Determinants of Academic Performance of Students: Case of Wolaita Sodo University

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ABSTRACT: Education is one of the most important factors in producing human resource that is necessary for economic development of a country. The quality of educational system of any country may reflect the development attempts to be made in social, economic and political aspects. Furthermore, in this era of globalization and technological revolution, education is considered as a first step for every human activity. Indeed, education in higher institution can be influenced by some many factors these variables are inside and outside school that affect students’ quality of academic achievement or academic performance. These factors may be termed as student factors, family factors, school factors and peer factors. The main objective of this study is to identify the major determinants or factors which influence the academic performance of students at Wolaita Sodo University (WSU). Out of 6,553 students a sample of 367 students was taken from 38 departments of Wolaita Sodo University using stratified random sampling with proportional allocation to size. Both secondary a well as primary sources of data were used through student filled questionnaire. To estimate the effect of the socio-economic, demographic variables, academic motivation, academic self-concept, environmental factors and psychological factors on academic performance (achievement) were considered. The cross tabulation with Chi-square test and binary logistic regression were employed to analyze the data. The result of cross tabulation with Chi-square test show that age, study outside class, amount of money received from family and first choice of department have significant association with academic performance at 5% level of significance.  Also the result of the logistic regression analysis revealed that preparing time table, father’s education level, peer influence; combining ideas and good life later on (motivation) have a significant relation with academic performance at 5% level of significance. It can be concluded that to increase and improve students’ academic performance some crucial steps regarding securing first choice of department and advising about peer influence should be taken into consideration. It can be recommended that the university should set programs to strength self-concept to make them confident on their potential.


INTRODUCTION

Education is one of the most important factors in producing human resource that is necessary for economic development of a country. Education, in a broad sense, is any act or experience that has a formative effect on mind, character or physical ability of an individual. The role of education plays and contributes to intellectual growth and development of society which becomes the common concern in both developed and developing countries (Hanushek, 2006). The quality of educational system of any country may reflect the development attempts to be made in social, economic and political aspects. Furthermore, in this era of globalization and technological revolution, education is considered as a first step for every human activity. It
plays a vital role in the development of human capital and is linked with an individual’s well-being and opportunities for better living (Battle & Lewis, 2002).

Schools, colleges and universities have no worth without students. Students are most essential asset for any educational institute. The social and economic development of a country is directly linked with student academic performance. Student academic performance measurement has received considerable attention in previous research, it is challenging aspects of academic literature, and science student performance are affected due to social, psychological, economic, environmental and personal factors. These factors strongly influence on the student performance, but these factors vary from person to person and country to country. Indeed, academic performance can be influenced by some many factors these variables are inside and outside school that affect students’ quality of academic achievement. These factors may be termed as student factors, family factors, school factors and peer factors (Crosnoe, Johnson & Elder, 2004).

It is assumed that the number of determinants or factors other than university entrance result may significantly affect the academic performance of students in universities. The factors might be the type and location of secondary school attended, type of admission, quality of teaching, life in university, study habit, economic and educational background of parents, references and textbook availability in a university, students placement by their first choice etc. In our study, we take GPA of students can measure student academic performance. This idea supported by (Hijaz & Naqvi, 2006) stated that GPA in university is commonly used indicator of student academic performance.

Therefore, academic performance of students in universities can be measured by using CGPA (Cumulative Grade Point Average) or GPA (Grade Point Average) which is influenced by the above stated factors. Thus, the main objective of the current study was to identify the major determinants or factors that influence student academic performance.

DATA AND METHODOLOGY

Data Source, Sampling design and Method of data analysis

Both secondary as well as primary source of data were used. The primary data was obtained questionnaire filled by students. The sampling design was employed by using stratified random sampling with probability proportional to size allocation of each department we take a sample of 367 sampled students out of 6553 students in the university of all batch. The cross-tabulation with chi-square and binary logistic regression analysis were employed to analyze the data.

Variables used in this study

The Response Variable

The response variable of this study is “academic performance”. For our study purpose the response variable “academic performance” is coded 0 if a student is not ok status and the coding for ok status is 1. The response variable for the $i^{th}$ student is represented by a random variable $Y_i$ with two possible values coded 0 and 1. In view of this, the response variable of the $i^{th}$ student $Y_i$ was measured as a dichotomous variable.
The Explanatory Variables: The predictor variables considered in this analysis include age of student, parents’ educational background, securing first choice of department, availability of textbooks and references, environmental factor, study habit, place of residence before joining university and others.

Description of variables and coding

The description of response and explanatory (predictor) variables about academic performance of students is presented below.

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<th>No</th>
<th>Variables</th>
<th>Categories</th>
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<td></td>
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<tr>
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<td>Question</td>
<td>Code</td>
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<td>---</td>
<td>--------------------------------------------------------------------------</td>
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</tr>
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</table>
| 13 | Counseling and guidance(M15)                                             |      | (0) No  
|    |                                                                          |      | (1) Yes  |
| 14 | Happy in studying(S16)                                                   |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 15 | Hate studying(S17)                                                      |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 16 | Better in Mathematics(S18)                                               |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 17 | Combing ideas (S19)                                                      |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 18 | Peer influence (E20)                                                     |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 19 | University living environment(E21)                                        |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 20 | Sufficient reference and textbook(E22)                                   |      | (1) Strongly agree  
|    |                                                                          |      | (2) Agree  
|    |                                                                          |      | (3) Neutral  
|    |                                                                          |      | (4) Disagree  
|    |                                                                          |      | (5) Strongly disagree  |
| 21 | Securing first choice(E23)                                               |      | (0) No  
|    |                                                                          |      | (1) Yes  |
| 22 | Frequency of attending tutorial class(E24)                               |      | (0) Not attended  
|    |                                                                          |      | (1) Attended  |
| 23 | Preparation of timetable (E25)                                           |      | (0) No  
|    |                                                                          |      | (1) Yes  |
| 24 | Category of study time(CST)                                              |      | (0) <48 hours  
|    |                                                                          |      | (1) ≥48 hours  |
| 25 | Frequency of allocating study time(E27)                                  |      | (0) About exam time  
|    |                                                                          |      | (1) Always  |
| 26 | Category Amount of money send from family(CAM)                           |      | (0) <1500 birr  
|    |                                                                          |      | (1) ≥1500 birr  |
RESULTS AND DISCUSSIONS

Based on the results in Table 1, out of the number of factors were considered, age, father’s level of education, good life later on, preparing study time table, arranging study time outside class, amount of money received from family and securing first choice of department have a significant relation with academic performance (status). From Table 2, the result of the logistic regression analysis revealed that preparing time table, father’s education level, peer influence; combining ideas and good life later on (motivation) have a significant relation with academic performance.

The result of chi-square test show that age, study outside class, amount of money received from family and first choice of department have significant association with academic performance. Also the result of the logistic regression analysis revealed that preparing time table, father’s education level, peer influence; combining ideas and good life later on (motivation) have a significant relation with academic performance.

The finding shows that the education level of father is a key determinant of academic performance. The result obtained in this study showed that the rate of academic performance among better educated father is lower than among less educated father. As a result better educated father lead their families in a better way than less educated father because of higher literacy and greater likelihood of rejecting a fatalistic attitude towards life. Education exposes father to information and makes them more aware of their own health and the health of their children. This, therefore, supports the research findings of Adem (2005) who found that the father’s level of education has a significant effect on academic performance.

The result of our study shows that amount of money received from family has a significant effect on academic performance of students. The reason could be that economically advantaged parents or families are more able to afford the cost of education of their children at higher education levels. This finding is consistent with the finding of Agus (2004) indicated that students from families of higher income levels perform better in academic performance compared to those who come from families of lower income. Also this finding is consistent with the finding of Rouse & Barrow (2006) & Checchi (2008) who found that the achievement of students is positively correlated with income of parents or families. However, the finding is inconsistent with the finding of Hijaz and Naqvi (2006) showed that there is negative relationship between family income and student academic performance.

The result of this study has indicated that peer influence is an important variable which is found to be a determinant of academic performance of students. The reason could be student at high education level easily expose to new thing or tend to be less mature and make less forward looking decision and poor role model performance due to peer influence. This result supports the finding of Rothstein (2007) who found that learning is not only a product of formal schooling but also of peers influence.

Securing first choice of department appears to be an important determinant of academic performance of students. This result therefore, to some extent negates the findings of Adem (2005) who indicated that securing first choice of department has a significant effect on academic performance of students.
CONCLUSION

The result of this study revealed that good life later on or motivation, combining ideas or academic self-concept, peer influence, preparing time table, securing first choice department and study outside class, respectively are important variable which significantly affect academic performance of students.

REFERENCES

## APPENDIX

### Table 1. Results of Descriptive statistics and cross-tabulation of chi-square test

<table>
<thead>
<tr>
<th>Factors</th>
<th>Status</th>
<th>Not ok</th>
<th>Total</th>
<th>(\chi^2)</th>
<th>p-value</th>
</tr>
</thead>
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<td><strong>Sex</strong></td>
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<td>47(15.6%)</td>
<td>175(57.9%)</td>
<td>1.27</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>128(42.4%)</td>
<td>126(41.7%)</td>
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<tr>
<td></td>
<td></td>
<td>34(11.5%)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>92(30.5%)</td>
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<tr>
<td><strong>Place of High school</strong></td>
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<td>238(79.1%)</td>
<td>5.13</td>
<td>0.16</td>
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<tr>
<td></td>
<td>Rural</td>
<td>178(59.1%)</td>
<td>61(20.3%)</td>
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<tr>
<td></td>
<td></td>
<td>21(7.0%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>40(13.3%)</td>
<td></td>
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<tr>
<td><strong>Age</strong></td>
<td>18-23 years</td>
<td>83(27.8%)</td>
<td>270(90.3%)</td>
<td>12.3</td>
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<td></td>
<td>(\geq) 24 years</td>
<td>187(62.5%)</td>
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<td>6.21</td>
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<tr>
<td></td>
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<td>41(13.7%)</td>
<td></td>
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<td>Certificate &amp; above</td>
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<td>76(25.3%)</td>
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<td>Certificate &amp; above</td>
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<td>9(3%)</td>
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<tr>
<td><strong>Good life</strong></td>
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<td>167(55.1%)</td>
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<td>7(2.3%)</td>
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<td>Disagree</td>
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<td>168(55.4%)</td>
<td>105(34.7%)</td>
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<td>1(0.3%)</td>
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