

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/266736633>

# A STUDY ON ACADEMIC PERFORMANCE OF UNIVERSITY STUDENTS

Conference Paper · February 2011

DOI: 10.13140/2.1.3949.3126

---

CITATIONS

0

---

READS

40,594

2 authors, including:



**Z. Ahmad**

University of Southampton

63 PUBLICATIONS 131 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Final Thesis [View project](#)

## A STUDY ON ACADEMIC PERFORMANCE OF UNIVERSITY STUDENTS

Erum Shahzadi<sup>1</sup> and Zahoor Ahmad<sup>2</sup>

Department of Statistics, University of Gujrat, Gujrat, Pakistan

Email: <sup>1</sup>erum\_stat@yahoo.com

<sup>2</sup>zahoor.ahmed@uog.edu.pk

### ABSTRACT

Earlier research has focused to explore the factors that are related to the academic performance of university students [Hijazi and Naqvi (2006); Vandamme, et al. (2005); Cheesman, et al. (2006)]. In this paper we want to develop a model for academic performance of students of university of Gujrat, Gujrat, Pakistan. To develop this model we consider the independent factors like home environment, study habits, hardworking, learning skills, and academic interaction. For the development of model using Structure equation modeling, first of all we use Confirmatory factor analysis to confirm the considered factors. For this study the population was all students of social sciences and now studying in 4<sup>th</sup> semester and who enrolled in 2007 and we select a sample of 300 students using stratified sampling with proportional allocation. The fitted model shows that academic performance depends on learning skills and learning skills depends on home environment. Also academic performance depends on academic interaction and academic interaction depends on study habits and home environment. It means academic performance can be estimated for any student by its home environment and learning skills and also by its academic interaction, study habits, and home environment. By examining the three possible paths of estimating academic performance, the strongest path is the home environment which affects the learning skills and ultimately learning skills lead to affect the academic performance. According to our model students can achieve high academic performance by focus on home environment and learning skills.

### KEYWORDS

Academic Performance, Home Environment, Study Habits, Learning Skills, Academic Interaction, Confirmatory Factor Analysis, Structural Equation Modeling.

### 1. INTRODUCTION

Student's academic performance and graduation rates have been the area of interest for higher education institutions. Investigation of factors related to the academic performance of university students become a topic of growing interest in higher educational circle. Many recent studies were carried out to explore factors that affecting university student's academic performance. Hanson (2000) reported that Student performance is affected by different factors such as learning abilities, gender and race. Simmons, et al. (2005) concluded that family income level, attending full time, receiving grant aid and completing advanced level classes in high school having statistically significant effects on college persistence among first generation college students. Garton,

et al. (2000) carried out a study with freshmen college students to evaluate the efficiency of student learning style and other university admission variable in predicting student academic performance and retention. Act composite score, high school class rank, high school core GPA, and learning style were used as predictors. Results showed that core GPA and Act score were best predictors for predicting academic performance of first year of college. McKenzie and Schweitzer (2001) conducted a prospective study to explore the psychosocial, cognitive, and demographic predictors of academic performance of first year Australian university students. Results demonstrate that previous academic performance was identified most significant predictors of university performance. Integration into university, self efficacy, and employment responsibilities were also predictors of university performance. Hijazi and Naqvi (2006) conducted a study to find out the factors which affecting college students' performance. In this study researcher mainly focus to explore the factors that associated with performance of students in intermediate examination. This study conclude that attitude towards attendance in classes, time allocation for studies, parents level of income, mother's age and mother's education were main factors that affect performance of students of private colleges.

There are numerous factors which affect the academic performance and retention of students in higher education institutions. We discuss those important factors which we used in this study. The justification of the factors with existing literature is given below.

#### **1.1.1 Home Environment:**

Reviewed literature indicated that there is an awareness of the importance of the home environment or family on pupil's/students academic performance. The home has a great influence on the students' psychological, emotional, social and economic state. In the view of Ajila and Olutola (2007), the state of the home affects the individual since the parents are the first socializing agents in an individual's life. This is because the family background and context of a child affect his reaction to life situations and his level of performance.

Ichado (1998) stated that parent's constant disagreement affects children emotionally and this could lead to poor academic performance. Taylor, et al. (1995) showed that parenting style (nature and control) and parental involvement significantly predicted academic outcomes. In Saudi Arabia, Kritam, et al. (2004), reported that the family financial support, encouragement and following up have positive impact on students' performance as measured by their GPA.

#### **1.1.2 Study Habits:**

Study habits of students may be relevant to the prediction of grades because it is possible that student's grades may be related to their study habits. That is, students with poor study habits may obtain lower grades than those students with better study habits. The importance of the relationship between grades, instructor ratings and study habits has not been determined [Middleton (1979)].

Study skills and learning approaches include, for example, time management, using information resources, taking class notes, communicating with teachers, preparing for and taking examination, and several other learning strategies. The research shows a significant correlation between such learning behavior and approaches and academic

achievement in higher education [Soares, et al. (2009)]. Students who create their own study aids are spending time making them, whereas those who use others' study aids or not. It may also be that the process of creating study aids helps the learner gain more meaningful knowledge through the process of synthesizing disparate pieces of information into new knowledge, as has been shown with note taking. We wondered if students who used study aids made by others rather than making their own might be missing out on the benefits of time-on-task and concept mapping [Sleight and Mavis (2006)].

Estes and Richards (1985) developed a survey of study habits for use with high school and college students. Their study skills index measured three factors for both homework and test situations. Distractibility items assess the degree to which students report being unable to maintain their attention or concentrate on their task. Inquisitiveness items measure how well students try to make sense of the material they are studying- do they look for essential concepts or deeper meaning? Compulsiveness items assess the degree to which students attend to details and try to remember facts.

### 1.1.3 Learning Skills:

Recent research has considered student behavior and learning to be important factors in student's academic success and retention. Hattie, et al. (1996) conclude that if we aim to increase student's academic success in higher education institutions, we must focus on interventions directed towards learning strategies, a fact which suggests the need to develop programs of this kind [Soares, et al. (2009)]. The influence of learning strategies on academic achievement, on the other hand, has been much less widely investigated, in spite of its theoretical importance and prevalence in international reports [Martin, et al. (2008)]. In 1998, Jere Brophy demonstrated that increased time spent on learning activities yields increased learning, provided that the teacher was competent and that the learning activities were effectively designed and implemented. Another theory that guided us was concept mapping. Concept mapping is a method in which the learner links new knowledge to a framework of relevant concepts that the learner already knows. Ausubel (1963) maintained that this linking of new with existing knowledge was a key factor in successful learning and that it was the difference between meaningful learning and rote learning [Sleight and Mavis (2006)].

### 1.1.4 Academic Interaction:

Research on college students suggests that activities like advising could increase students' involvement in their college experiences. Colleges and universities could use strategic planning to design advising programs based on relationships of shared responsibility and focused on students' success. Research on positive outcomes of college and on the diverse needs of students making up today's student population suggests that a new look at advising is needed. Findings link academic advising directly and indirectly to contact between faculty and students and persistence in college. For example, involvement influences learning and defines effective institutions as those having the capacity to involve students [Astin (1984)]. Research also indicates that frequent and meaningful contact with faculty members, especially contact focusing on intellectual or career-related issues, seems to increase students' involvement and motivation [Astin (1984); Pascarella (1980, 1985); Terenzini, Pascarella, and Lorang (1982); Tinto (1987)]. These results can be important to advisers, for they have the capacity to increase

meaningful contact with students and to encourage them to persist in college. When a broad base of the college community plans for, implements, and evaluates advising services, advising can become a systematic enterprise of the institution that enhances the educational outcomes of college. Another very important factor in establishing high retention rates at a college is the degree to which students establish close and supportive personal and professional relationships with faculty and other significant people on campus [Tinto (1987)].

## 2. MATERIAL AND METHODS

### 2.1 Population:

Population of study consisted of all students of social sciences and now studying in 4<sup>th</sup> semester and who enrolled in 2007. Size of target population in this study is 708 students.

### 2.2 Sample Selection:

The students of social sciences (Statistics, Sociology, CSIT, Business Administration, English) are not homogeneous with respect to academic performance across disciplines and programs (BS and MA/Msc). We have used stratified random sampling with proportional allocation method to select a sample.

We Calculated the Sample size using Yamane (1967) as:

$$n = \frac{N}{1 + Ne^2}$$

where n and N are sample and population size respectively and 'e' is margin of error. Let the e = 0.04 and N = 708 then our required sample size is 300.

### 2.3 Research Instrument:

Questionnaire is used for data collection. First part of the questionnaire is designed to obtain information on the demographic characteristics of university students, like gender, age, region, family system, profession of father of respondent. Next part designed to obtain information on some quantitative variables related to student performance. Then there are 39 items that consist of a combination of two categories nominal items, and 37 items using a 5-point Likert-Scale. Items are designed to assess six dimensions associated with student academic performance. (Previous Achievements, Home Environment, Study Habits, Learning Skills, Hardworking, Academic Interaction).

### 2.4 Data Analysis Techniques:

#### 2.4.1 Confirmatory Factor Analysis:

CFA is used to provide a confirmatory test of our measurement theory. A measurement theory specifies how measured variables logically and systematically represent constructs involved in a theoretical model. In confirmatory factor analysis (CFA), theory is a systematic set of casual relationships that provide the comprehensive explanation of a phenomenon. In confirmatory factor analysis (CFA), model is a specified set of dependant relationships that can be used to test the theory. In confirmatory factor analysis (CFA), is used to test structural equations. The path diagram shows the graphical representation of cause and effect relationships of the theory. In confirmatory factor analysis (CFA), endogenous variables are the resulting variables that are a causal relationship and exogenous variables are the predictor variables.

In confirmatory factor analysis (CFA), identification is used to test whether or not there are a sufficient number of equations to solve the unknown coefficient. In confirmatory factor analysis (CFA) identifications are of three types: (1) under identified, (2) exact identified, and (3) over-identified. In confirmatory factor analysis (CFA), goodness of fit is the degree to which the observed input matrix is predicted by the estimated model.

#### **2.4.2 Structural Equation Modeling:**

Structural equation modeling (SEM) is a relatively new analytical tool, but its roots extend back to the first half of the twentieth century. During the late 1960s and early 1970s, the work of Joreskog and Sorbom led to simultaneous maximum likelihood estimation of the relationship between constructs and measured indicator variables as well as among latent constructs.

Structural equation modeling (SEM) is a family of statistical models that seek to explain the relationship among multiple variables. In doing so, it examines the structure of interrelationships expressed in a series of equations, similar to a series of multiple regression equations. These equations depict all of the relationships among constructs (the dependent and independent variables) involved in the analysis. Constructs are unobservable or latent factors represented by a multiple variables (much like variables representing a factor in factor analysis). SEM can be thought of as a unique combination of both types of techniques (interdependence, dependence) because SEM's foundation lies in two familiar multivariate techniques: factor analysis and multiple regression analysis. SEM is the only multivariate technique that allows the simultaneous estimation of multiple equations.

With large sample sizes, the  $\chi^2$  test statistic is known to always reject in any formal test of significance (Byrne, 1998). Hilton et al. (2004), more focused on the Root Mean Square Error of Approximation (RMSEA), the Goodness-of-Fit Index (GFI), the Non-Normed Fit Index (NNFI; termed Tucker-Lewis Index or TLI in Marsh & Yeung, 1996), the Comparative Fit Index (CFI) and the Relative Fit Index (RFI, termed Relative Noncentrality Index or RNI in Marsh & Yeung, 1996), and the normed version of the  $\chi^2$  test statistic:  $\chi^2/df$ . For the last index, no clear-cut guidelines exist; values in the range of 2.0 to 5.0 are acceptable, with lower values indicating better fit. For RMSEA, values  $\leq 0.05$  indicate good fit, values  $\leq 0.08$  indicate reasonable fit. The indices GFI, NNFI, CFI, and RFI, all normally lie in the range 0.0 – 1.0, with higher values indicating better fit. As a benchmark for good fit, the value 0.90 is often used (Kline, 2005).

### **3. RESULTS AND DISCUSSION**

#### **3.1 Descriptive Statistics:**

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summary statistics about different variables. Descriptive statistics of all the variables are given in table1 to table 3. Table1 contains the summary statistics (minimum, maximum, mean and SD) of all quantitative variables. It shows that the average age of students is 20.93 with 1.538 SD. Average father income is Rs. 31738/- with 23411.566 SD, indicating that there is a lot of variation in father income of students it is so because the university located in Gujrat and more the parents of students are

working abroad and also gujrat is an industrial area. Mean CGPA after two semesters is 2.88 with SD 0.49. Average study time of the students is 145 minutes with 80.068 S.D.

Table-2 contains the percentages of nominal scale variables. Results show that percentage of female respondents (68.7%) is high as compared to male respondents (31.3%). On the basis of these results we can say mostly respondent win educational prizes but scholarship is not offered to them. 19.7% students leave the university before receiving a degree because they accept a good job. 9.7% leave because of financial problems, 17% leave because they get married, 11% leave due to lack of interest, 8.7% leave because lack of academic ability. 34% leave due to some other reasons.

Table-3 depicts the percentages of ordinal scale variables. Table-3 shows that average rank of respondents on the statement that previous degree marks greatly influence your current academic abilities is 3.72, which is close to 4, it means on the average respondents are agree with that statement. Average rank of the respondents on the statement that previous degree marks really reflect what you can do is 3.62, it means on the average respondents are agree on the above statement. Average rank of respondent on the statement that your home environment supports you to enhance your academic abilities is 4.34, it means on the average respondents are agree with that statement. Average rank of the respondents on the statement that your family provides you facilities which are required for attaining your educational goals is 4.52, it means on the average respondents are Strongly agree with that statement. Average rank of respondents on the statement that your family encourages you on your academic achievement is 4.50, it means on the average respondents are strongly agree with that statement. In the light of above results about the home environment factor that home environment supports the students to enhance their academic performance. Average rank of respondents on the statement that for getting a good grade to organize your time and to set aside time each day for studying is important is 3.98, it means on the average respondents are agree with that statement. Average rank of respondents on the statement that you schedule definite study times and outline specific goals for your study time is 3.53, it means respondents are agree with that statement. Average rank of respondents on the statement that you avoid activities which tend to interfere with your planned schedule of study is 3.24, it means on the average respondents are neutral with that statement. Average rank of respondents on the statement that I am confident with the level of concentration, I am able to maintain in study is 3.73, it means on the average respondents are agree with that statement. Average rank of the respondents on the statement that you take notes in class, refine and study them soon after class, and review them frequently is 3.34, it means on the average respondents are neutral on the above statement. Table-3 also contains the percentages and average rank of other variables; which can be interpreted in similar manner.

### **3.2 Confirmatory Factor Analysis:**

Confirmatory factor analysis is a special type of factor analysis and is the first part of a complete set of a structural equation model. We confirm all the factors which we considered such as Study Habits, Learning Skill, Academic Interaction, Academic Performance and Home Environment by using confirmatory factor analysis.

Table-4 shows the model estimates of confirmatory factor analysis of all the factors. Goodness of fit measures for all the factors is given in table-5. Table-4 contains the model estimates of confirmatory factor analysis of Study Habits. p-values of all the items are significant so we reject the null hypothesis that all items are not confirm for that factor. So we conclude that all items of that factor are confirmed for that factor. Individual parameter estimates exhibited that proper study time has a parameter estimate value of 1.105, which is high as compared to other variables in the factor; it means that variable is most important for the factor. In other words giving proper time to studies is an essential variable for the development of student's study habits. Concentration level has a parameter estimate value of .421, which is low as compared to other variables in the factor; it means that variable is less important for the factor. Goodness of Fit measures is used to assess the model fitness. Almost all goodness of fit measures meets the recommendation level for this factor. So, goodness of fit measures supports our estimated model.

Table-4 also contains the model estimates of other factors; which can be interpreted in similar manner. After Confirmatory Factor Analysis our next step is to fit the structure equation model on those factors (including items) that are confirmed by Confirmatory Factor Analysis.

### 3.3 Structure Equation Modeling:

In this paper, we use Structure Equation Modeling to develop the academic performance model of students of social sciences at University of Gujrat. We use Home environment, Study Habits, Learning Skills, Hardworking, Academic Interaction, and Academic Performance as a constructs.

A structure model involves specifying Structural relationships between latent constructs. Table-6 contains the Parameter estimates of Structure equation model. p-values of all the parameters are significant so we reject the null hypothesis that the coefficients are zero. So we conclude that all relations are significant and positive.

Goodness of Fit measures of is used to assess the fitness of structure equation model. p-value of Chi-Square test is significant. So our model is fit. Recommended value of  $(\chi^2/d.f)$  is less than 3. In this case, the value of  $(\chi^2/d.f)$  is 2.42 that is less than 3. So it also supports our estimated model. In this case, GFI value is .94 the value of AGFI is .90, which supports our estimated model. In this model, the value of RMSEA is .06 that is less than .08. So RMSEA is supported to fitted model. All the important Goodness of fit measures indicates that our estimated model is best fitted.

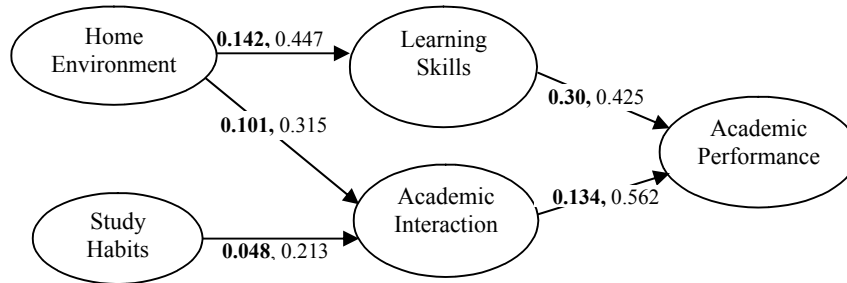


Fig. 1: Fitted Structural Equation Model



The fitted possible equations for estimating academic performance from figure 1 can be written as:

$$\begin{aligned}\text{Academic Performance} &= .447 (\text{Home environment}) + .425 (\text{Learning skills}) \\ \text{Academic Performance} &= .315 (\text{Home environment}) + .562 (\text{Academic interaction}) \\ \text{Academic Performance} &= .213 (\text{Study habits}) + .562 (\text{Academic interaction})\end{aligned}$$

From figure 1, the fitted model shows that academic performance depends on learning skills and learning skills depends on home environment. Also academic performance depends on academic interaction and academic interaction depends on study habits and home environment. It means academic performance can be estimated for any student by its home environment and learning skills and also by its academic interaction, study habits, and home environment. By examining the three possible paths of estimating academic performance, the strongest path is the home environment which affects the learning skills and ultimately learning skills lead to affect the academic performance.

### 3.4 Conclusions

In this paper, we determine the different factors that are related to Academic performance and develop an academic performance model of social science students at University of Gujrat by using Structure equation modeling. They should do efforts to take initiatives in academic activities like (Presentation, Quiz and Assignments) and up-to-date their self with academic matters (Course objectives, Course outlines, Week plan), then they can enhance their academic Performance.

In the light of these results we can say that home environment is more important construct for student academic performance at university level. The contribution of previous achievement and Home environment to the academic performance of students is parallel with decades of research on the importance of these factors for university student's academic performance. Rollins and Thomas (1979) found that high parental control were associated with high achievement. Religiosity as an aspect of the family environment is another independent variable possibly influencing academic achievement [Bahr, et al. (1993)]. Cassidy and Lynn (1991) investigated how family environment impacts motivation and achievement. Furthermore results indicated that motivation served as a mediating variable between home background, personal characteristics, and educational attainment.

Since most of the literature emphasizes the importance of faculty-student out-of-classroom interaction [Astin, (1993); Milem and Burger, (1997); Pascarella, (1980); Pascarella and Terenzini, (2005)]. In our research work, results demonstrate that academic interaction with teachers and peers have significant affect on the academic performance of them. We can also conclude from descriptive statistics that students must improve their Study Habits especially give proper time to study per day and revise the lecture notes daily. The present results are supported by the earlier findings by Aluja and Blanch (2004). Moreover; the findings of our research work brings to a close that the better study habits, the higher the academic interaction which ultimately lead to higher academic performance.

For high Academic Performance, we suggest that students basically improve their Home Environment and Study Habits like give proper study time, proper revision of

lecture notes, avoid activities interfere in planned schedule of study, then their Learning Skills like especially presentation skills, reading the material related to course content besides the lecture notes and Academic Interaction especially academic discussions with other class fellows and teachers.

## REFERENCES

1. Ajila, C. and Olutola, A. (2007). Impact of parents' socio-economic status on university students' academic performance. *Ife Journal of Educational Studies*, 7(1), 31-39.
2. Aluja, A. and Blanch, A. (2004). Socialized Personality, Scholastic Aptitudes, Study Habits, and Academic Achievement: Exploring the Link. *European Journal of Psychological Assessment*, 20.
3. Astin, A.W. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey Bass.
4. Astin, A.W. (1984). Student Involvement: A Developmental Theory for Higher Education. *Journal of College Student Personnel*, 25, 298-307.
5. Ausubel, D. (1963). *The Psychology of meaningful verbal learning*. New York: Grune and Stratton.
6. Bahr, S.J., Hawks, R.D. and Wang, G. (1993). Family and religious Influences on adolescent substance abuse. *Youth and Society*, 24.
7. Brophy, Jere (1998). *Motivating students to learn*. New York: McGraw-Hill.
8. Byrne, B.M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum.
9. Cassidy, T. and Lynn, R. (1991). Achievement motivation, educational attainment, cycles of disadvantage and social competence: Some longitudinal data. *British Journal of Educational Psychology*, 61, 1-12.
10. Cheesman, J., Simpson, N. and Wint, A.G. (2006). *Determinants of Student Performance at University: Reflections from the Caribbean*. Unpublished Manuscript.
11. Estes, T.H. and Richards, H.C. (1985). Habits of Study and Test Performance. *Journal of Reading Behavior*, 17, 1-13.
12. Garton, B.L., Dyer, J.E. and King, B.O. (2000). The Use of Learning Styles and Admission Criteria in Predicting Academic Performance and Retention of College Freshmen. *Journal of Agriculture Education*, 41(2), 46-53.
13. Hanson, J.B. (2000). *Student performance and student growth as measure of success: A evaluator's perspective*. Paper presented at annual meeting of the American educational research association New Orleans. Louisiana. 25 April.
14. Hattie, J., Biggs, J. and Purdie, N. (1996). Effects of Learning Skills Interventions on student learning: A Meta-analysis. *Review of Educational Research*, 66, 99-136.
15. Hijazi, S.T. and Naqvi, S.M.M.R. (2006). Factor Affecting Students' Performance: A case of Private Colleges. *Bangladesh e-journal of Sociology*, 3(1).
16. Hilton, S.C., Schau, C. and Olsen, J.A. (2004). Survey of Attitudes Toward Statistics: Factor structure invariance by gender and by administration time. *Structural Equation Modeling*, 11(1), 92-109.

17. Ichado, S.M. (1998). Impact of broken home on Academic Performance of Secondary School Students in English Language. *Journal of Research in Counseling Psychology*, 4(1), 84- 87.
18. Kline, R.B. (2005). *Principles and practice of structural equation modeling* (2nd Ed.). New York: Guilford Press.
19. Kritam, Abou Rakbah and Al-Awassawi (2004). *Factor Impact on Students' Motivation*. Published in the Second International Conference on Administrative Science Proceedings. King Fahd University of Petroleum and Minerals-Saudi Arabia.
20. Marsh, H.W., Hau, K.T., Balla, J.R. and Grayson, D. (1998). Is more ever too much? The number of indicators per factor in confirmatory factor analysis. *Multivariate Behavioral Research*, 33, 181-220.
21. Martin, E., Arias-Martinez, R., Marchesi, A. and Perez, E.M. (2008). Variables that Predict Academic Achievement in the Spanish Compulsory Secondary Educational System: A Longitudinal, Multi-Level Analysis. *The Spanish Journal of Psychology*, 11(2), 400-413.
22. Mckenzie, K. and Schweitzer, R. (2001). Who succeeds at University? Factors Predicting Academic Performance in First Australian University Students. *Higher Education Research and Development*, 20(1), 21-33.
23. Middleton, M.A. (1979). *An Exploratory Study of the Relationship of Study Habits, Expected Grade and Instructor Effectiveness Ratings to Academic Performance*. Simon Fraser University.
24. Milem, J.F. and Berger, J.B. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development*, 38 (4), 387-399.
25. Pascarella, E.T. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research*, 50 (4), 545-595.
26. Pascarella, E.T. and Terenzini, P.T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.
27. Pascarella, E.T. (1980). Student-Faculty Informal Contact and College Outcomes. *Review of Educational Research*, 50, 545-95.
28. Pascarella, E.T. (1985). *College Environmental Influences on Learning and Cognitive Development*. In Higher Education: Handbook of Theory and Research, Vol 4, edited by J.C. Smart. New York: Agathon Press.
29. Rollins, B.C. and Thomas, D.L. (1979). Parental Support, Power and Control Techniques in the Socialization of Children. *Contemporary Theories about the Family*, 1, 317- 364.
30. Simmons, A.B., Musoba, G.D. and Choong, C.G. (2005). *Persistence Among First-Generation College Students in Indiana: The Impact of Precollege Preparation, College Experiences, and Financial Aid*. Indian Project on Academic Success (IPAS) Research Report # 05-01.
31. Sleight, A.D. and Mavis, E.B. (2006). Study Skills and Academic Performance among Second-Year Medical Students in Problem-Based Learning. *Med Educ*.
32. Soares, A.P., Guisande, M.A., Almeida, L.S. and Paramo, M.F. (2009). Academic Achievement in first-year Portuguese College Students: The role of Academic Preparation and Learning Strategies. *International Journal of Psychology*, 44(3), 204-212.

33. Taylor, L.C., Hinton, I.D. and Wilson, M.M. (1995). Parental influences of academic performance in African-American Students. *Journal of Child and Family Studies*, 4, 293-302.
34. Terenzini, P.T., Pascarella, E.T., Pascarella, and Lorang, W.G. (1982). An Assessment of the Academic and Social Influences on Freshman Year Educational Outcomes. *Review of Higher Education*, 5, 86-109.
35. Vandamme, J.P., Meskens, N. and Superby, J.F. (2005). *Fresher's Achievement: Prediction Methods and Influencing Factors*. Higher Education, Multijurisdictionality and Globalisation Conference, Ateliers des Fucam, Mons, Belgium. Dec 16-17.
36. Yamane, T. (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row.

## APPENDIX

**Table 1: Descriptive Statistics of Quantitative Variables**

Variables	Minimum	Maximum	Mean	Std.Deviation
Age in years	18	28	20.93	1.538
Father income	3000	200000	31738	23411.566
CGPA at the end of second semester	1.58	3.89	2.8842	0.49566
Study time in minutes	0	360	144.88	80.068

**Table 2: Percentages of Nominal Scale Variables**

Gender		Discipline	
Male	Female	Business Administration	31.3%
31.3%	68.7%	English	11.3%
Program		Statistics	12.7%
BS	MS	CSIT	29.7%
57.3%	42.7%	Sociology	8.3%
Region		Psychology	6.7%
Rural	Urban	Reasons to leave university	
44.7%	55.3%	To accept a good job	19.7%
Educational Prize		It would cost more than my family could afford	9.7%
Yes	No		
71.7%	27.3%	Marriage	17%
Scholarship Offers		Lack of interest	11%
Yes	No	Lack of academic ability	8.7%
33%	67%	Other	34%
Father Profession			
Business man	33.3%	Doctor	2.3%
Government employ	10.3%	Late	3.0%
Engineer	5.0%	Others	35.7%
Lawyer	3.7%		

**Table 3: Percentages, Mean and Standard Deviation of all Ordinal Scale Variables**

Factor/Variables	SA%	A%	N%	D%	S.D%	Mean	S.D
<b>Previous Achievements</b>							
Influence of previous degree marks	24.7	43.3	17	9.3	5.7	3.72	1.10
Reflection of abilities	19	46.7	17.3	11.3	5.7	3.62	1.09
<b>Home Environment</b>							
Support by home environment	50.7	38	6.7	3.7	1.0	4.34	.83
Facilities provided by family	61.7	31.3	5.0	1.0	1.0	4.52	.72
Encouragement by family	62.7	27.7	7.0	2.0	0.7	4.50	.76
<b>Study Habits</b>							
Time management for getting a good grade	31.7	45.3	14.3	6.7	2.0	3.98	.95
Schedule Proper time for study	12	40.3	26.7	16.7	4.3	3.53	2.5
Avoid interference in planned schedule of study	13.7	30.3	29	20	6.7	3.24	1.12
Fully concentrated during study	18.3	52	16.3	11.3	2.0	3.73	.95
Proper revision of notes	13	39.3	21	21.7	5.0	3.34	1.10
<b>Learning Skills</b>							
Critical attitude towards new concepts	15	51.3	24	8.7	1.0	3.71	.86
Presentation skills	17.3	46.7	26	8.7	1.3	3.70	.90
Influence of presentation skills on academic performance	25.3	49.7	17.3	6.7	1.0	3.96	.84
Reading of material on course content	15.7	37	24.3	18.7	4.3	3.48	1.52
Express concept through Writing	27	48.7	17.7	4.3	2.0	3.95	.89
Confidence as UOG student	23.3	43.3	20.7	10	2.3	3.76	.99
<b>Hardworking</b>							
Focus on work during study	20.3	51	17.7	9.3	1.7	3.79	.92
Class participation	22	36.3	24	15.7	2.0	3.61	1.05
Competing environment	20.3	51	20.7	6.7	1.3	3.82	.87
Initiatives in academic activities	9.3	46	32	10.7	2.0	3.50	.87
Academically up-to-date yourself	15.7	43.7	20.7	15.7	4.3	3.51	1.06
<b>Academic Interaction</b>							
Influence of Interpersonal relationship on academic growth	24.3	48	19	8.3	0.3	3.88	.88
Role of Peer group support on academic growth	26	49.3	15	8.7	1.0	3.91	.91
Effect of academic interaction with Students	19	52.7	20.7	6.7	1.0	3.82	.85
Opportunities to meet faculty members	19.3	46.3	19.7	11.7	3.0	3.67	1.01
Interaction with teachers outside the classroom	32.3	41.3	15	7.3	4.0	3.91	1.05
<b>Academic Performance</b>							
Satisfaction with academic performance	13	44.3	16.7	21.3	4.7	3.40	1.10
Performance according to academic abilities	10.7	50	17.7	17.3	4.3	3.45	1.03
Satisfaction with academic experience	11.3	49	24.7	12.3	2.7	3.54	.94
Growth of academic performance	18	5	16.7	12	1.3	3.73	.93
Importance of grades	42	43.7	8.3	4.3	1.7	4.20	.88
Confidence after joining that university	33.7	47.3	11	5.3	2.7	4.04	.94
Ability to convey knowledge	18.7	53.3	19	7.0	2.0	3.80	.89
Faith on own perception	13.7	54.3	22	9.3	0.7	3.71	.84
Critical discussion	18.7	47	23.7	9.3	1.3	3.72	.91

**SA:** Strongly Agree, **A:** Agree, **N:** Neutral, **D:** Disagree and **SD:** Strongly Disagree

**Table 4: Model Estimates of Confirmatory Factor Analysis of Different Factors**

Variables	Parameter Estimate	Standard Error	T Statistic	Prob. Level
<b>Study Habits</b>				
Time management for getting a good grade	0.454	0.066	6.839	0.000
Schedule Proper time for study	1.105	0.179	6.184	0.000
Avoid interference in planned schedule of study	0.711	0.080	8.927	0.000
Fully concentrated during study	0.421	0.067	6.316	0.000
Proper revision of notes	0.607	0.077	7.867	0.000
<b>Learning Skills</b>				
Critical attitude towards new concepts	0.309	0.061	5.049	0.000
Presentation skills	0.531	0.066	8.072	0.000
Influence of presentation skills on academic performance	0.560	0.063	8.868	0.000
Reading of material on course content	0.441	0.109	4.039	0.000
Express concept through Writing	0.286	0.063	4.564	0.000
Confidence as UOG student	0.358	0.071	5.051	0.000
<b>Hardworking</b>				
Focus on work during study	0.409	0.064	6.424	0.000
Class participation	0.580	0.072	8.036	0.000
Competing environment	0.579	0.061	9.520	0.000
Initiatives in academic activities	0.454	0.060	7.561	0.000
Academically up-to-date yourself	0.430	0.074	5.847	0.000
<b>Academic Interaction</b>				
Influence of Interpersonal relationship on academic growth	0.395	0.057	6.928	0.000
Effect of academic interaction with Students	0.526	0.053	9.863	0.000
Opportunities to meet faculty members	0.755	0.064	11.795	0.000
Interaction with teachers outside the classroom	0.675	0.066	10.159	0.000
<b>Academic Performance</b>				
Performed Academically	0.392	0.072	5.443	0.000
Confidence After Joining that University	0.518	0.065	7.918	0.000
Ability to Convey through Knowledge	0.538	0.062	8.703	0.000
Faith on own Concepts	0.426	0.058	7.342	0.000
Critical Discussion on Concept	0.497	0.063	7.864	0.000
<b>Home Environment</b>				
Support by Home	0.554	0.053	10.550	0.000
Facilities by Family	0.530	0.047	11.391	0.000
Encouragement by Family	0.524	0.049	10.792	0.000

**Table 5: Measure of Goodness of Fit of CFA Model of Different Factors**

Factors	$\chi^2$	d.f	p-value	$\chi^2$ /d.f	GFI	AGFI	RMSEA
Study Habits	9.50602	5	0.09	1.90	.98	.96	0.05
Learning Skills	17.1534	9	0.04	1.90	.98	.95	0.05
Hardworking	12.9228	5	0.02	2.58	.98	.94	0.07
Academic Interaction	2.93344	2	0.23	1.46	.99	.97	0.03
Academic Performance	35.204	5	0.00	7.04	.95	.86	.14
Recommended				$\leq 3$	$\geq .90$	$\geq .90$	$\leq 0.08$

**Table 6: Model Estimates of Structure Equation Model**

Structural Relationships	Parameter Estimate	Standard Error	T Statistic	Prob. Level
Home Environment-->Learning Skills	0.447	0.142	3.141	0.002
Home Environment-->Academic Interaction	0.315	0.101	3.126	0.002
Study Habits-->Academic Interaction	0.213	0.048	4.396	0.000
Learning Skills-->Academic Performance	0.425	0.130	3.267	0.001
Academic Interaction-->Academic Performance	0.562	0.134	4.197	0.000