The Effects of Background Characteristics and School Factors on College Students' Performance and Satisfaction

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Abstract

Although, the effects of socioeconomic status on college students' academic performance are often cited, few research studies have examined the effect of school quality on the academic performance of students. This study examines the factors that determine students' academic behavior and performance. Specifically, the study aims to determine the impact of socioeconomic background and academic environment on student performance and satisfaction. A five-point scale was employed to assess student preferences and satisfaction with academic programs and various services. The Chi-square and Likelihood ratio test statistics show that satisfaction with academic environment and services as well as high school performances are pointedly correlated with college performance. Similarly, adequacy of library services, out-of-class experiences as well as the distribution of college majors are dependably related to college achievements.

Keywords: Background characteristics, school factors, academic performance and satisfaction.

1. Introduction

The fact that education plays a major role in the socioeconomic and technological development of any nation cannot be understated. This is because the development of any nation or community depends principally on the quality of education of such nation. It then becomes imperative that a society takes seriously the development of its human resources.

Then again, the academic performance of students impacts their future educational attainment as increase in income and social status is generally associated with increase in levels of education (Ross & Wu, 1995). This associated increase in socioeconomic status affects the students' access to health care, lifestyle factors such as recreation and nutrition, work environment, and social psychological factors such as self-regard, emotional stability and assertiveness.

Academic attainments in higher institutions of learning can be considered as an outcome of two factors: the first is the individual attributes, that is, each student's unique combination of socioeconomic factors and stability. The second factor is located in the sort of the school attended that is, the systems of education and patterns of imparting knowledge that are organized within schools. This study intends to find out the effects of both factors.

The major objective of this study is to examine factors that determine student behavior and performance at the Federal Polytechnic, Ilaro. Specifically, this study intends to appraise the impact of academic climate and services on student learning, performance, and satisfaction. In addition, it seeks to examine the effects of socioeconomic background and polytechnic environmental variables on academic performance. As a result, factors reflecting students' family socioeconomic status, students' classroom performance, out-of-class experiences and students' extra-curricular activities are included in this study to investigate the idea that academic performance is a function of complex and interactive conditions in-and-out of classrooms.

The socioeconomic factors considered in this research work include parental education, income and family size since it is commonly reported that more educated and wealthier parents have children who perform better on average (Karemera, Reuben, & Sillah, 2003; Jacobs & Havey, 2005) as such children are better exposed to a learning environment at home because of provision and availability of extra learning facilities (Okafor, 2007).

In a study conducted among the students of the University of Western Australia, Win and Miller (2004) observed that schools do matter to the performance of students in high school. Typically, the study shows that students at private schools have better academic performance than their counterparts at public schools. In a similar study, Marks, Millan and Hillman (2001) concluded that "a higher level of confidence among students in their own ability, a school environment more conducive to learning, and higher parental aspirations for the students' education" contribute to lifting student achievement.

The intention of this study is to examine how these variables might interact to explain high achievement among the students of higher institutions of learning using a case-study analysis. This is in line with the findings of Driessen, Smit and Sleegers (2004) which state that:

There are three important contexts or social institutions which can influence the education and socialization of children: the family, school and local community. It is assumed that at least some of the objectives of the various institutions – such as support for the development and school careers of children – are shared and therefore best reached by communicating and cooperating… The congruence between the different spheres of influence is then seen to be of considerable importance and partnership is viewed as a means to realize this. (p. 511).

2. Participants

A random sample of three 350 students (ranging from fresh students to returning ones) of the Federal Polytechnic, Ilaro was selected for the study. Among the participants, 323 students completed the questionnaire, which makes a response rate of 92.3%. The participants were not given any financial incentive nor any bonus marks for taking part in the survey. Based on stratified random sampling, the sample was representative of the entire departments of the school.

2.1 Instrument

The questionnaire used for this study was divided into three sections. The first section asked students questions pertaining to their socio-demographic features such as age, gender, current academic status and major field of study.

The second section of the questionnaire inquires about the students' educational background and the socioeconomic characteristics of their parents. They were asked to indicate the level of education of their parents, their household income bracket and religious behavior. The income bracket was ranged from less than #50,000 #1,000,000 (per month) with the interval of #100,000. They were also asked to state their Cumulative Grade Point Average (CGPA) to serve as a proxy for their academic performance. These questions help to assess the impact of cultural and socioeconomic background on a student's level of development, college choice and performance (Kuh & Hu, 2001; Hu & St. John, 2001).

The third section assesses the Polytechnic's characteristics and services. This was intended to capture the effects of the Polytechnic's services, academic programs, and activities on student learning and outcomes. Participants were asked to indicate the level of adequacy of the Polytechnic services and programs. Designed in Likert's 5-point scale, the statements were ranked from "very inadequate" to "outstanding". A value of 1 represented "very inadequate" and a value of 5 represented "outstanding". In this way, a greater mean value indicates a greater level of adequacy and students' preferences with the Polytechnic's academic programs and services. Previously, Graham and Grisi (2000) had pointed out that academic climate and student services interact to yield greater satisfaction and performance.

3. Result and Analysis

The survey was administered to the students of the federal Polytechnic, Ilaro (having obtained permission from the management of the school). One hundred and eighty seven students (58.1%) were females and one hundred and thirty six (41.9%) were males. It was also revealed that 39.6 percent of the respondents are currently in the first year of the Ordinary National Diploma (OND I) program. OND II were 26.2 percent, first year of the Higher National Diploma (HND I) program were 20.9 percent and HND II were 12.9 percent. Those who could not be categorized accounted for the remaining 0.4 percent. The distribution of the academic major was as follows: 26.3 percent were Civil Engineering, 42.4 percent were Business administration, 13.4 percent were Town and Regional Planning, 4 percent were Food and technology, 1.8% were Accountancy and undecided ones were 12.1 percent.

3.1 Parent Educational Background and Socioeconomic Factors

The survey responses show a noticeable educational gap between students' parents. It reveals that over 62 percent of the students came from families where fathers have at most secondary school education and 47.1% of the students came from home where mothers have at most secondary school education. Furthermore, the results show that 14.7 percent of the students indicated that their mothers had either a Polytechnic or University education while 24.9 percent of the same students claimed that their fathers had either a Polytechnic or University education. In addition, about 4 percent of the respondents indicated that their mothers had at least a Master's degree compared with 9.9 percent for fathers. It can then be concluded that a large percentage of the respondents came from homes where an educational disproportion between fathers and mothers exist. Besides, the results also point to the fact that a large size of students does not have parents that serve as higher education role model.

Regarding the socioeconomic characteristics, a remarkable point is the income disparity among respondents' families

based on students' knowledge and claim. For example, the responses show that 19.1 percent of the students surveyed are from families with over #1 000 000 in income while 27.6 percent are students from families with less than #500 000 per annum. This discrepancy in income seems to buttress the disparity in the level of parents' education.

3.2 Life, Academic Program, Activities and Services

Opinions of students indicating their level of satisfaction with academic programs and various services were used in this section. Participants were asked to rank various Polytechnic services and environment by levels of adequacy ranging from very inadequate to outstanding. The Likert's 5-point scale was used. The lowest value of 1 represented very inadequate while the highest value of 5 represented outstanding. A greater mean value represents a greater level of adequacy and student satisfaction with the academic program or service. Table 1 provides basic statistics.

The results show that respondents were generally satisfied with academic programs, activities and services received. As a matter of fact, most mean values are greater than 3.0 and only a few mean values are less than 2.0. Thus, these results indicate that students describe most services as adequate. But then, it should be noted that no mean score of 4 or above was recorded, which suggests that no activity was considered to be very adequate or outstanding.

3.3 College Performance and Environmental Characteristics

This section was used to test whether a student's CGPA as a proxy for academic performance is independent of the socioeconomic background and educational attributes of the students' family and Polytechnic environment characteristics.

Table 2 shows the $[X.sup.2]$ test and the Likelihood Ratio test results and corresponding significance levels for the selected characteristics. Since both tests point to similar inferences in most cases, the $[X.sup.2]$ test result is used in the analysis

When the null hypothesis that academic performance in College is not dependent upon high school achievements was tested, the results showed that performance in College is highly dependent upon performance in high school. This finding is similar to those of other researchers (Pascarella & Terenzini, 1991; Marks et al., 2001; Win & Miller, 2004). The degree of association between the family's income level and the Polytechnic performance is not significant at the 5 percent level since p= .09. Expectedly, academic major is extremely related to academic performance. The hypothesis of no association between academic majors and performance is rejected at the 0.5 level of significance when compared with a calculated p-value, p= 0.019. This means that academic performance is not the same across majors and varies according to major course of study.

Although students were not asked how frequently they used library resources but it is more likely that students who rate library resources as adequate are more likely to perform better. However, it cannot be concluded from the findings that respondents who ranked library resources as adequate or very adequate perform better because they used the library more than students with lower CGPAs.

The polytechnic's Professional development Programs, Student Industrial Working Experience Scheme (SIWES), Industrial Training (IT) attachment, and expected job opportunities are largely associated with academic performance based on the $[X.sup.2]$ test (see table 2). This finding shows that outside-classroom experience and activities are an essential and underlying part of student learning outcomes and development as claimed by previous researches (Kuh, 1995; Pascarella & Blimling, 1996). The results further reveal that the adequacy of classroom facilities as well as physical school environment is connected to academic performance. The implication is that undeniably, school environment and academic services are correlated with student performance and satisfaction.

4. Summary and Conclusion

This study examines how students' family characteristics, educational background, school environment and services are associated to student performance and satisfaction. A survey of students in the Federal Polytechnic, Ilaro was conducted and a 5-point scale was used to assess student preferences and satisfaction with academic programs and various services.

Respondents show satisfaction with the school academic programs and services. A significant finding is that student performance is notably related to satisfaction with academic environment and services obtained. This shows that student services exert positive influence on student results and increase student satisfaction with College. The existence of professional development programs, SIWES, and IT schemes are central to student learning experience and development and are essential for better academic performance.

A $[X.sup.2]$ test and Likelihood ratio test statistic were employed to test the hypothesis of independence between the various attributes and academic performance. The high points included the discovery that performance in College and high school are mutually dependent factors. The Likelihood distribution of majors and the adequacy of library

services are discovered to be significantly related to College performance. Although the results reveal an existence of income disparity as well as educational background differences among students' families, however, there is no statistical evidence of significant association between family socioeconomic status and College performance.

These findings offer additional hints on how to enhance effective admission and maintenance of students. Colleges, especially Polytechnics and Universities need to identify opportunities in which better cooperation between academic and student affairs can be used to promote in-class and out-of-class experiences that are mutually fortifying and helpful of the learning objectives. Experiences such as IT, SIWES, guest speaker events, excursions, inter-department and hall-based activities hold extensive potential for combining in-class and out-of-class experiments in ways that stimulate learning and cognitive development (Trenzini et al. 1996). In general, these findings provide some standards on student satisfaction with academic programs and services and may be useful in student admission, placement and maintenance at various Colleges.

This study was limited to students in the Federal Polytechnic, Ilaro. Future survey should involve more schools including private ones to provide far-reaching findings that would be enough to generalize for more schools.

Table 1. Student Ratings of Factors Affecting Polytechnic Life, Academic Programs and Activities; result by academic majors

	ALL STUDENTS			CIVIL ENGINEERING		
	MEAN	NO.	SD.	MEAN	NO.	SD.
Off- campus Housing	2.65	217	1.06	2.77	56	1.03
On-campus Housing	1.68	216	0.91	1.64	56	0.80
Commuter service	2.35	198	0.99	2.59	51	0.92
Classroom facilities	2.96	216	0.91	2.91	53	0.71
Quality of classroom instruction	3.20	215	0.91	3.23	53	0.87
Computer services	3.10	214	1.01	3.19	53	0.79
Quality of library Services	2.95	2.09	0.82	2.85	52	0.89
Administrative assistance	3.17	209	0.92	3.12	52	0.73
Overall rating of student academic experience	3.14	207	0.90	3.19	52	0.86
Overall polytechnic conducive to learning	3.23	183	0.92	3.33	45	0.80
Professional development programs	3.19	206	0.80	3.25	55	0.87
Expected SIWES opportunities	3.26	201	0.90	3.33	52	1.02
Expected IT opportunities	3.20	205	0.76	3.26	54	0.87
Expected job opportunities	3.22	204	0.82	3.28	54	0.90

	FOOD TECHNOLOGY			ACCOUNTANCY		
	MEAN	NO.	SD.	MEAN	NO.	SD.
Off- campus housing	1.88	8	0.83	2.33	3	1.15
On-campus housing	1.56	9	0.73	1.67	3	1.15
Commuter service	1.86	7	0.90	1.50	2	0.71
Classroom facilities	2.75	8	0.89	2.25	4	0.96
Quality of classroom instruction	2.71	7	1.11	2.75	4	1.26
Computer services	2.86	7	1.35	2.25	4	1.50
Quality of library services	2.29	7	1.11	2.50	4	1.00
Administrative assistance	2.86	7	1.35	1.50	4	1.00
Overall rating of student academic experience	2.88	8	1.13	1.50	4	1.00
Overall polytechnic conducive to learning	2.57	7	1.27	2.50	4	1.91
Professional development programs	0	8	0	0	2	0
Expected SIWES opportunities	0.38	8	1.06	0	2	0
Expected IT opportunities	0	8	0	0	2	0
Expected job opportunities	0	7	0	0	2	0

	TOWN & REGIONAL PLANNING			MARKETING		
	MEAN	NO.	SD.	MEAN	NO.	SD.
Off- campus housing	2.86	29	0.95	2.62	91	1.10
On-campus housing	1.72	29	0.92	1.67	88	0.98
Commuter service	1.96	27	0.90	2.42	83	1.05
Classroom facilities	3.10	29	0.72	3.00	90	1.01
Quality of classroom instruction	3.28	29	0.84	3.29	90	0.89
Computer services	3.24	29	0.99	3.19	90	1.03
Quality of library services	3.19	27	0.92	3.02	89	0.98
Administrative assistance	3.32	28	0.90	3.25	87	0.87
Overall rating of student academic experience	3.22	27	1.01	3.16	87	0.83
Overall polytechnic conducive to learning	3.16	25	0.99	3.32	75	0.87
Professional development Programs	3.25	28	1.00	3.16	83	0.80
Expected SIWES Opportunities	3.15	27	0.53	3.24	82	0.87
Expected IT opportunities	3.26	27	1.02	3.16	83	0.71
Expected job opportunities	3.26	27	1.02	3.20	82	0.82

Table 2. Relationship between Performance and Socioeconomic/Academic Characteristics

Independence tests between Performance and attributes	Pearson Chi-Square	P-value Mean	Likelihood Ratio Test	P-value	No. of cases
Performance and Academic major	35.26	0.019**	35.27	0.019**	221
Performance and Family Income Level	23.87	0.092*	27.69	0.034**	189
Performance and High School Result	64.32	0.001***	56.95	0.001***	222
Performance and Housing on-campus	11.16	0.8	15.71	0.473**	218
Performance and Housing off-campus	25.95	0.055*	31.11	0.013**	211
Performance and Commuter service	33.84	0.006***	36.06	0.003***	193
Performance and Classroom Facility	25.9	0.055*	24.088	0.088*	207
Performance and Quality of Library	31.42	0.012**	29.72	0.02**	209
Performance and Administrative Assistance	24.12	0.087*	28.99	0.024**	203
Performance and Polytechnic Experience	23.64	0.098*	19.78	0.23	203

Performance and Professional Development Programs	29.9	0.019**	20.27	0.208	201
Performance and SIWES opportunities	31.1	0.054*	25.52	0.182	199
Performance and IT opportunities	40.57	0.004***	24.161	0.235	195
Performance and Expected job opportunities	40.81	0.004***	25.43	0.185	199

* indicates 0.1 level of statistical significance

** indicates 0.05 level of statistical significance

*** indicates 0.01 level of statistical significance

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