

# Introducing the Discussant Role to Stimulate the Debate in the Classroom: Effects on Interactivity, Learning Outcomes, Satisfaction and Attitudes

## Abstract

Debates can help students to acquire cross-curricular competencies and improve their learning. However, their use in higher education is scarce and students' acceptance is low. Considering the effectiveness of discussants in scientific conferences, this research introduces the discussant activity as a teaching tool to revitalise the debate in the classroom. We propose and test a model to analyse the effects of this activity on three important aspects of learning (interactivity, learning outcomes, and satisfaction). We examine how these variables determine the students' attitudes towards the two roles that can be adopted in the activity (discussant or discussed) and their overall evaluation. We test the model regarding the students' expectations and perceptions once the activity has been experienced. Results show significant relationships between interactivity, learning, and satisfaction. Moreover, the three factors strongly determine attitudes and overall evaluation of the activity. Differences before and after experiencing the activity are also found.

Keywords: discussant; discussed; interactivity; learning outcomes; satisfaction; attitude

## 1. Introduction

Institutions and companies demand universities training programs in which graduates possess a series of cross-curricular competencies that can readily apply when they join the labour market. One of these competencies is the ability to argue, give reasons for, and defend their ideas. The debate in the classroom is one effective tool to help students acquire this ability (Haseman, Nuipolatoglu, and Ramamurthy 2002; Siau, Sheng, and Nah 2006). However, research about the use of this tool in business and management studies is scarce, which is surprising given that these disciplines represent an ideal context for its utilisation (Vo and Morris 2006).

Debates are not extended in several university contexts and are not well accepted by students. This negative attitude may be due to the excessive number of students in the classroom (Goodwin 2003), which hinders the implementation of discussions; there is little chance for each student to participate, and those with particular characteristics (e.g., extra motivated students) tend to totally control the conversation. Brower (2003) states that if the class size is above 20 students, the discussion may become counterproductive. In addition, there are additional shortcomings when the debate is

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3 based on the work carried out by the students rather than on a general topic, in such a way that the  
4 students have to tackle the criticism and suggestions of their classmates. For example, confrontations  
5 among students may arise, which can damage the climate in the classroom (Ainsworth et al. 2011).  
6 Collusive situations may also occur to avoid these situations, which reduce the efficacy of this tool.  
7 Either the case, the debate might not accomplish with the goal of providing students the required  
8 competencies.  
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12 Therefore, there is a need for mechanisms to overcome these barriers. One possible solution is  
13 to introduce the *discussant role* into the classroom. This figure is widely known by university  
14 instructors and researchers. Research shows that the discussant is effective for encouraging the debate  
15 in scientific conferences (Davidson 2003). In teaching contexts, Lindauer (1990) argues the benefits of  
16 the discussant role, given that this activity revitalises the classes, shows students that the business  
17 concepts are not a monolithic truth, and encourages their participation. Thus, the discussant role in  
18 higher education tries to bring the activity from the scientific realm to the classroom and, together with  
19 traditional teaching tools such as the debate, trigger collaborative learning and peer-to-peer  
20 assessment. However, this tool has barely been put into practice in higher education studies.  
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27 User acceptance is one of the cornerstones of any teaching methodology. We analyse the  
28 factors that determine the students' attitude towards the discussant activity as a means to revitalise a  
29 relevant teaching methodology, such as the debate. In addition, we compare the students' attitude  
30 towards the discussant activity regarding their expectations (before experiencing the activity), and  
31 their perceptions once the activity has occurred (experience). We consider three factors that are  
32 inherent to teamwork and the debate in the classroom as antecedents of the students' attitude:  
33 interactivity among peers, learning outcomes and satisfaction with the activity. We aim to understand  
34 which strategies can be implemented to influence the success of the discussant activity in the  
35 classroom. The results of this research can help instructors to overcome the limitations for the success  
36 of debates as a teaching tool in higher education.  
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43 The remaining of this paper is organised as follows. First, we establish the theoretical  
44 framework based on the discussant role, collaborative learning and debates in education, as well as on  
45 the antecedents of attitude, namely interactivity, learning outcomes and satisfaction. The central  
46 construct of attitude is also defined. Second, we outline the hypotheses that lead us to propose two  
47 theoretical models, one based on students' expectations (model A) and one resulting from the  
48 experience with the activity (model B). Third, we describe the context of the study, the methodology  
49 and the data analysis. Fourth, we present the findings. Finally, we discuss the results and offer  
50 recommendations for instructors of higher education studies.  
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## 52 53 54 55 **2. Theoretical Framework and Hypotheses**

### 56 57 **2.1. The Discussant Role: Debate and Collaborative Learning**

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3 The discussant role in scientific conferences has advantages that can be extrapolated to higher  
4 education contexts. The Academy of Management (2002) and several authors (e.g., Davidson 2003)  
5 claim that the discussant helps speakers to improve their research by identifying errors and  
6 weaknesses. However, implementing the discussant activity in a college degree course differs from a  
7 scientific conference. The levels of maturity and knowledge of the participants, the practical nature of  
8 the projects carried out by the students, or the absence of a hierarchy based on professional status, are  
9 some of the main differences between the two contexts (Davidson 2003).

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14 The discussant activity requires a debate between the person who presents the work  
15 (discussed, hereinafter) and the person who makes comments (discussant, hereinafter). The rest of the  
16 audience can also join the debate. Using debates in the classroom benefits students in their  
17 communication and argumentation skills, and improves their knowledge about the topic of discussion  
18 (Allen et al. 1999). Furthermore, the students have the opportunity to see different points of view; they  
19 are forced to search for reasons to support an idea; and eventually, it is reasonable to argue that their  
20 learning will improve as a consequence of a better preparation of the topic. However, there are barriers  
21 to the success of debates in the classroom mostly based on a deceptive feeling of companionship  
22 and/or a “non-aggression” tacit agreement. Goodwin (2003) highlights three main reasons for students  
23 to have a negative attitude towards the debate: first, students may associate it with negative qualities  
24 like hostility and fighting; second, students may find this specific form of arguing to be intimidating or  
25 silencing; third, students may simply find debates to be unfamiliar and they resist the innovation.

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33 According to Lindauer (1990), we argue that the discussant activity can revitalise the debate  
34 because it can overcome the abovementioned barriers. The student does not criticise other students’  
35 work voluntarily but he or she is forced by the instructor. However, discussing others’ work implies  
36 some kind of peer-to-peer assessment which gives students a higher responsibility and may have also  
37 negative consequences (Trahasch, 2004). Therefore, the students need to prepare the discussion  
38 beforehand to develop the activity efficiently.

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42 In sum, the discussant activity in the classroom is a form of collaborative learning. This  
43 learning methodology allows the instructor to rapidly adapt the pace and content of the course to better  
44 fit the students’ needs and improve their learning outcomes (Blasco-Arcas et al. 2013) and it also  
45 allows for a mutual influence of learning partners in the group (Strijbos and Fischer 2007).

## 46 47 48 **2.2. Expectations and Experiences: Interactivity, Learning Outcomes and Satisfaction**

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51 Interactivity among peers “is not defined by the frequency of interactions, but by the extent to which  
52 these interactions influence the peers’ cognitive processes” (Dillenbourg 1999, 8). When the students  
53 perceive interactivity in the classroom, they feel more encouraged to learn, pay more attention, are  
54 more participative, and are more willing to exchange ideas with instructors and other students than  
55 when they do not perceive interactivity (Siau, Sheng, and Nah 2006).

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3 In active and collaborative learning contexts, research shows that increasing the interactivity  
4 in the classroom has a positive influence on the students' learning outcomes (e.g., Boyle and Nicol  
5 2003; Haseman, Nuipolatoglu, and Ramamurthy 2002; Sims 2003). Interactivity improves the active  
6 processing of the contents of the course (Blasco-Arcas et al. 2013) and favours different kinds of  
7 learning (Haseman, Nuipolatoglu, and Ramamurthy 2002). Behaviourist and constructivist models of  
8 learning relate positively interactivity in the classroom to learning. The behaviourist perspective  
9 emphasises feedback and student self-assessment in learning, which can be achieved through  
10 increased interactivity (Siau, Sheng, and Nah 2006). The constructivist model, which requires the  
11 internal process of a learner to organise pieces of information into a system of knowledge, stresses the  
12 importance of learners' engagement and attention in learning, which can also be achieved through  
13 interactivity (Sims 2003). Moreover, students' satisfaction can be enhanced through interactivity in the  
14 classroom (Orús et al. 2016; Siau, Sheng, and Nah 2006; Sun and Hsu 2013) and the design of  
15 interactive teaching tools (Eom, Wen, and Ashill 2006; Sun et al. 2008).

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23 However, there is a lack of research analysing these relationships in a face-to-face  
24 environment where the interactions among students are established more directly. In addition, if the  
25 students perceive that the interactivity resulting from the activity influences positively their acquisition  
26 of competencies, learning outcomes and satisfaction, we can establish a parallelism with their  
27 expectations. If the students expect (experience) that the discussant activity benefits the interactivity  
28 among peers, we should also anticipate a positive impact on their expected (experienced) learning  
29 outcomes (Bravo, Lucia-Palacios, and Martín 2016). Moreover, if the discussant activity, which can be  
30 seen as a novel approach compared with a traditional learning environment, increases the expected  
31 (experienced) interactivity among peers it can also affect positively the students' expected  
32 (experienced) satisfaction. Therefore, and taking into account the two different timeframes of our  
33 model (before and after carrying out the activity; a and b, respectively), we propose:

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41 *H1a (b): The expected (experienced) interactivity among peers derived from the discussant*  
42 *activity has a positive influence on the students' expected (experienced) learning outcomes.*

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*H2a (b): The expected (experienced) interactivity among peers derived from the discussant*  
*activity has a positive influence on the students' expected (experienced) satisfaction with the*  
*discussant activity.*

We also propose a positive direct relationship between learning outcomes and satisfaction with the discussant activity. Previous research analyses these two variables as key consequences of learning processes (e.g. Abdous and Yen 2010; Alshare and Lane 2011; Eom, Wen, and Ashill 2006; Sun and Hsu, 2013). However, few studies examine the relationship between these two constructs. In an active learning environment where students produced videos related to marketing concepts, Orús et al. (2016) show that the students' perceived learning outcomes have a positive effect on their satisfaction

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3 with the course. In this way, we propose that if the students expect (experience) an improvement in  
4 their learning due to the discussant activity, their expected (experienced) satisfaction will be higher.  
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8 *H3a (b): The students' expected (experienced) learning outcomes has a positive influence on*  
9 *their expected (experienced) satisfaction with the discussant activity.*  
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### 11 **2.3. Attitudes towards the Activity and Overall Evaluation**

12 Before dealing with the effects of the discussant activity on attitudes, we need to articulate the  
13 dichotomy in the roles played in the activity. The student may either be the discussant of others' work  
14 or be discussed by other peers. Each of these roles implies different tasks, preparation and effort. Thus,  
15 it is possible that the students have distinct attitudes towards the two figures. Our model includes this  
16 dichotomy and considers a dual dependent variable: attitude towards being the discussant and attitude  
17 towards being discussed.  
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20 According to the cognitive perspective of social psychology, attitudes are based mainly on the  
21 individual's beliefs and expectancies (Ajzen 2008). The link between expectations, experiences and  
22 attitudes is well documented in the literature. Howard (1989) claims that attitudes are formed by the  
23 individual's expectations about the satisfaction of their needs. Redish, Saul, and Steinberg (1998) also  
24 reveal that the learners' expectations of a teaching activity determine their response towards it. We  
25 argue that the expectations and experiences resulting from the stimulus (the discussant activity) will  
26 have a positive influence on the students' attitudes. Moreover, knowing the learners' expectations and  
27 experiences in relation to a subject, course, or activity, is paramount to understand their learning  
28 processes. The student's expectations evolve with the passing of the time from a relativist to a  
29 constructivist stage in which learning is fundamentally determined by his or her experiences (Belenky  
30 1986; Perry 1970).  
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33 Specifically, our model proposes the influence of three critical factors of learning  
34 environments on attitudes: interactivity among peers, learning outcomes, and satisfaction. First, the  
35 discussant activity implies a degree of interactivity among peers that can positively affect attitudes,  
36 given that there are no differences in status or prestige among the discussant and the discussed, which  
37 may occur in scientific conferences (Davidson 2003). The interaction fostered by the discussant offers  
38 different viewpoints to the discussed, forces him or her to search for reasons to counter-argue ideas,  
39 and eventually favours his or her learning as a consequence of a better preparation of the topic. Vo and  
40 Morris (2006) point to a positive attitude towards the debate among students due to a better  
41 comprehension and easier learning of the contents of the course, as well as to a better academic  
42 performance and analysis of real cases. Sims (2003) also points out that one of the most important  
43 benefits of interactive teaching methodologies is the enhanced engagement with the topic, which  
44 results in a positive attitude.  
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3 Second, learning outcomes are based on the acquisition of competencies, both specific to a  
4 course and cross-curricular. Taking into account the previous review, we can expect that the discussant  
5 activity will provide students with enhanced abilities and will generate an expectation of better  
6 learning outcomes. Therefore, their attitude towards the activity will be positive.  
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10 Third, the expectation confirmation theory (Oliver 1977) studies the relationship between  
11 consumer satisfaction and post-purchase attitudes. This theory exposes the direct link between  
12 satisfaction and attitude. Specifically, we consider the student's attitude as the mental associations  
13 between the object and its overall evaluation. Therefore, we propose that the interactive nature of the  
14 discussant activity, the perceived learning outcomes and the satisfaction with the activity will affect  
15 positively the attitudes towards both figures (discussant and discussed), before (a) and after (b)  
16 carrying out the activity:  
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21 *H4a (b): The students' expected (experienced) interactivity among peers has a positive*  
22 *influence on their expected (experienced) attitude towards the discussant role.*  
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24 *H5a (b): The students' expected (experienced) learning outcomes has a positive influence on*  
25 *their expected (experienced) attitude towards the discussant role.*  
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28 *H6a (b): The students' expected (experienced) satisfaction with the discussant activity has a*  
29 *positive influence on their expected (experienced) attitude towards the discussant role.*  
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31 *H7a (b): The students' expected (experienced) interactivity among peers has a positive*  
32 *influence on their expected (experienced) attitude towards the discussed role.*  
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35 *H8a (b): The students' expected (experienced) learning outcomes has a positive influence on*  
36 *their expected (experienced) attitude towards the discussed role.*  
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39 *H9a (b): The students' expected (experienced) satisfaction with the discussant activity has a*  
40 *positive influence on their expected (experienced) attitude towards the discussed role.*  
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42 The discussant activity is based on a constructive and autonomous learning grounded in reflection and  
43 peer judgments. The student is the active subject of his or her performance. Therefore, the attitude  
44 towards the two figures implied in the activity (discussant and discussed) will affect its evaluation.  
45 According to Bednall, Sanders, and Runhaar (2014), the evaluation of a learning activity may  
46 influence the perceptions of performance appraisal quality and the willingness to participate in follow-  
47 up learning activities. Brower (2003) claims that real learning occurs when students and instructors  
48 can freely express and exchange their opinions and ideas; interaction is one of the most important  
49 components of any learning experience. Therefore:  
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55 *H10a (b): The students' expected (experienced) attitude towards the discussant role has a*  
56 *positive influence on their expected (experienced) overall evaluation of the activity.*  
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3 *H11a (b): The students' expected (experienced) attitude towards the discussed role has a*  
4 *positive influence on their expected (experienced) overall evaluation of the activity.*

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6 *H12: The students' expected overall evaluation of the discussant activity has a positive*  
7 *influence on the experienced overall evaluation of the discussant activity.*

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10 The model is graphically depicted in Figure 1. As previously stated, all the relationships will be tested  
11 before and after the development of the activity to analyse the differences between the students'  
12 expectations and experiences.

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15 [Figure 1 near here]

### 16 17 **3. Methodology**

#### 18 19 **3.1. Context, Participants and Procedure**

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21 This research examines the impact of the discussant activity in a university course for the degree in  
22 business management and administration at a major university in Europe. The course is compulsory  
23 for second-year students. The evaluation of students' learning is based on the outcomes of several  
24 activities carried out during the semester, rather than on a global exam. This evaluation system  
25 accounts for the 40% of the final grade (the remaining 60% is achieved through a final test). A total of  
26 382 students could participate in the discussant activity.

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28 Specifically, the evaluation system consists of the development of a real marketing research  
29 project. The project is carried out by groups of students (from 4 to 6 people) who choose the topic  
30 independently from one another and work on it during the entire semester. In this major project, every  
31 group has to complete five assignments with different levels of progression of the marketing research  
32 plan and applying different research techniques. Each assignment includes a written report and an oral  
33 presentation in class. Specifically, the first assignment presents the research goals and information  
34 needs; the second case develops a qualitative (e.g., in-depth interview, focus group) or an observation  
35 technique; the third assignment consists of the design and implementation of a survey study; the fourth  
36 applies an experimental design; finally, the fifth case consists of the final report that gathers the entire  
37 marketing research project.

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39 The discussant activity is embedded in this major project. Each group has to elaborate a series  
40 of critical and constructive comments about other group's assignment; these comments establish the  
41 basis for the debate in the classroom after the oral presentation of the case. The day before the oral  
42 presentation in the classroom, the groups have to submit their assignment (written report and slides for  
43 the oral presentation) to the instructor. After the submission, the instructor assigns the assignment to  
44 the groups. Next, the "discussant group" prepares a series of comments to be made in class following  
45 the oral presentation given by the "discussed group". The discussant group has also to send the  
46 comments to the instructor before the presentations session and to the discussed group afterwards. The  
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3 distribution system is designed so that each group has to discuss and be discussed by a different group  
4 in each of the five assignments. As for the comments, they may underline weaknesses that need to be  
5 improved, request for the resolution of doubts, or suggest innovative ways to overcome the  
6 shortcomings. In this way, each group has to make their case and defend it from the comments of the  
7 discussant group; they try to reasonably answer the questions and counter argue their comments. From  
8 this point, the two groups start debating, and the rest of the students (and the instructor) can join at any  
9 moment.

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14 The importance of the discussant activity is stressed throughout the entire project and  
15 especially for the development of the final report. For the last assignment, the groups have to prove  
16 that they have taken into consideration the comments made by their classmates by either implementing  
17 corrections or justifying better their approach. The instructor has also comments and suggestions for  
18 each assignment, and acts as the judge and supervisor during the entire project.

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22 At the beginning of the course, there is an introductory session to avoid possible bias in the  
23 activity due to the different instructors' background. All the instructors are thus trained to develop the  
24 activity in the same way, giving similar explanations to their students (using the same slides and  
25 materials) and devoting some sessions to solve doubts and supervise the progress of the project before  
26 and after each assignment.

### 30 **3.2. Questionnaire**

#### 31 *3.2.1. Data Gathering Process*

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34 In the introductory session of the marketing research project, and after explaining the discussant  
35 activity in detail, the students answered to a questionnaire to measure their expectations (model A).  
36 We obtained a total of 297 valid cases. To test model B regarding the students' experience with the  
37 activity, we used a similar questionnaire which was handed out in the final sessions of the course (161  
38 valid cases).

#### 39 *3.2.2. Measurement*

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42 All the measurement scales consisted of 7-point Likert questions which were obtained from the  
43 specialised literature on education. To measure interactivity among peers, we used 5 items adapted  
44 from Blasco-Arcas et al. (2013). The 13 items to measure the learning outcomes of the activity were  
45 obtained from the official university report of the degree in business management and administration  
46 ([goo.gl/fS2f0K](http://goo.gl/fS2f0K)), the teaching guide of the course ([goo.gl/VB5h1N](http://goo.gl/VB5h1N)), and from similar questionnaires  
47 employed by European institutions. We employed the scale of Orús et al. (2016) to measure the  
48 satisfaction with the activity (3 items). Regarding the scales to measure the students' attitudes towards  
49 both figures (discussant and discussed, 12 items for each one), as well as their overall evaluation of the  
50 activity (5 items), we adapted the measurements from Saygi (2010), Borthick and Jones (2000), Sad  
51 (2012), and Sagin (2008) used in different collaborative learning contexts.



### 3.2.3. Analytical Procedure

We used partial least square (PLS) as the estimation procedure to examine the relationships proposed. We analysed the data in two steps: first, we tested the validity and reliability of the measurement instruments; second, we examined the relationships between the model coefficients (Ringle, Wende, and Becker 2015). PLS methodology is increasingly used in social sciences and education contexts (e.g., Islam 2013; Lueg and Lueg 2015; Orús et al. 2016; Wu, Tennyson, and Hsia 2010) and focuses on maximising the variance of the dependent variables explained by the independent variables (Haenlein and Kaplan 2004). This estimation technique is particularly useful when the variables follow non-normal distributions and when the sample size is relatively small compared with the number of estimation parameters (Chin and Newsted 1999; Stan and Saporta 2005), as it is our case. We used the SmartPLS software version 3.0 to analyse the data. We also conducted a preliminary analysis with IBM SPSS version 22.

## 4. Results

### 4.1. Mean Analysis

Before testing the hypotheses, we performed a statistical analysis to compare the students' expectations and final perceptions on the discussant activity. After checking their psychometrical properties, the constructs were built as the average value of their respective items (see Table 1). We must note that one item was removed from the scales of attitude towards the discussant, attitude towards being discussed and general evaluation, both before and after the activity, since their item-total correlation was below cut-off point 0.3 (Nunnally and Bernstein 1994). After the depuration process, Cronbach's alphas were above the critical threshold of 0.7 (Nunnally and Bernstein 1994) in all cases. The Average Variance Extracted (AVE) values exceeded the threshold of 0.5 and composite reliability was higher than 0.6 for all the constructs, thus confirming convergent validity (Fornell and Larcker 1981). Discriminant validity was also confirmed by checking that AVE coefficients exceeded the correlations between each pair of factors.

Taking into account the lack of normality in the data distributions, we carried out Wilcoxon signed-rank tests by comparing the statistical means of the constructs before (expectation) and after (experience) the activity. The Table 2 shows the results of the tests and effect size estimations (Cohen's  $d$ ). We observe that the final perceptions were significantly different from the initial expectations for all the variables except for the attitude towards the discussant role ( $p > 0.1$ ). Although the final attitude towards the discussed role was marginally higher than the expectations value, most of the respondents' final perceptions were lower than their expectations (Table 2). Nevertheless, all the mean values were above the middle point of the scale (4) indicating overall positive attitudes.

[Table 1 near here]

[Table 2 near here]

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3 Regarding effect sizes, Cohen (1988) proposed three thresholds by making a distinction between small  
4 ( $d = 0.2$ ), medium ( $d = 0.5$ ), and large ( $d = 0.8$ ) effects. According to this classification, there are  
5 medium effects for learning outcomes and satisfaction, whereas the remaining effects fall into the  
6 small-medium (overall evaluation and interactivity) and small (attitude towards both the discussed and  
7 the discussant role) categories.  
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#### 10 11 **4.2. Structural Model Estimation**

12 We used the method of partial least square (PLS) regression for the estimation of the structural model.  
13 We specifically analysed the statistical significance of the structural parameters and the path  
14 coefficients besides the  $R^2$  values of the dependent factors. All the factorial loadings of the different  
15 indicators on their respective latent variables were significant at 1%, and  $R^2$  values were higher than  
16 0.1 (Falk and Miller 1992).  
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21 Table 3 shows the results of the structural model estimations, which are based on a bootstrap  
22 with 2,000 replications. The left column refers to the analysis of the students' expectations (model A),  
23 whereas the right column corresponds to their perceptions after the activity (model B). The estimation  
24 of the structural model reveals a higher predictive power of model B, with  $R^2$  values higher than those  
25 provided by model A. The main dependent variable, overall evaluation of the activity, was explained  
26 in 54.9% in model A and 75.1% in model B.  
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33 The analysis supported most of the hypotheses in both models, although we observed different  
34 patterns (Table 3). Hypotheses H1, H2 and H3 were clearly supported at 99% confidence level.  
35 Interactivity among peers had a significant effect on learning outcomes (H1) and satisfaction (H2),  
36 whereas satisfaction was also dependent on learning outcomes (H3).  
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40 As proposed in H4, H5 and H6, the expected (experienced) interactivity among peers, learning  
41 outcomes, and satisfaction positively influenced the expected (experienced) attitude towards the  
42 discussant role (Table 3). All the coefficients were significant at 99% confidence level, with the  
43 exception of the effect of interactivity which was weaker in model A than in model B (Table 3).  
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47 We found the most evident differences between the two models on the attitude towards being  
48 discussed. In the expectations model, attitude towards the discussed role was significantly affected by  
49 interactivity among peers (support to H7a) and learning outcomes (support to H8a); however, the  
50 expected satisfaction did not have a significant effect, thus we have to reject hypothesis H9a. In the  
51 final perceptions model, interactivity among peers also influenced the attitude towards the discussed  
52 role (support to H7b). This time, the experienced satisfaction had a positive effect (support to H9b),  
53 but the final perceptions of learning outcomes did not have a significant effect (rejection of H8b)  
54 (Table 3).  
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3 Finally, in line with hypotheses H10 and H11, the overall evaluation of the activity was  
4 significantly influenced by the attitude towards the discussant role in both models, and to a lesser  
5 extent by the attitude towards the discussed role (Table 3). Contrary to H12, the initial expectations  
6 did not have a significant effect on the final evaluation of the activity ( $p = 0.102$ ).  
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## 9 10 **5. Discussion and Conclusions**

11 Higher education studies are a fundamental context to introduce novel and attractive proposals that  
12 encourage students to acquire, strengthen, and put their knowledge into practice. These dynamic  
13 activities rely on students' active role and allow them to develop a series of skills very close to the  
14 labour reality (Willcoxon, Cotter, and Joy 2011). In addition, the design of dynamic activities  
15 motivates students to acquire a critical perspective of their own work and their classmates' work. One  
16 of these teaching tools is the discussant activity introduced in this research, which aims to revitalise  
17 another important teaching methodology in the classroom, such as the debate. We analyse the  
18 influence of three important consequences derived from the activity (interactivity among peers,  
19 learning outcomes and satisfaction) on the students' attitude towards the two different roles that can be  
20 adopted (i.e. discussant and discussed), as well as on their overall evaluation. Furthermore, we  
21 compare these influences before and after experiencing the activity to better understand the effect of  
22 the students' experience on their final perceptions and to identify different influences of these  
23 variables on students' expectations and final perceptions.  
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32 The results of the analysis reveal the usefulness of the proposed model, given that most of the  
33 relationships are validated and the model proves consistency in two different time frames (i.e.  
34 expectations, model A; final perceptions, model B). Moreover, both models show good fit levels ( $R^2$ ),  
35 especially when the model is estimated after carrying out the activity (model B). This result is more or  
36 less self-evident. When individuals face a new, challenging activity, they do not know how the activity  
37 is going to be or how they are going to perform it. Expectations entail uncertainty, and therefore the  
38 variables explained better attitudes once the activity has been experienced and perceptions are certain.  
39 Nevertheless, the higher explanatory power of the model B indicates that the three variables  
40 considered (interactivity among peers, learning outcomes, satisfaction) are strong determinants of  
41 students' attitudes and evaluation of the learning activity.  
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48 Specifically, the results of both models show a strong influence of the interactivity among  
49 peers on learning outcomes, and of these two factors on the satisfaction with the activity, supporting  
50 H1, H2 and H3 (a and b). However, the expected values of the three variables are significantly higher  
51 than the final perceptions. This finding may be due to the fact that students are more prone to  
52 innovative teaching activities that provide a healthy break from routine. Also, at the beginning of the  
53 course (when we conducted the expectations questionnaire), students may feel less workload and  
54 usually feel more optimistic about their performance. All these factors may contribute to inflated  
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3 expectations, and the reality, once the activity has been experienced, lowers these expectations. On the  
4 other hand, these results may also be explained by the development of the activity itself. The students  
5 may have perceived the discussant activity as less favourable as expected. Moreover, experiencing the  
6 discussant activity in front of an overcrowded audience may hinder the debate.  
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10 The three consequences of the discussant activity have an overall positive influence on  
11 students' attitudes, both before and after experiencing it. However, if we analyse the two facets  
12 separately (discussant and discussed) and compare the expectations with the final perceptions, we find  
13 several differences. Regarding the role of being discussed, the expected satisfaction with the activity  
14 does not affect attitude. This result is intriguing given that research widely demonstrates the  
15 satisfaction-attitude relationship in consumption experience contexts. Perhaps this link is weaker in an  
16 expectations model because the students' expectations might be mainly based on the explanations of  
17 the activity provided by the instructors. The discussant activity was completely new for the students;  
18 therefore, they would probably not know how they will feel about it. This result may also be explained  
19 by other factors that affect the expectations about how students may feel about other classmates  
20 criticising their work, such as insecurity or fear of confrontations. Nevertheless, the relationship  
21 between satisfaction with the activity and attitude towards being discussed is significant once the  
22 activity has taken place.  
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30 In the experience model (model B), the perceived learning outcomes do not translate into a  
31 favourable attitude towards being discussed. This result may be due to the fact that the students  
32 considered that the comments received from other classmates did not help them to improve their  
33 assignments. Several reasons may explain this perception of lack of effectiveness: the discussed group  
34 may not know how to articulate the discussant's comments to improve their work; they may consider  
35 the comments of others as nonrelated to their work (even to the content of the course); at the extreme,  
36 the discussed group may think that the discussant group is not qualified to criticise them (contempt).  
37 One implication for teaching is the need to inform the students that the comments have to be specific  
38 to the contents of the course and focused on the technical particularities of the assignment, rather than  
39 generic about managerial or theoretical questions. That is, the comments have to be practical in nature  
40 so that the group being discussed can tackle most of them. The lack of significance in the relationship  
41 between perceived learning outcomes and attitude towards being discussed may be also explained  
42 because the instructors noticed that most of the comments were negative or addressed the weaknesses  
43 of the students' work. Positive reinforcements were barely mentioned. In this way, the instructors need  
44 to highlight to their students the importance of acknowledging the positive points of their classmates'  
45 work, which may help to reinforce their learning and to show the entire classroom the parts of the  
46 work that are well executed.  
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56 The interactivity among peers has significant positive effects on attitudes in all cases, although  
57 its effect was lower on the attitude towards the discussant role after experiencing the activity. The  
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3 resulting interactivity may have not been as expected. In fact, the perceived interactivity was lower  
4 than expectations (see Table 2); perhaps the debate was perceived as futile by the participants or it  
5 generated confrontations. The implications of this finding are in line with our previous  
6 recommendations. The instructors should make an effort to show students the importance of giving  
7 positive feedback to the same extent than criticising their classmates' work. In so doing, the students  
8 may perceive a return of their participation in the discussant activity.  
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12 As we anticipated, the attitudes towards both roles (discussant and discussed) have a positive  
13 influence on the overall evaluation of the activity. However, we find that in the two models considered  
14 (expectations and experiences) the attitude towards the discussant role has a stronger impact on the  
15 overall evaluation than the attitude towards the discussed role (see Table 3). Thus, students may feel  
16 more comfortable when they have to discuss others' work than when they have to be criticised by their  
17 classmates. This finding is noteworthy given that discussing the work of other students entails extra  
18 work in reading the cases and preparing the comments, trying to find flaws and weaknesses (and good  
19 points and strengths, hopefully); when the students receive the comments, their task is limited to  
20 defend their choices and argue from a position of dominance (the authors of a case should have a  
21 higher knowledge of their own work than any other student). However, the students who must present  
22 and defend their work, on the stage and in front of the whole classroom, are in a stressful situation to  
23 which they are unfamiliar. This "being judged" feeling may eventually translate into a lower impact of  
24 the discussed role on the overall evaluation of the activity.  
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33 The overall evaluation of the activity declines slightly, but significantly, from the expectations  
34 to the final perceptions (see Table 2). However, if we look at the attitudes towards both roles, we  
35 observe no significant differences between the expected and perceived attitude towards the discussant  
36 role, and a marginally significant increase in the attitude towards the discussed role. Perhaps the  
37 students expected harder comments than what they actually received. Thus, the decrease in the overall  
38 evaluation of the activity may be due to inflated expectations rather than to a decrease in attitudes.  
39 Finally, the expectations about the evaluation of the activity have no effect on the final evaluation. We  
40 have to note that the measurement of expectations was three months before the measurement of final  
41 perceptions, and the students probably had difficulties in remembering their expectations. Therefore,  
42 they might not been able to maintain the same answers in order to be coherent. However, this finding  
43 indicates that their final evaluation may depend exclusively on their performance during the activity  
44 and its consequences (interactivity, learning outcomes, satisfaction, and attitudes), rather than on their  
45 previous expectations.  
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53 Our research offers interesting implications for academy and pedagogy. First, we propose the  
54 introduction of a new teaching tool (the discussant activity) that revitalises another important resource,  
55 such as the debate in the classroom. The students show a high degree of acceptance of the discussant  
56 activity, as we observed positive expectations to improve their interactivity among peers, their  
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3 learning outcomes, and satisfaction. These positive expectations also favour their attitudes towards  
4 both figures of the activity (discussant and discussed). Instructors should emphasise the positive  
5 aspects of the activity related to the enhanced interactivity and learning to foster the students'  
6 acceptance and therefore engagement with the activity. It is also important that the instructors  
7 supervise the activity so that students play their roles effectively and do not engage in collusive  
8 behaviours. The discussants should focus on the contents of the course, make constructive comments,  
9 and maintain the good manners and respect required for a debate in a higher education context.

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14 The students should be aware of the two roles they play during the activity. They have to make  
15 an effort to offer good feedback to their classmates' work but also they have to stand up for their own  
16 work. Nevertheless, the instructor should remind the students to be prepared for a lesson in humility  
17 and admit their mistakes. If they acknowledge their deficiencies, they may correct them in the  
18 subsequent cases and prove learning. Otherwise, the point of the debate is worthless. If the students  
19 castle in their positions, it will result in a negative impact on their academic performance their  
20 academic performance may not improve as a result of the activity.

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25 Second, this research contributes to the use of dynamic tools in the classroom to improve the  
26 quality of learning outcomes. The students' acquisition of specific and cross-curricular competencies  
27 is the cornerstone of the new educational models in higher education (Bravo, Lucia-Palacios, and  
28 Martín 2016). Specific competencies refer to particular skills to solve or perform tasks in a specific  
29 field of knowledge; cross-curricular competencies transcend a particular field and have a  
30 multidisciplinary nature (Parvu, Ipate, and Mitran 2014), and involve social, interpersonal and  
31 communicational skills, among others (Pereira et al. 2014). Our research shows that the discussant  
32 activity helps the students to acquire both types of competencies.

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37 Specifically, our research aims at improving students' learning through fostering their  
38 motivation, their capacity to argue and make constructive comments, and their capacity to empathise  
39 with their peers. Similarly, with this activity students can develop their ability to defend their work, to  
40 accept constructive comments from others, and rebut them. The activity may also improve the  
41 students' communication, teamwork and synthesis skills, as well as their ability to put knowledge into  
42 practice.

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47 Future research should apply this activity to other subjects to examine its effectiveness and to  
48 identify differences depending on the learning context. In social sciences, we can find areas in which  
49 subjectivity and interpretation may have different degrees of importance and therefore debates are  
50 more or less advisable. Another interesting future research line is to analyse the impact of the students'  
51 personality (e.g., empathy, self-criticism, leadership) on their perceptions of the activity and attitudes.  
52 In this way, the instructors will be able to design teaching activities focused on their students'  
53 characteristics and needs with a greater probability of success.

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Table 1.Descriptive Statistics, Composite Reliability and Convergent Validity

	Mean	Standard Deviation	Composite Reliability	AVE	Cronbach's Alpha
Overall evaluation of the activity (A)	4.59	1.19	0.905	0.704	0.859
Attitude towards the discussed role (A)	4.34	1.09	0.942	0.598	0.932
Attitude towards the discussant role(A)	4.26	1.11	0.941	0.597	0.931
Interactivity among peers (A)	4.95	1.02	0.937	0.787	0.910
Learning outcomes (A)	5.32	0.90	0.950	0.595	0.943
Satisfaction (A)	5.47	1.08	0.932	0.820	0.891
Overall evaluation of the activity (B)	4.31	1.24	0.932	0.775	0.903
Attitude towards the discussed role (B)	4.47	1.04	0.933	0.587	0.920
Attitude towards the discussant role (B)	4.16	1.07	0.939	0.591	0.928
Interactivity among peers (B)	4.69	1.19	0.931	0.770	0.901
Learning outcomes (B)	4.71	1.15	0.967	0.693	0.963
Satisfaction (post)	4.81	1.20	0.899	0.747	0.831

Note: (A): expected; (B): experienced

Table 2. Mean Differences between Expectations and Final Perceptions

	Mean (A)	Mean (B)	Z	p-value	Cohen's d
Overall evaluation of the activity	4.59	4.31	-2.229	0.026**	0.230
Attitude towards the discussed role	4.34	4.47	-1.825	0.068*	0.122
Attitude towards the discussant role	4.26	4.16	-0.208	0.835	0.092
Interactivity among peers	4.95	4.69	-2.700	0.007***	0.235
Learning outcomes	5.32	4.71	-6.421	0.000***	0.591
Satisfaction	5.47	4.81	-5.506	0.000***	0.578

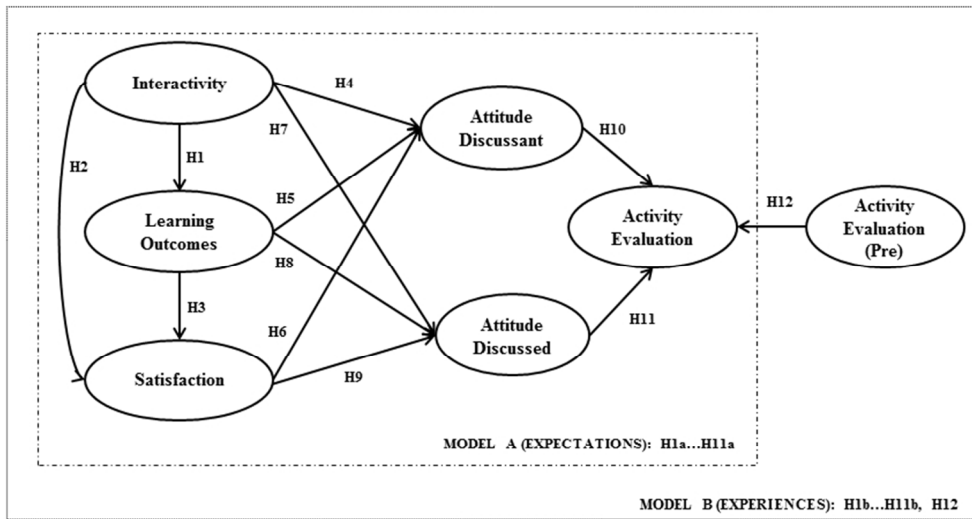
Note: (A): expected; (B): experienced; \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

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Table 3. Structural Model Estimation

		Model A		Model B	
Hypothesis		$\beta$ -value		$\beta$	<i>t</i> -value
H1	Interactivity → learning outcomes	0.539	11.420***	0.584	7.645***
H2	Interactivity → satisfaction	0.227	3.272***	0.319	4.522***
H3	Learning outcomes → satisfaction	0.449	6.222***	0.533	7.199***
H4	Interactivity → attitude towards discussant	0.368	6.245***	0.123	1.888*
H5	Learning outcomes → attitude towards discussant	0.177	2.665***	0.330	4.224***
H6	Satisfaction → attitude towards discussant	0.210	3.523***	0.458	6.577***
H7	Interactivity → attitude towards being discussed	0.323	4.745***	0.197	2.457**
H8	Learning outcomes → attitude towards being discussed	0.297	4.090***	0.145	1.341
H9	Satisfaction → attitude towards being discussed	0.055	0.884	0.503	5.480***
H10	Attitude towards discussant → Evaluation of activity	0.527	8.395***	0.597	8.400***
H11	Attitude towards being discussed → Evaluation of activity	0.258	4.573***	0.280	3.715***
H12	Evaluation of activity (pre) → Evaluation of activity (post)	-	-	0.061	1.275
		$R^2$ -value		$R^2$ -value	
		Evaluation of activity		75.1%	
		Attitude towards discussant		57.6%	
		Attitude towards being discussed		67.0%	
		Learning outcomes		34.1%	
		Satisfaction		58.4%	

Note: \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$



Research Model and Hypotheses

229x124mm (96 x 96 DPI)

Review Only