What is the Impact of Social Factors on the Performance of Our Students?

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Abstract

The question of students' performances was and continues to be in the centre of numerous debates in the field of Education. The sources of this concern, among other things, are the important financial resources which are dedicated to Education in order to promote the economic, social and individual development. But the numerous cases of failure recorded not only in the developed societies, but also in developing countries testify of the ineffectiveness of their education system. This leads to arousing a number of questioning regarding the relevance of the granted investments. Based on the survey realised for this purpose, this study means to highlight the social factors influencing the success or the academic failure in Moroccan universities with open access.

Keywords: education, social factors, performances, Moroccan universities

1. Introduction

There are currently several studies that have addressed the question of the influence a variety of parameters might have among students' performances in universities with open access. In general, there are two major families of parameters: internal parameters (related to the university itself), and external parameters (associated with the external environment at the university, especially, the social factors). Among these works, we quote:

Coleman and al., 1966; Baudelot and Establet, 1971; Jencks and al., 1972) whose studies emphasized on social and family factors as causes of school failure; whereas some others insisted on institutional variables for this faiure such as (Heyneman, 1983; Postlethwaite, 1980; etc.). Meanwhile others highlighted institutional variables (Heyneman, 1983; Postlethwaite, 1980; etc.).

- MANSKI (Manski, 1992) showed that the probability of a student completing high school will increase if that student lives with both parents (Elena Arias and Catherine Dehon, 2007).
- HAVEMAN and his team, tested in their work whether family characteristics and investment in the household influence educational outcomes for children (Elena Arias and al, 2007).
- The first one who focuses on perseverance is Tinto (Tinto 1975, 1993) with his model of "students' integration" in which the author incorporates several sociological and economic factors driving the student whether to give up or persevere.
- The second model is called "student attrition" by Bean and Metzer (Bean, 1985) in which these authors take into account other factors external to the institutions.
- Various studies on attrition, perseverance (Rivière and Jacques, 2002; Roy and others, 2005; Tremblay, 2005; Tremblay and others, 2006) on success (Bélanger and others, 2005; Barbeau, 2007) were produced over the last years to better understand the phenomenon and explain its main factors.

There are different ways to consider this issue, as there are diverse methods to approach academic success. In almost all studies, however, the parents' human capital[2], is considered as one of the factors tested in almost all of them. This variable occurs to be statistically significant in explaining students' success. Family socioeconomic environment was closely related to educational pathway of children in the study DUTSMAN: «Educators were slow to realise that all forms of selection in education, which are assumed to take an interest in only intellectual abilities of applicants, are actually in correlation with their social background» (Torten HUSEN, 1975).

A review of the international literature allows us to identify the various existing approaches in order to tackle the success of the student and the main socio-economic factors that have been proposed.

2. Problematic

This paper focuses on the study and analysis of social parameters and their influence on student performance in Moroccan universities with open access. A research topic is particularly relevant when it reflects the values of a society. This study is pertinent both at socially, economically and theoretically. The value of our study is firstly in the use of a database, containing socio-economic information about students, and secondly in applying the analysis of variances (ANOVA) used as a test for estimating the conditional probability of a student success or failure, knowing the characteristics of the student (gender, field of study, etc.), the previous educational pathway and socio-economic background.

To process the variables related to the social background of a student which affect students' performances in universities, we selected the following social variables: type of student's accommodation, occupation of parents, education funding, medical coverage, the size of of the family, family status, kind of transportation, transportation problems, non-academic occupations, prospects after the degree, concerns over the job market, impact concerns about the study.

Similarly, for analysing data collected, we used the analysis of variances method and factor analysis of multiple correlations (AFCM).

3. Targeted Population

The study of factors affecting student performance focused on a population belonging to different institutions from several cities. The size of our sample amounted to 1,500 students divided among the faculties of Rabat, Salé, Kénitra, Casablanca, Agadir and Oujda at 150 students per school. Apart from the latter and that of Rabat where samples came from faculties of Arts and Sciences, all other institutions targeted were law schools solely.
After corrections and rectifications (because of missing data or lack of results), we reached a database of 900 individuals whose age distribution shows a large concentration of 20-22 years, since in itself, this group represents nearly 65% of the students surveyed.

As for the gender, the database reveals a large majority of women (over 58% of respondents). The vast majority of surveyed students comes from public institutions (83%); and most of them (over 86%) are respectively a BS degree holders (43%) or literary high school diploma (42.6%).

The sample of the study was performed on the basis of the quota method. This is the most common form (empirical or non-probability method). It is used especially in opinion polls and market surveys.

Data collected based on the questionnaire distributed to students were voted and manually processed (frequency distribution techniques using crosstabs, percentage comparison ...) to compute the frequency distribution within survey population.

4. Questionnaire Description

The major objective of this study is to determine how to account for the causes of success or failure in school. We wish to know what representations to maintain in this regard, or what to think about the causes behind of school performance. More specifically, we would like to check if there is a relevant connection between social background and school performance.

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2 Human capital can be defined as the set of abilities, talents, skills and experiences accumulated by an individual and which partly determines its capacity to work or to produce for him or for others.

A questionnaire was administered to all students forming the sample survey. The purpose of this tool for data collection is to gather information on (Outtaj & Yousfi, 2012):

- The socio-economic characteristics of the surveyed;
- The family structure and characteristics of the surveyed;
- The level of education of their parents and the family tracking;
- The surveyed school characteristics.

The choice of the questionnaire is warranted [3] by the fact that it is most convenient but also because it provides information about the purpose of the study in a very short time and at a low cost. The questionnaire used in the survey was written in Arabic and French, since these are the two languages used in the selected universities.

5. *Analysing with Analysis of Variance (ANOVA)*

The bivariate analysis reveals to us all the explanatory variables that are statistically significant and which direct impact on the dependent variable. In order to consolidate our findings, the analysis of variance (ANOVA) was used as test. The analysis of variance is a set of methods designed to express and interpret the average differences noted between groups within similar variables (Raouf & all 2012).

ANOVA can check whether there are average differences between subgroups by studying their variance. The null hypothesis is tested by the F test in SPSS.

We find in this group all exogenous factors that can influence directly or indirectly students' performance. The test used showed that most of those factors have no impact on this performance.

For the rest, we will give some examples of processing variables with ANOVA.

Type of Student Accommodation

The overall average is not affected by the type of accommodation of the student. Whether in family, dormitory, tenant or roommate, the average does not vary significantly (sig=0.3< 0,5).

The Father's Occupation:

ANOVA table

			Sum of squares	df	Average of squares	F	Signification
Average Total * TypAccom	Inter-groups Combined		3,904	3	1,301	1,224	,300
	Intra-class		832,451	783	1,063		
	Total		836,354	786			

ANOVA shows that the students' performance does not depend on the father's occupation. Significance is 0.296 <0.5.

			Sum of squares	df	Average of squares	F	Signification
Average-Total* Father'occupation	Inter-groups Combined		13,116	9	1,457	1,195	,296
	Intra-class		602,234	494	1,219		
	Total		615,350	503			

Education Funding

The type of financing for studies appears to have no effect on student performance. Whether the studies are funded by a grant and / or with family assistance or other incomes, ANOVA indicates that no impact on overall average is registered (sig = 0.445 <0.5).

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[3] Benaceur Outtaj, Abdellah Yousfi (Rabat, December 12, 2012). To justify the choice and factors influencing the students' performance at faculties with open access. Proceedings of the National Symposium on Higher Education in Morocco: which teaching to ensure efficiency?

			Sum of squares	df	Average of squares	F	Signification
Average - Total * Educ Fund	Inter-groups	Combined	5,089	5	1,018	,955	,445
	Intra-classe		831,621	780	1,066		
	Total		836,710	785			

Holding a Medica Cover

Students with medical cover have a higher average (1,48 %) in comparison to those who do not have it. The significance level for the variable is 0.025. We deduce that the access to health care affects students' performance negatively.

ANOVA table

			Sum of squares	df	Average of squares	F	Signification
Average- Total *Medcover	Inter-groups	Combined	5,363	1	5,363	5,067	,025
	Intra-class		830,753	785	1,058		
	Total		836,116	786			

Conclusion

The table above shows the significance level of social variables:

Social variables	Interpretation
Concern over the job market	0,921
Impact of the concerns on studies	0,743
Transport problems	0,655
Education funding	0,445
Students' type of accommodation	0,3
Father's occupation	0,296
Mother's occupation	0,187
Type of transport	0,173
Marital status	0,137
Non-academic activities	0,130
Perspectives after the degree	0,129
Family size	0,124
Medical cover possession	0,025

In conclusion, we can deduce that the variables affecting students' performance are those having a meaning higher than 0.5, which are in this case the concern over the job market, the impact of the concerns on studies, and transport problems.

6. Analysing with the Method of Factor Analysis of Multiple Correspondences (MCA)

Following the data purification, thorough analysis of the data was carried out with the MCA. However, the inertia ratio described by the MCA is low, about 17% of the inertia could be explained throughout the factorial design. But it is possible to improve the outcome of the MCA by using the homogeneity analysis as described by Dominique Desbois. (Desbois, 2008)[4].

This method enabled us to express the variables on a 2 level dimension with an inertia > 30%. The implementation of the MCA following this stage gave us the array of indices of discrimination in relation to the first and second axes (Boussari, 2013).

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[4] «"The Dutch" Multiple Correspondence Analysis »: Introduction to homogeneity analysis» (2008), *Modulad*, pp.194-244.

Discrimination Variables Table

Variable	Dimension		Input to inertia cloud
	1	2	
Type of transport	0,835	0,352	0,385
Transport problems	0,833	0,244	0,227
Type of accommodation	0,725	0,065	0,130
Marital status	0,781	0,214	0,138
Medical coverage	0,781	0,069	0,132
Perspectives after the degree	0,747	0,014	0,096
Family size	0,747	0,057	0,141
Concern over the job market	0,610	0,107	0,209

Student performance is characterized by the first factorial axis, so any variable having an index of discrimination in relation to the first axis > 0.5 has an impact on performance.

The bivariate statistical analysis is not limitless, and in order to support our approach, we used an MCA to extract the most relevant set of variables which explain more accurately student performance.

According to the table above, we note that the following variables influence student performance with a discrimination index> 0.5 (see table above). We notice that the variables having a relationship with the transport impact more than other variables with a discrimination index > 0.8.

7. Conclusion and Prospects

This research work aimed to investigate the factors related to the social aspect affecting students' performance in universities with open access. To address our problem and determine the most significant factors, we retained a statistical approach based on bivariate analysis, completed by an AFCM. The results of our analysis show that for all 12 variables taken into account nearly 66% have a significant impact on student performance.

As prospects we want to make the same study but this time on the variables that related to environmental studies.

These results demonstrate that the following variables: type of transport, transport problems, type of accommodation, marital status, medical coverage, perspectives after the degree, family size, concern over the job market, have a direct influence on the student performance.

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