

ON STATISTICAL ANALYSIS OF IMPACT OF SOCIO ECONOMIC FACTORS ON STUDENTS' ACADEMIC PERFORMANCE

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ABSTRACT

There are so many factors that can improve students' academic performances and also so many factors that can lead to poor academic performance. With the results of the analyses and factors under consideration, the following factors contribute positively to students' academic performance: good parental background, adequate hostel facilities, good attitude to studies, adequate educational resources, good teaching methods and involvement in only one group discussion while having many peer groups, bad attitude to studies, involvement in too much sport activities, too much students' enrolment, and involving in so many group discussion bring about reduction in students' academic performance.

Key Words: *Academic performance, Canonical correlation, Multiple regression, Questionnaire.*

1. INTRODUCTION

This research work was carried out to investigate some factors that are affecting students' academic performances in the tertiary institutions.

Five liker scale questionnaire was designed, it contains five sections with five questions in each section and the questions were ranked from one to five in such a way that if the statement is very certainly true of students' situation they will tick five. Four if the statement is certainly true of their situation, three if the statement is neither true nor false of their situation, two if the statement is not true of their situation and one if the statement is not certainly true of their situation.

The following factors were studied; parental background, Hostel facilities, peer group, students' health, students' attitude to studies, Educational resources available, sport activities, students' enrolment, Lecturer teaching method and group discussion. The questionnaires were administered to 849 students in colleges of education, polytechnics and universities in Nigeria. Canonical Correlation and Multiple Regression analysis were used in the analysis of the data. The average values of the students' response to the questions were combined with their CGPA. CGPA is the dependent variable while those factors described above stand as independent variables and these were used in the analysis.

The result showed that Parents financial status has a significant positive relationship with the students' academic performance, the better the parental background the better the result of the students. This result supports [3] who affirmed that poor parental background contributes to poor performances by their children. Hostel facilities are positively related to the academic performance of the students. The better the hostel facilities, the better the result of the students. Peer group is negatively related to the students' academic performance. This implies that the more the students make friend, the worse the result. This supported [12] who said that peer groups have the power to bring about the failure of their group members because the groups often have the power to punish by open shame. The lecturer teaching style is statistically significant to students' academic performance. The better the teaching method of the lecturer, the better the results of the students. The available educational resources are positively related to the student academic performances. The better the educational resources, the better the results of the students. This is in line with both [14] and [13] that agreed that textbooks contribute immensely to the academic performance of students.

All researches reviewed support the hypothesis that student performance depends on different socio-economic, psychological and environmental factors. The findings of research studies focused that student performance is affected by different factors such as learning abilities because new paradigm about learning assumes that all students can and should learn at higher levels but it should not be considered as constraint because there are other factors like race, gender, sex that can affect student's performance. [9]. The performance of students on the module is not affected by such factors as age, sex and place of residence but is associated with qualification in quantitative subjects. It is also found that those who live around the university environment perform better than far away

students.

[16], further elaborated that student performance is very much dependent on SEB (socio economic back ground) as statistically significant differences, linked to their gender, grade level, school location, school type, student type and socio-economic background.

Research on improving the rather weak performance of students in University has been extensive in recent years. In a paper advocating reform, [5] noted that grades in economics classes are often lower than grades in other college departments. Further, women have consistently performed worse than men. Thus, a focal point for much of the research has been an attempt to explain the relatively low performance of woman in the principles of Economics courses, even after adjusting for mathematics background, ACT, and GPA, [1]; [4]; [5], [7], [8], [17].

[6] first noted that gender was not a significant factor in determining students' performance once student personality type was introduced. Using the Myers-Briggs Type Indicator to determine student and personal personality type and the courses grade to determine the student's mastery of the material, they found student gender to be insignificant. They also noted that matching student and personal personality types enhanced student performance. [6] and [18] concluded that certain broad personality types, introverts and thinkers, tend to perform better. However, [18] disagreed that student's personality match improved performance. Although, three of the four broad personality categories are distributed evenly between men and women, one is not; most women are 'feelers' sensitive, empathetic, and in search of harmony, while most men are 'thinkers' cool, analytical and logical, [15], [17]. Given the gender-specific personality type, some argued that if matching personality types enhances learning, then women students would learn better. [4], [7], [10].

However, the reality is that economics remains a field dominated by men. In 2000, less than one-third of undergraduate degrees and doctorates in economics were awarded to women [4], while in 1994 only 11 percent of female economics professors were tenured associates [7]. [4] found that women tend to have low expectations about their ability to succeed in principles of economics courses, with a major factor being women's relatively low level of competency in mathematics. In several studies [4], [1], [10] noted the importance of mathematics skills in determining students' performance in economics.

Another area of concern in the economic education has been whether the traditionally large lecture classes for principles of economics provide a beneficial learning environment for the students. Research by [2] found a significant negative relationship between class size and student performance. They did not find gender to be significant.

Kirby [11] focused on student's impatience (his time-discount behavior) that influences his own academic performance.

2. METHODOLOGY

Canonical correlation and multiple regression analysis were used for this research work. The students' CGPA were used as dependent variable and parental background, Hostel facilities, peer group, students' health, students' attitude to studies, Educational resources available, sport activities, students' enrolment, Lecturer teaching method and group discussion were used as independent variables.

3. ANALYSIS AND RESULT

From the result of correlation analysis in table 1, the following were obtained:

The result showed that Parental financial status has a significant positive relationship with the students' academic performance, the better the parental background is, the better the results of the students. Hostel facilities are positively related to the academic performance of the students. The better the hostel facilities, the better the results of the students. Peer group is negatively related to the students' academic performance. This implies that the more the students make friends; the worse their results. The lecturers teaching style is statistically significant to students' academic performance. The better the teaching method adopted by the lecturer, the better the results. The available educational resources are positively related to the student academic performance. The better the resources, the better the results of the students. Considering the effect of the sport activities on students' academic performance, we could see that it has a negative impact on students' results. The more the students engage in the sport, the lower their CGPA becomes.

From the regression analysis in table 2, the result showed that a unit increase in parental financial status brings about 10.28 % increments in student academic performance. A unit increase in the improvement of the hostel facilities brings about 2.63% increase in student academic performance. A unit increase in the number of friend make by the student will bring about 9.51% decrease in students academic performance. A unit increase in the improvement of lecturer method of teaching will bring about 4.01% increase in students academic performance. Both students' enrolment and their attitude to studies are inversely related to their academic performance. As the number of

students admitted increase, the students CGPA decreases. This is similar to result obtained for having more friends. As the population of students increases, the more the friends they keep, the more the reduction in their CGPA. In case of students' attitude to studies, the more the bad impression they have for studies, the lower their CGPA and more they show interest to academic, the higher their CGPA. For the effect of involving in group discussion, the more the number of group discussion the students involve, the lower their CGPA. This implies that involving in so many group discussions will automatically increases the number of friends and peer group which brought decrease in students' CGPA.

4. CONCLUSION

In a nutshell, we could see that there are so many factors that can improve students' academic performances and there also so many factors that reduce students' academic performances. With the results of the analyses and factors under consideration, the following factors contribute positively to students' academic performances: good parental background, adequate hostel facilities, good attitude to studies, adequate educational resources, good teaching method and involvement in only one group discussion while having many peer groups, bad attitude to studies, involvement in too much sport activities, too much students' enrolment, and involving in so many group discussions bring about reduction in students' academic performance.

5. RECOMMENDATIONS

By going through the results obtained, the following recommendations are put forward for proper educational planning, policy making and proper implementation of decisions on education.

- There is a proverb which says 'Charity begins at home', at this junction; my advice goes to the parents. They should as much as possible ensure that they have a very good husband wife relationship and they should teach their children a good moral because if there is peace at home the students will have rest of mind to face their studies and if they have a good moral .they will keep good relationship with their mates and their lecturers, as we know that the award of certificate does not only based on academic performance, but also based on moral.
- Adequate hostel facilities such as conducive reading rooms, pipe borne water, constant electricity supply, good bedding materials, regular cleaning of the floors and surrounding etc should be provided for the students. These would enable them to have full concentration on their studies.
- The management should try to bring in the idea of using level advisers. These advisers will be able to put the students through on the kind of friends they need to keep. As we know that bad company corrupts good manner.
- Regular orientation should be giving to the lecturers on the modern methods of teaching. If possible, the management should encourage those without teaching qualification to enroll for a year program in postgraduate diploma in Education. Also, the management should ensure that all lecturers are connected to the internet in their various offices; this will help them to know what is going on in the world than to be a local champion.
- Adequate educational resources such as a well equipped libraries, laboratories, lecture rooms, instructional materials etc should be made available for both students and lecturers. This will make teaching to be convenient for the lecturers and at the same time, it will provide good learning environment for the students.
- In case of sport activities, a specific period should be assigned for sport and under no circumstances a student should go to the field other than the time. By doing this, it will improve their academic performance.
- Looking in to the students' enrolment, I advice that the management should ensure that the number of students to they admit is proportional to the available educational resources and also the students must be thoroughly screened to avoid admitting riffraff.
- Regular orientation should be given to the students on how to have and maintain good habit to studies. This will make students to understand that there is nothing difficult. Some of them belief that there are certain courses that they cannot pass. They belief that there are certain areas that are to be understood by certain set of people. By enlighten them and to let them understand that nobody was born with what they have in their brain, that they learn everything as they are growing up. By doing this, the orientation that the students have will change and they will be able to have positive attitude to their studies.
 - I also recommend that the lecturers should assist the students by organizing tutorial classes.

This will allow the students to utilize their time judiciously.

APPENDIX

TABLE 1: Correlation Matrix

	<i>GPA</i>	<i>PARE BAGR</i>	<i>HOST EFATY</i>	<i>STUD HEAL T</i>	<i>PEER GRP</i>	<i>TEACH METD</i>	<i>EDUCAR ESOUR</i>	<i>SPOR TACTY</i>	<i>STUD ENRO L</i>	<i>STUD ATIT UDE</i>	<i>GRO UPD ISC</i>
GPA	1										
PAREBAGR	0.075894	1									
HOSTEFATY	0.01481	0.02236	1								
STUDHEALT	-0.04935	-0.03359	0.01876	1							
PEERGRP	-0.06118	-0.02607	0.04318	0.05138	1						
TEACHMETD	0.022049	-0.00039	-0.04989	0.07022	-0.03205	1					
EDUCARE SOUR	0.065899	0.03328	0.02018	0.02765	0.01405	-0.04371	1				
SPORTACTY	-0.01093	-0.05421	0.10002	0.02804	0.00549	-0.07352	-0.01149	1			
STUDENROL	-0.02396	0.02442	0.00998	0.10501	0.09466	-0.02187	-0.003	-0.00202	1		
STUDATITUDE	-0.0496	-0.09518	0.04466	0.02451	-0.11752	-0.03323	-0.04345	0.02896	-0.08086	1	
GROUPDISC	-0.04915	0.0223	-0.03822	0.01732	-0.02329	0.035979	-0.01225	0.01795	0.00252	0.0150	1

TABLE 2: Regression Coefficient

	<i>Coefficients</i>	<i>Standard Error</i>
Intercept	2.823918	0.587597
PAREBAGR	0.102812	0.052678
HOSTEFATY	0.026251	0.051209
STUDHEALT	-0.0736	0.052233
PEERGRP	-0.09506	0.05332
TEACHMETD	0.040112	0.051998
EDUCARESOUR	0.09672	0.051898
SPORTACTY	-0.00371	0.052553
STUDENROL	-0.04089	0.050537
STUDATITUDE	-0.07222	0.052485
GROUPDISC	-0.08794	0.06034

PAREBAGR = parental background, *HOSTEFATY* = Hostel Facility, *STUDHEALT* = student health, *PEERGRP* = Peer Group.

TEACHMETD = Teaching Method, *EDUCARESOUR* = Educational Resources, *SPORTACTY* = Sport Activity, *STUDENROL* = Students' Enrolment, *STUDATITUDE* = Students' Attitude, *GROUPDISC* = Group Discussion.

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