

THE EFFECT OF GENDER IN THE ESTABLISHMENT OF RELATIONSHIPS IN HIGHER EDUCATION

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Abstract

The beginning of higher education is a very important moment in the life of students, in which the relationships established between peers can be crucial and determining for the development of their studies. Among other things, the help and support they receive, both academically and personally, may depend on these relationships.

In this study we will analyse the importance that certain variables acquire in the establishment of these relationships, with special emphasis on the effect that gender can have.

We will study the relationships established at the beginning of higher education, in the specific case of students of the Bachelor's Degree of Business Administration at the Alcoi campus of the Universitat Politècnica de València in Spain. We will study the relations that are established at the beginning of their studies and we will verify if there is a tendency to group and to establish relations between the peers of the same gender and if this tendency is maintained throughout the following courses, or if with the passage of time it tends to break this tendency and to establish new relations independently of the gender. The results obtained can have important consequences in the organization of the learning processes of university students, thanks to a better knowledge of their behavior in the classroom and to the improvement in the establishment and definition of work groups and learning activities.

Keywords: Gender, University.

1 INTRODUCTION

With the start of university studies, a large number of students move to educational institutions outside their usual places of residence and also usually with new colleagues they do not know. For these reasons, the relationships they will establish in this new stage of their lives, both academically and in terms of friendship, will be of great importance.

There is a great deal of literature that studies the establishment of relationships between different groups and between peers, as well as the variables that will determine these relationships [1,2,3].

In that sense, many papers have shown that people have tendencies to become friends with others of the same characteristics, such as age and gender, having proximity in the social space [4,5,6]. This proximity is also known as homophily [4].

However, most of these studies focus on the case of relationships between adolescents and children [7, 8], and there are fewer references to the level of relationships that are established in the field of higher education, focusing most of them on their relationship to academic performance [9,10]. In addition, although gender frequently appears as one of the variables that can determine relationships, it is not usually used as one of the main focuses in peer relations research [7], on the other hand, there is not much empirical evidence about the gender differences in peer relations.

It is for this reason that this paper will analyse the influence of gender on the establishment of relations between students at both academic and friendship levels, and whether such relationships and the influence of gender, if any, are maintained over time and as students move from one academic year to another, or whether on the contrary such influence loses weight over time.

In order to study these relations, the following questions arise:

Research Question 1 (RQ1): *Is there a tendency to establish relationships between peers of the same gender?*

Research Question 2 (RQ2): *If such relationships exist, are they maintained over time or do they lose strength over the years?*

In order to answer these questions, a study has been carried out with the third-grade students of the Bachelor's Degree in Business Administration and Management of the Campus of Alcoy of the Universitat Politècnica de València in Spain.

The article is structured in the following way, firstly and after the introduction the methodology used will be reviewed, commenting on the sample and the design, then the results obtained in the research will be shown and discussed and finally the conclusions will be shown.

2 METHODOLOGY

2.1 Sample

The sample consisted of students in their third-year of the Bachelor's Degree in Business Administration and Management of the Campus of Alcoy of the Universitat Politècnica de València in Spain.

This Bachelor's Degree is a four-year full-time program requiring the completion of 240 ECTS (European Credit Transfer System) credits which aims to train future professionals able to manage, run, advise and assess business organizations.

The third-year students were chosen because the students then had spent three years together at the university, and learned to know each other well, so they have been able to extensively develop their relationships in this context after three academic years. On the other hand, in the fourth year, a large part of the students decides to carry out part of their studies in foreign universities mainly thanks to the scholarships of the European Erasmus+ Programme or to carry out internships in companies, which impedes the adequate development of their relations in the University environment.

The total amount of third-year students considered at this Bachelor's Degree in Campus of Alcoy was 47. However, this number was smaller in the first year, since five full-time new students enrolled in the Bachelor's Degree in the second year. Table 1 shows a detailed description of the sample of students addressed for each year.

Table 1. Main characteristics of the students analysed

<i>Academic year</i>	<i>Number of students</i>	<i>Genre</i>		<i>Average age</i>
		<i>Female</i>	<i>Male</i>	
2015/2016 (1 st year)	42	20 (47.62%)	22 (52.38%)	20.79
2016/2017 (2 nd year)	47	24 (51.06%)	23 (48.94%)	21.85
2017/2018 (3 rd year)	47	24 (51.06%)	23 (48.94%)	22.85

As can be seen in the table, the students analysed present a gender balance, thus we find a similar number of men and women in the Bachelor's degree under study.

2.2 Design

Data was collected from the students of the third-year class. The main purpose of the project was to study criteria for friendship and academic relations with focus on gender.

A questionnaire was filled in by the students during ordinary lessons. Before obtaining information from the students, they were informed students about research's objectives and aims, ethical aspects and procedures. The study was carried out using roster recall method [11,12,13], which involves presenting to the interviewees a full list of the students enrolled in the course who were then asked about their academic and personal relationships with each of them in the first, second and third year of the Bachelor's degree. Specifically, each student was asked about the students he/she had helped to develop projects, exercises and joint classroom activities, as well as to prepare for exams in each of the first three years of the Bachelor's degree. This information allowed us to build three academic relationship networks, one for each of the academic years that the student has been in the university. With regard to personal relationships, each student was asked about with whom he had established bonds of trust and friendship in each of the three years, which allowed us to build three personal relationships networks, one for each of the academic years.

At the end of the process of data collection, we had 47 valid responses which represents the whole population of third-year students.

For the analysis of the data, the UCINET software [14] was used for the description and indexation of the variation between the individuals in the sample. In particular, homophily has been explored among students according to their gender.

Once the percentages of homophily of the students in the three years were obtained, these data were analysed by means of the PSCP statistical package.

Since data follow a non-normal distribution, the Kruskal Wallis test was chosen in order to contrast the research questions under study.

3 RESULTS

The results obtained in the analysis of the above-mentioned sample are shown below. As can be seen in the following tables, there are a number of missing values that are due to students who for various justified reasons (usually for work reasons), could not attend class in person during a course and therefore during that course did not have relations with their peers

3.1 Results for research question 1

With regard to the first question of research, the academic relations established between students on the one hand and friendship relations on the other have been analysed. In both cases, the effect of the gender variable has been studied in order to determine these relationships.

Table 2. Descriptive statistics to analyse the degree of homophily in academic relations

N	Valid	132
	Lost	9
Average		69,67
Std. Deviation		28,54

Table 3. Homophily mean ranks of academic relations by gender

<i>Gender</i>	<i>N</i>	<i>Mean rank</i>
Male	66	72.06
Female	66	60.94
Total	132	

Table 4. Kruskal-Wallis test to analyse academic relations by gender

Chi square	2.86
df	1
Sign. Asint.	0.091

As can be seen in the previous tables, there is homophily between students determined by gender, with an average homophily percentage of 69,67%. Furthermore, when differentiating by gender, it can be observed that in both cases, in both men and women, the homophily percentage is significant with 72.06 and 60.94 respectively, but in addition, when performing the Kruskal Wallis test, there is a difference between both with a significance of less than 10%.

Table 5. Descriptive statistics to analyse the degree of homophily in friendship relations

N	Valid	131
	Lost	10
Average		67,69
Std. Deviation		27,37

Table 6. Homophily mean ranks of friendship relations by gender

Gender	N	Mean rank
Male	66	72.45
Female	65	59.45
Total	131	

Table 7. Kruskal-Wallis test to analyse friendship relations by gender

Chi square	3.9
df	1
Sign. Asint.	.048

With regard to friendly relations, the line observed above is maintained in the results obtained in academic relations, observing a significant homophily among students determined by gender with an average of 67,69%, although in this case when performing the Kruskal Wallis test, the difference between men and women when establishing friendly relations is greater with a significance of less than 5%.

3.2 Results for research question 2

Regarding research question 2, as can be seen in the following tables, homophily due to gender is maintained over the years in the case of both friendship and academic relationships. In this regard, when performing the KW tests, tables 9 and 11, it is observed that there is no significant difference over the years in either academic or friendship relationships, so we can state that the effect of homophily determined by gender is maintained over time.

Table 8. Homophily mean ranks of academic relationships over the years.

Year	N	Mean rank
1	39	69,68
2	46	62,36
3	47	67,91
Total	132	

Table 9. Kruskal-Wallis test to analyse academic relations over the years

Chi square	.89
df	2
Sign. Asint.	.640

Table 10. Homophily mean ranks of friendship relations over the years

<i>Year</i>	<i>N</i>	<i>Mean rank</i>
1	38	64.04
2	46	65.05
3	47	68.51
Total	131	

Table 11. Kruskal-Wallis test to analyse friendship relations over the years

Chi square	.34
df	2
Sign. Asint.	.844

4 CONCLUSIONS

According to the results obtained, it is observed how the relations established between students are clearly influenced by gender, establishing homophily relations between students at both friendship and academic levels, which are maintained over time.

At the same time, there is a small difference between students according to gender. Specifically it can be seen that the degree of homophily determined by gender for academic relationships is higher in the case of men with an average percentage of 72%, compared to 60.9% for women, with a significance of 10%. In the case of friendship relations, the percentage of homophily continues to be significant although there is a greater difference between men and women with a significance of less than 5%. In particular, in the case of men the degree of homophily is 72.75% while in the case of women it is 59.45%.

Therefore, our results are in line with other research, showing that the gender variable will determine the establishment of relationships between students, which will be maintained in the future, but it has also been shown that there is a difference between gender and peer relations.

These results will contribute to a better knowledge of the students' behaviour, as well as to the establishment and definition of work groups and learning activities.

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