on perceived learning outcomes was non-significant. Altogether, these results imply rejecting H3a, whereas support to H3b and H3c depend on the dimension of MTL considered.

Finally, the analysis yielded the expected effects of perceived learning outcomes on attitude toward being discussant and being discussed, supporting H4. In this vein, the coefficients obtained (higher than 0.5) indicate that the effects of learning outcomes on attitudes were considerably stronger than the effects of the students' personality.

4.3. Cluster analysis

The second objective of this research is to identify profiles of students according to their personal characteristics. Thus, we carried out a cluster analysis in two stages (Punj & Stewart, 1983; Arnold & Reynolds, 2003). First, we submitted the personality traits to hierarchical cluster analysis (Ward's method, squared Euclidean distances) to obtain a preliminary solution regarding the cluster number. A range of cluster solutions (3–6) was tested, and an examination of the dendrogram and the agglomeration schedule suggested a three-cluster solution (Arnold & Reynolds, 2003). A discriminant analysis supported this solution with a classification of 93.7% of the individuals (four-cluster solution: 89.1%; five-cluster solution: 87.9%; six-cluster solution: 90.2%). Second, we conducted a k-means cluster analysis using the hierarchical cluster centroids as initial seeds (Hair et al., 1999). The results confirmed the three-cluster solution.

Fig. 2 shows the means for the different profiles. We observe that cluster 1 ($n_1 = 38$) has high levels of empathy, proactivity, affective-identity MTL and social-normative MTL. Cluster 2 ($n_2 = 71$) stands out for the high level of calculative MTL. Finally, cluster 3 ($n_3 = 65$) presents low levels in all the personality variables.

Table 3 shows the mean values of the personality traits, perceptions of learning outcomes, and attitudes, of the three clusters. Moreover, we carried out an ANOVA to test for significant differences. The last column reveals the significant differences between the different clusters, which were calculated with a post-hoc Tukey test at a significance level of 95% (Arnold & Reynolds, 2003).

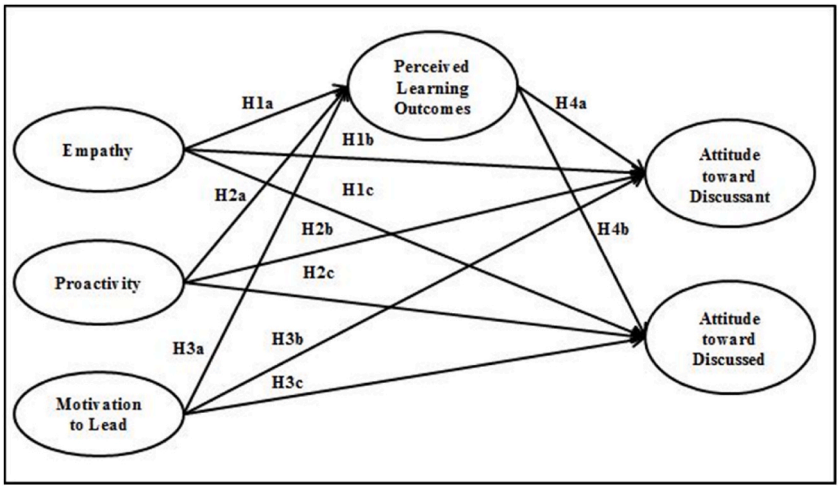

Fig. 1. Proposed theoretical model.

Table 2
Results of the structural model.

Hypotheses		β	t-value
H1a	Empathy → Learning outcomes	0.065	0.818
H1b	Empathy → Attitude discussant	0.128	2.397**
H1c	Empathy → Attitude discussed	0.230	3.804***
H2a	Proactivity → Learning outcomes	0.360	3.421***
H2b	Proactivity → Attitude discussant	−0.024	0.371
H2c	Proactivity → Attitude discussed	−0.044	0.530
H3a1	Affective-identity MTL → Learning outcomes	−0.129	1.125
H3a2	Affective-identity MTL → Attitude discussant	−0.029	0.384
H3a3	Affective-identity MTL → Attitude discussed	−0.122	1.485
H3b1	Social-normative MTL → Learning outcomes	0.135	1.391
H3b2	Social-normative MTL → Attitude discussant	0.032	0.492
H3b3	Social-normative MTL → Attitude discussed	0.147	2.012**
H3c1	Calculative MTL → Learning outcomes	0.004	0.048
H3c2	Calculative MTL → Attitude discussant	0.125	1.937*
H3c3	Calculative MTL → Attitude discussed	0.157	2.012**
H4a	Learning outcomes → Attitude discussant	0.717	15.702***
H4b	Learning outcomes → Attitude discussed	0.564	8.648***
		R^2	**Q^2**
Learning outcomes		16.8%	0.686
Attitude discussant		56.6%	0.596
Attitude discussed		45.4%	0.582

*p < 0.1 **p < 0.05 ***p < 0.01.

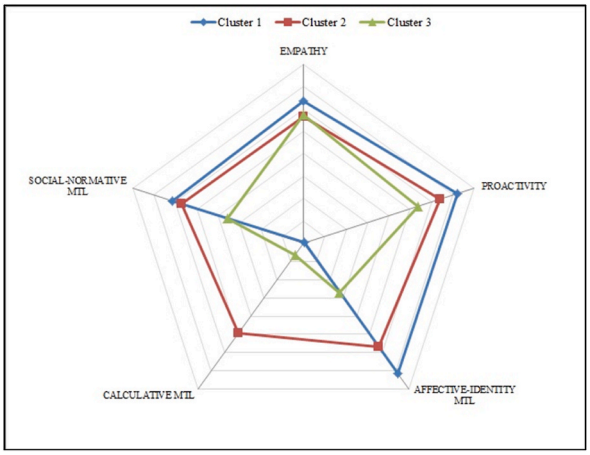

Fig. 2. Average personality values for clusters.

Table 3
Descriptive data of the cluster analysis.

Cluster	Cluster 1 Mean (SD)	Cluster 2 Mean (SD)	Cluster 3 Mean (SD)	Total Mean (SD)	ANOVA $F_{(2,\ 173)}$ (p-valor)	Significant differences
N	38	71	65	174		
PERSONALITY						
Empathy	5.182 (0.604)	4.834 (0.695)	4.865 (0.709)	4.921 (0.692)	3.578 (0.030)	1-2; 1–3*
Proactivity	5.601 (0.727)	5.195 (0.695)	4.674 (0.709)	5.089 (0.797)	21.318 (0.000)	1-2; 1–3; 2-3
Affective-Identity MTL	5.586 (0.880)	4.835 (0.871)	3.358 (0.980)	4.447 (1.273)	81.784 (0.000)	1-2; 1–3; 2-3
Calculative MTL	1.974 (0.788)	4.458 (0.893)	2.308 (0.913)	3.112 (1.427)	142.209 (0.000)	1-2; 2-3
Social-Normative MTL	5.079 (0.895)	4.859 (0.790)	3.790 (0.813)	4.508 (0.992)	40.403 (0.000)	1-3; 2-3
ACTIVITY PERCEPTIONS						
Learning outcomes	4.923 (1.237)	4.758 (1.068)	4.563 (1.141)	4.721 (1.136)	1.270 (0.283)	–
Attitude toward the discussant role	4.211 (1.217)	4.273 (0.955)	4.085 (1.142)	4.189 (1.084)	0.514 (0.599)	–
Attitude toward the discussed role	4.313 (1.089)	4.656 (0.981)	4.366 (1.083)	4.473 (1.049)	1.869 (0.157)	–

*p-value <0.1.

Table 4
EPL questionnaire (empathy, proactivity, leadership).

EMPATHY-Perspective Thinking	
I try to look at everybody's side of a disagreement before I make a decision	
I sometimes try to understand my friends better by imagining how things look from their perspective	
I believe that there are two sides to every question and try to look at them both	
Before criticizing somebody, I try to imagine how I would feel if I were in their place	
EMPATHY-Empathic Concern	
I often have tender, concerned feelings for people less fortunate than me	
Sometimes I don't feel sorry for other people when they are having problems *(R)*	
When I see someone being taken advantage of, I feel kind of protective toward them	
Usually I am not extremely concerned when I see someone else in trouble *(R)*	
When I see someone being treated unfairly, I sometimes don't feel very much pity for them	
I would describe myself as a pretty soft-hearted person	
PROACTIVITY	
If I see something I don't like, I fix it	
No matter what the odds, if I believe in something I will make it happen	
I love being a champion for my ideas, even against others' opposition	
I excel at identifying opportunities	
I am always looking for better ways to do things	
If I believe in an idea, no obstacle will prevent me from making it happen	
MTL-Affective	
Most of the time, I prefer being a leader rather than a follower when working in a group	
I am the type of person who is interested to lead others	
I usually want to be the leader in the groups that I work in	
I have a tendency to take charge in most groups or teams that I work in	
MTL Calculative	
I am only interested to lead a group if there are clear advantages for me.	
I would want to know 'what's in it for me' if I am going to agree to lead a group	
MTL Social-Normative	
I feel I have a duty to lead others if I am asked	
I agree to lead whenever I am asked or nominated by the other members	
I was taught to believe in the value of leading others	
AVERAGE SCORES	
(1) EMPATHY + PROACT + MTL Affective	**A higher value means proactive empathic leadership**
(2) MTL Calculative + MTL Social	**A higher value means speculative leadership**
(1) + (2)	**A lower means a passive follower behaviour**

Individuals belonging to cluster 1 are students with higher levels of empathy, proactivity and affective-identity MTL than the rest of the students. This cluster also had a high level of social-normative MTL, although the difference with cluster 2 was not significant. Therefore, individuals in this cluster could be labelled as *proactive empathic leaders*. We can also note that this cluster is the smallest one in size. Cluster 2 consists of 71 students, whose levels of empathy were significantly lower than cluster 1. This group had a moderate level of proactivity, being significantly lower than cluster 1 but significantly higher than cluster 3. Concerning their motivations to lead, this group exhibited higher levels of social-normative and calculative MTL. Thus, we labelled students in this cluster as *speculative leaders*, since the only motivation to lead seems to take place when they can obtain a personal benefit or social recognition. Finally, cluster 3 had significantly lower levels in all personality traits. Thus, students belonging to this group, labelled as *passive followers*, did not show any motivation to lead, and their levels of proactivity were also inferior to the other profiles identified.

Regarding the differences between the three clusters on the dependent variables, we found no significant effects. The previous analysis may help us to interpret this lack of significance. In this way, we observe a link between the clusters' proactivity levels and perceived learning outcomes, although the differences are not significant. As for attitudes, the PLS analysis revealed significant influences of empathy and calculative MTL (Table 2). These effects may explain the lack of significant differences between proactive empathic leaders (cluster 1) and speculative leaders (cluster 2), since proactive empathic leaders had the highest level of empathy, whereas speculative leaders were superior in non-calculative motivation. There is no simple explanation for the lack of significant differences concerning cluster 3, where lower perceptions in these variables were expected. An explanation is that the effect of learning outcomes on attitudes could be stronger for this group of students.

Finally, taking into account the results obtained in the validation of the scales and the cluster analysis, the questionnaire that appears in Table 4 is proposed. This questionnaire may allow teachers to diagnose the type of personality of their students depending on their empathy, proactivity and leadership scores.

5. Discussion and conclusions

One of the primary tasks of higher education is to help their students to meet the challenges they will encounter during their professional life (El Mansour & Dean, 2016; Jarvis, 2013). The students' personality will influence their potential to address these challenges successfully, and ultimately, will determine their acquisition of skills required in the labour market. In addition, their personality may be shaped by the way these skills are acquired, so that students will be better able to succeed (Lakhal et al., 2012; Niehoff, 2006).

The main purpose of this study was to explore the impact of the students' personality on their perceptions and attitudes toward the activity of discussant in university debates. Specifically, we examined the impact of three important traits, empathy, proactivity and motivation to lead, on the perceptions of learning outcomes derived from the discussant activity, as well as on attitudes toward the two roles that can be adopted (discussant and discussed). We argue that these personality traits are decisive in the context of the discussant activity. The greater the students' ability to put themselves in their peers' shoes, to propose solutions in advance and to lead a team, the greater the benefits will be derived from the activity, both at the individual and the collective levels.

The results of our model indicate that personality directly affects the students' perceptions and attitudes. Empathic students that can understand the feelings of others will positively evaluate the activity of being either discussant or discussed. However, empathy does not influence the perception of learning outcomes. Thus, as previous literature suggests (Davis, 1980, 1996; Davis et al., 1999), empathy is an affective or emotional trait related to the feelings that people have for their peers. Empathic students value the feelings resulting from their interactions during the activity, rather than enhanced learning.

The opposite occurs with proactivity, where the analysis revealed a positive impact on learning outcomes and a lack of effect on attitudes. Proactivity may be considered a more pragmatic trait, reflecting the students' willingness to search for opportunities and take advantage of them to obtain specific results. Proactive students may thus value more the personal initiative and less those feelings that arise when interacting with their peers.

The students' motivations to lead also have different effects. First, we highlight the fact that the affective-identity MTL did not affect the dependent variables. Students with a high affective-identity MTL may find the chance to prove their leadership skills through this activity (since its development involves some reflection and public debate), regardless of the possible consequences. Second, we point out the impact of social-normative and calculative MTL on the attitude toward being discussed by other peers. Thus, publicly responding to the criticisms of classmates can be seen by these individuals as an opportunity to 'take a step forward for the team', demonstrating a sense of duty and responsibility.

The second goal of this research was to identify different profiles of students concerning their levels of empathy, proactivity and motivation to lead. The results of a cluster analysis identified three student profiles, two with a high motivation to lead (although in different dimensions) and one with a follower profile. Thus, proactive empathic leaders are students who consider themselves as the leaders of a team but also have a high capacity to understand their peers (high levels of empathy), as well as to act actively in different situations. This is the smallest group of the three, with 21.8% of students in our sample. This group could be considered as the students that every teacher *would like to have in the classroom* since they empathize with their peers, are proactive and exercise their leadership skills collectively, which enable the success of the discussant activity. On the other hand, speculative leaders are those students who, while possessing a proactive personality, are interested in leading a work team because they feel some social pressure or can take personal advantage. This group of individuals represents a high proportion of students (40.8%) who do not show high levels of empathy, so it would be interesting to develop activities in the classroom to foster this trait.

Finally, passive followers have medium-to-low levels in all personality traits. These students (37.5% in our sample) seem not to be willing to take initiative in classroom activities or to lead work teams, nor do they stand out because of their empathy levels. These results are in line with previous research that postulates that followers considered to be passive do not critically evaluate the process or the desired results (Kelley, 1992). Therefore, passive followers need a special motivation and the constant direction of a leader who must clarify and direct each decision in the activity (Sronce & Arendt, 2009).

Although these students would be expected to have some perceptions about the activity in terms of learning outcomes and attitudes, the results of the ANOVA did not show significant differences depending on the students' profiles.

5.1. Recommendations, limitations, and future research lines

This research offers interesting contributions to the educational and business areas. First, this research contributes to the research on the role of personality as a cornerstone for the development of innovative teaching activities (Dong et al., 2011). Our study points out the importance of taking into account the personality traits of the students when designing the learning activities in higher education. Specifically, our research identifies profiles of students in terms of empathy, proactivity and different motivations to lead. Focusing on these personality traits, a questionnaire is proposed that may allow teachers to identify those students who require an improvement in their social skills as well as to build teams where their members have a complementary personality. It can also be used as a self-diagnostic tool for students to identify their social strengths and weaknesses. Compared to surveys such as the Multifactor Leadership Questionnaire (MLQ) of Bass and Avolio (1995), this approach requires a relatively low number of items to measure the joint effect of leadership, proactivity and empathy.

From the educational point of view, our findings help to understand how the students' personality influence the development of teaching activities like debates, which can help teachers to identify behavioural patterns that facilitate their task as moderators in the implementation of such activities. By designing teaching activities appropriate for the students' profiles, students can benefit from learning at both the individual and group levels. In addition, this might result in the teachers' satisfaction to see that the effort made to introduce, prepare and develop innovations in the classroom has a reward.

Also, from a business point of view, fostering this type of teaching activity in higher education contribute to making graduates suited to the needs of specific jobs (El Mansour & Dean, 2016). Thus, individuals with high levels of empathy, proactivity and motivation to lead a work team will be better able to perform certain tasks. On the other hand, people with a high motivation to be the leader when there is some personal benefit or social recognition may best operate in situations requiring intense competition or pressure. Finally, people who are passive and willing to follow others' commands may be the perfect complement to creating balanced work teams. Not everyone can (or has to) be a leader, nor does everyone need to make decisions in advance. However, motivating

'passive followers' in an educational context is crucial and special attention should be paid to possible specific tools or strategies for this type of student. First, teachers must attempt to identify what makes these students have a passive behaviour in class, their personality or other factors such as the size of the class, their classmates, their teachers or the fear of making mistakes (Abdullah et al., 2012). Students can become passive when they are not engaged and challenged by team tasks or goals. In this sense, students can increase their motivation when they feel part of the goal-setting process. Should this be the case, they will know that their contributions and choices have a direct influence on the academic results obtained. Also, passive students that are aware of the importance of their role in their teams and the specific skills they possess will be more motivated to have an active role in the task. In addition, the development in universities and educational centres of action-oriented work culture, through active learning activities, such as the debate activity, can help to achieve more proactive participation in the future.

This research has several limitations that offer interesting lines for future research. We focused only on three personality traits to analyse the success of the discussant activity. It would be interesting to include other personal variables, such as the students' entrepreneurial spirit or learning strategies, to examine the relationships proposed. Our study does not take into account the influence of the teacher's personality type. Students react differently to different people, so it cannot be said that the student's personality is the sole determinant of their participation in the activity. Therefore, it would be interesting to investigate how students react to the discussant activity with different teachers' personalities. The role of situational factors, such as the classroom climate or the conditions for the implementation of the didactic project may also affect the development of the active learning activities, such as the discussant activity.

Furthermore, the study is limited to a relatively small sample of students in a marketing course. Future research should replicate the model with students with different backgrounds and specialization areas (e.g., finance, strategic management, economics) to offer generalizable findings. Finally, it would also be interesting to show how personality variables influence the evaluation and development of the discussant activity at a team level rather than an individual level.

Author statement

All Authors: Conceptualization, Design of Methodology, Reviewing. **Carlos Orús-SanClemente**: Data Analysis, Literature Review. **Alfredo Pérez-Rueda**: Writing-Editing, Original draft preparation, Supervision of reviewed version. **Carmina Fandos-Herrera**: Data Analysis, Literature Review. **Julio Jiménez Martinez**: Literature Review, General Supervision. **José Miguel Pina**: Writing- Editing, Data Analysis.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijme.2022.100754.

AppendixItems used in the questionnaire

Scales		Source
EMPATHY		Davis (1980, 1999)
Perspective Thinking		
PERSTH1	*I sometimes find it difficult to see things from the 'other guy's' point of view (R)*	
PERSTH2	I try to look at everybody's side of a disagreement before I make a decision	
PERSTH3	I sometimes try to understand my friends better by imagining how things look from their perspective	
PERSTH4	*If I'm sure I'm right about something, I don't waste much time listening to other people's arguments (R)*	
PERSTH5	I believe that there are two sides to every question and try to look at them both	
PERSTH6	*When I'm upset at someone, I usually try to 'put myself in his shoes' for a while*	
PERSTH7	Before criticizing somebody, I try to imagine how I would feel if I were in their place	
Empathic Concern		
EMPCON1	I often have tender, concerned feelings for people less fortunate than me	
EMPCON2	Sometimes I don't feel sorry for other people when they are having problems *(R)*	

(*continued on next page*)

(*continued*)

Scales		Source
EMPCON3	When I see someone being taken advantage of, I feel kind of protective toward them	
EMPCON4	Usually I am not extremely concerned when I see someone else in trouble *(R)*	
EMPCON5	When I see someone being treated unfairly, I sometimes don't feel very much pity for them	
EMPCON6	*I am often quite touched by things that I see happen*	
EMPCON7	I would describe myself as a pretty soft-hearted person	
PROACTIVITY		Bateman and Crant (1993)
PROAC1	If I see something I don't like, I fix it	Seibert et al. (2001)
PROAC2	No matter what the odds, if I believe in something I will make it happen	
PROAC3	I love being a champion for my ideas, even against others' opposition	
PROAC4	I excel at identifying opportunities	
PROAC5	I am always looking for better ways to do things	
PROAC6	If I believe in an idea, no obstacle will prevent me from making it happen	
MOTIVATION TO LEAD (MTL)		Chan and Drasgow (2001)
Affective-Identity MTL		
AFFMTL1	Most of the time, I prefer being a leader rather than a follower when working in a group	
AFFMTL2	I am the type of person who is interested to lead others	
AFFMTL3	I usually want to be the leader in the groups that I work in	
AFFMTL4	I have a tendency to take charge in most groups or teams that I work in	
Calculative MTL		
CMTL1	I am only interested to lead a group if there are clear advantages for me.	
CMTL2	I would want to know 'what's in it for me' if I am going to agree to lead a group	
CMTL3	*If I agree to lead a group, I would never expect any advantages or special benefits (R)*	
CMTL4	*Leading others is really more of a dirty job rather than an honorable one*	
Social-Normative MTL		
SAMTL1	I feel I have a duty to lead others if I am asked	
SAMTL2	I agree to lead whenever I am asked or nominated by the other members	
SAMTL3	I was taught to believe in the value of leading others	
LEARNING OUTCOMES		Official university report of the degree in business management and administration (goo.gl/fS2f0K)
The Discussant activity carried out …		
LO1	… has improved my comprehension of the theoretical concepts of the course	
LO2	… has improved my learning of the course	
LO3	… has improved my knowledge of marketing	
LO4	… has improved my knowledge of the marketing techniques, strategies and decisions followed by real companies	Teaching guide of the course (goo.gl/VB5h1N)
LO5	… has had a positive impact on my final grade of the course	
LO6	… has helped me to improve my ability to work in group	
LO7	… has helped me to expand my capacity to communicate, both orally and in writing, knowledge, ideas and outcomes of the activities and projects carried out	
LO8	… has improved my capacity to issue reports about specific market situations, industries, organizations, companies and their functional areas	
LO9	… has improved my capacity to comprehend and apply professional criteria with scientific rigor to the solving of economic, business and organizational issues	Orús et al. (2016)
LO10	… has improved my capacity to know the operations of all the functional areas of any company and have the skills to perform any task within these areas	
LO11	… has improved my ability to analyse and search for information from diverse sources	
LO12	… has improved my problem-solving capability	
LO13	… has improved my ability to analyse and synthesize.	
ATTITUDE TOWARD THE DISCUSSANT/DISCUSSED ROLE		
Being the discussant of my classmates' work …/Being discussed by my classmates …		Borthick and Jones (2000)
ATT1	… has been an activity that I like	Sagin (2008)
ATT2	… has been a pleasant activity	Saygi (2010)
ATT3	… has been an activity upon which I have a positive opinion	Sad (2012)
ATT4	… has been a good idea	
ATT5	… has been entertaining	
ATT6	… has been easy to make/answer to the comments	
ATT7	… has helped me to learn a lot	
ATT8	… I have felt comfortable playing the role of the discussant/discussed	
ATT9	*… has made me feel anxious (R)*	
ATT10	… has made me exert more effort in my written presentations	
ATT11	I have felt prepared to be the discussant of/discussed by my classmates	
ATT12	I have learnt a lot when discussing/being discussed by my classmates	

Note//Items in italics were deleted in the statistical validation procedure.

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