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**DEPARTMENT OF BUSINESS ECONOMICS  
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# **FACTORS CONTRIBUTING TO STUDENTS' ACADEMIC PERFORMANCE: A CASE OF UNIVERSITY OF SRI JAYEWARDENEPURA, SRI LANKA**

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## **ABSTRACT**

This study examined the factors affecting academic performance based on a study conducted at the Faculty of Management Studies and Commerce, University of Sri Jayewardenepura. The sample consisted of 200 undergraduate students selected from the 2500 students of the faculty. The 200 respondents were selected using random sampling method from 3<sup>rd</sup> year and 4<sup>th</sup> year students of the faculty. The data were collected through structured questionnaires. As the main technique of data analysis a multiple regression model has been employed to quantify the impact of different factors affecting the academic performance of students measured by their Grade Point Average of semester examinations. The findings of the study showed that mothers' education levels made a significant contribution to the students' academic performance. However, English knowledge of the students becomes the second important factor which influences students' academic performance. Students with higher levels of attendance for lectures have positive effect towards their academic performance. Further, higher socio-economic status exhibits a positive significant impact on students' performance. Further, the study employed an independent sample T-test and correlation analysis to identify differences among various group of students and the relationship between dependent and independent variables. Fourteen hypotheses were tested by employing an independent sample T- test in the study to explore whether the mean values of GPA among different student groups were equal or not. The null hypothesis is that the mean value of GPA of the two groups is equal. Nine null hypotheses were rejected at 1% level of significance.

**Keywords:** Academic Performance, Undergraduate Students, Knowledge of English, Socio-economic Status, Parents' Education Level

## **1. Introduction**

The three main mechanisms for acquiring human capital are experience, training and education. Among them education being the key for most individuals. Education empowers the acquisition of new skills and knowledge that ultimately increase productivity. Increase in productivity frees up resources to create new technologies, new businesses, and new wealth, finally it leads to economic growth. Education is a

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“public good” and it provides benefits to the society as well as the individuals (Saxton, 2000). There is a large impact on labour market experience from the amount of education acquired by a person. When individuals acquire more education, they are able to absorb new information, new skills, and familiarize themselves with new technologies than the others (Ann and Nachum, 1995). In this era of technological developments, education plays an important role in the advancement of human capital and it is considered the first step for every human aspect. Further education is closely linked with an individual’s well-being and opportunities for better living standards (Battle & Lewis, 2002). The quality of a student’s success has a great influence on a student’s self-esteem, motivation, and perseverance in higher education. Therefore, education remains as the students’ top priority. Lower level of students’ performance or higher level of failure rates may result in unacceptable levels of attrition, reduced number of graduates and increased cost of education. This also declines admission opportunities for students who are seeking higher degrees (Crosnoe et al., 2004, Farooq et al, 2011).

Students are an important resource of universities. Their performance (academic achievement) plays an essential role in producing the highest quality graduates and they will become dominant leaders and manpower for the country, not only that but also they become key responsible persons of the country’s economic and social development. Hence, the administrators, educators, policy makers and corporations in the labour market pay more attention to the performance of students in universities. The employers consider academic performance as one of the key factors in recruiting employees; especially fresh graduates. Thus, students have to pay attention to obtaining a good result in order to fulfil the employer’s requirements (Ali et.al, 2009). Students’ academic performance is measured by the Grade Point Average (GPA). It is a familiar measure of student performance that is commonly used in college, high school and universities (Peter et al. 2007).

Hence, determinants of students’ academic performance have become an interesting research theme for researchers. Many research studies have received considerable attention in identifying and understanding the variables that contribute to academic performance of the students. Educators and many researchers have found demographic, socio-economic, family and school factors as variables contributing to students’ academic performance. This is challenging aspects of academic literature, and performances of the student are affected by social, psychological, economic, class environmental, teaching styles, and personal factors. These factors strongly influence the student performance, but findings of the studies vary from area to area (like rural to urban), student to student, region to region and country to country. Therefore, some students academically perform much better than others (Cheesman et al, 2006; Raychaudhury et al, 2010).

This research focuses on one of the public universities in Sri Lanka. Students of the Faculty of Management Studies and Commerce (FMSC) at the University of Sri Jayewardenepura (USJP) are taken as the population of the study. The FMSC is the largest faculty in the university system in Sri Lanka and was founded in the 1960s and has a proud history and heritage as the pioneering Faculty for Management

Education in Sri Lanka. As the largest faculty in Management Studies and Commerce, it currently enrolls about 5,000 internal undergraduate students. Students that enter the University come from a wide range of social backgrounds and all over the country. These give them different life experiences, life styles, different educational opportunities, expectations, needs and diverse academic potential.

According to the records of the University Grants Commission (UGC), student admissions, there were 1,150 registered students for the 2010/2011 academic year at the FMSC (Table 01). Based on this information, we decided to select respondents from the FMSC for the study.

**TABLE 01**  
**Undergraduate Student Admission by Academic Stream - USJP**

| Academic Stream         | No. of Students |
|-------------------------|-----------------|
| Arts                    | 706             |
| Management and Commerce | 1150*           |
| Medicine                | 151             |
| Paramedical Studies     | 78              |
| Science                 | 520             |

\*The total number of students of the Management and Commerce stream for all public universities is 4330.

*Source:* University Grant Commission, Sri Lanka (Academic Year 2010/2011).

After 2002, the FMSC had introduced significant changes in the traditional teaching and learning system within the faculty. It has had a tradition of enrolling fulltime students on an annual basis before introducing a new system. However, since 2002 there has been a shift to accommodate students under the semester system. The differences between the conventional status and the semester basis are the time when lectures are conducted, medium of instruction, evaluation system, size of the class, method of teaching, number of subjects, course content, attendance policy, structure of degree programmes and subject combinations etc. Subjects like Information Technology (IT) and English have recorded higher dropout rates than the others. Not only that the students in public universities are coming from different areas and with various backgrounds; and knowledge in particular subjects like English and IT is at the lower level. At present-day this variety is much more complex than before in Sri Lankan culture. By considering all these complexities, the study is initiated to examine the influence of selected factors on students' performance at the FMSC in the USJP in Sri Lanka and performance differences among student groups.

## **2. Literature Review**

Previous studies have been paid attention to in identifying and analysing the number of factors that affect academic performance. These studies focused on factors such class schedules, class size, English text books, environment of the class, technology used in the class, extracurricular activities, part-time employment, family and work activities, parental education, family income, and etc. (Cheesman et al, 2006; Win and Miller, 2005). Diaz (2003) established that the relationship between personal, family and academic factors that account for school failure, as well as studying influence each other.

Qureshi and Ahmad (2014) found that the death of parents is one of the most severe shocks that a child can suffer. The loss of parents causes so many problems that a deprived child faces. Among those, the important problem is the effects on children's academic performance. The death of the father and divorcee's children show similar levels of academic performance. Further, it was revealed that the father's presence plays a very significant role in the academic performance of children.

Hanushek (1987) identified that the student's achievements typically depend on socio-demographic characteristics of families; including parental education, income and family size. Children who belong to more educated and wealthier parents perform better on average. In particular, the educated mother, measured by the years of formal schooling, is identified as a valuable resource in determining children's performance. The study also reported that assets that belongs to families, such as food and other learning materials (which include nutritious food, comfortable housing and reading materials) in the home do not show steady effects on children's learning (Murnane et al, 1981). Evans and Farley (1998) showed that there is a positive and significant relationship with student performance in Mathematics as well as Accounting subjects.

Most of the time, knowledge is transferred to the students by delivering lectures and other class meetings. This is the primary means of instruction in almost all undergraduate courses at universities. So far more or less everyone who has conducted lectures for an undergraduate course have probably noticed that attendance at these lectures/meetings is far below the expected level. Romer (1993) showed that there is a very strong statistical relationship between absenteeism and students' performance.

Newman et al (2009) have pointed out that a number of factors have contributed to declining class attendances around the world. Among them they identified that assessment pressures, poor delivery of lectures, timing of lectures, and work commitments as the major reasons for students' non-attendance. Gender and age showed minor impacts on academic performance while place of residence and former educational attainment appeared as significant predictors of performance. Further results of the study showed that three factors to be interrelated. Class attendance was correlated strongly with both entry points and place of residence. In turn, there was a strong relationship between prior educational attainment and place of residence.

Academics and administrators in higher education institutes have different thoughts relating to attendance policies for students. Informal studies indicate that there are some academics as well as administrators who try to maintain strict compulsory attendance policies; in the meantime others are not concerned about a compulsory attendance policy (St Clair, 1999). The major reasons for lower levels of attendance are assessment pressures, poor lecturing, inconvenient timing of the lecture, poor quality of lecture content (Fleming, 1992; 1995). Longhurst (1999) identified fifteen different types of factors for student absenteeism.

Rodgers and Rodgers (2003) have examined the effect of absenteeism on performance in an intermediate microeconomics class of business and economics students at a medium- size Australian university. They found absenteeism from lectures and tutorials to be common: on average, students attended 62 percent of lectures, 73 percent of tutorials and 65 percent of all classes (lectures and tutorials) during the semester. They observed that there was a decreasing trend of the attendance for lectures throughout the semester from 68 percent in the first half to 55 percent in the second half of the semester.

Raychaudhury et al (2010) found that socio-economic factors like family income, and mother's and father's education, teacher-student ratio, presence of trained teacher in school, sex of student and distance of school also affect the performance of the students. The study found that there was a positive impact on students' academic performance from Mother's education and presence of trained teacher in the school.

Karemera et al (2003) studied relationships among students' family characteristics, educational background, college climate and services; and student performance and satisfaction. An important finding is that there was a significant correlation in between students' performance and satisfaction with the academic environment. The adequacy of library services is found to be significantly associated with college performance.

Win and Miller (2005) examined the factors that affect university students' performance at the University of Western Australia. The study has concentrated on individual factors and school factors. Main conclusion drawn from the study is that high schools (type of secondary education institute) have a large impact on the performance of students rather than individual factors. Further, the study found that the education level of the parents also had a significant influence on students' academic performance.

Farooq et al (2011) studied determinants of academic performance of secondary school students in Pakistan. The findings of the study shown that parent's education and socio economic positions indicate an important impact on overall students' achievements. Furthermore, the results revealed that a high level of education and an average socio economic status have a significant effect than a lower level of education. Performances in the subjects of English and Mathematics also have a significant relationship with socio economics status and education levels of the parents. Meanwhile, the results showed that girls' performance is higher than the male students' performance in this school.

Ganyaupfu (2013) investigated factors determining academic performance of business students of private owned higher education establishments in South Africa. Sample size was 119 students who followed quantitative subjects. Results of the study revealed that there is a significant positive relationship among lecturer competence, teaching methods and quality of learning materials with undergraduate students' academic performance.

Akessa and Dhufera (2015) examined factors influencing academic achievement of students at Universities in Ethiopia. Sample for the study was selected through random sampling and data was collected by using survey questionnaires. Findings of the study revealed that there is a significant relationship between the academic achievement and their parent's education level as well as economic status of families.

Harb and El-Shaarawi (2006) investigated the determinants of students' performance of the College of Business and Economics in United Arab Emirates. Findings of the study indicate that there is a positive significant impact from competency in English and lecture participation on student's performance. Karemera et al (2003) showed that there is a significant relationship between students' performance and satisfaction with academic environment as well as service received. Further the results revealed that the higher academic performance is recorded with the existence of professional development programs and internship opportunities.

Gottfried (2010) analysed the relationship between attendance of the students and student performance of elementary and middle school students in the Philadelphia School District. The results indicated that significant relationships between students' attendance and student-level achievement. Osaikhiuwu (2014) recognized the importance of the institutional factors on students' performance in a Nigerian University. 131 final year students were selected using the purposive sampling approach. Findings of the study indicated that institutional variables like an unfavourable learning environment, inadequate water supply, and insufficient library facilities did not show significant relationship with students' performance. Further, the results showed that overcrowded lecture rooms, break-downs of electricity supply, continuous strikes and closure of school have a significant impact on students' performance.

Sattayanuwat (2015) examined the determinants of student performance in an international trade course at a Thailand university. The study found that the performance of male students were better than female students. Meanwhile higher level of family income has a positive impact on students' performance. Further, results showed that students who earned an average GP perform better in class. When students felt comfortable in communicating at the university they perform in a better manner. In addition to the above findings, the study showed that a higher level of attendance for the lectures and tutorial classes directed to increase the performance level.

The key determinants of undergraduate degree performance were examined by Barrow et al. (2009). The research has considered gender, entry qualifications, age level at the beginning of the course, health conditions, age at the completion of the

course, father's socio-economic conditions, and ethnic group. The study revealed that the mature students recorded higher levels of achievements than immature students. At the same time the study showed that pre-entry qualifications had a significant impact on performance while ethnicity and socio-economic status have a marginal impact.

Raychaudhuri et al (2010) examined the association between students' performance and students' attendance in the class, family income, mother's and father's education level, teacher-student ratio, distance from home to learning place and sex of the student in Bangladesh. Hijazi and Raza Naqvi (2006) explained the effects of mothers age, mothers education, family income, study hours, attendance level for the class on students' performance in Pakistan.

As a summary it was identified that all of the previous research findings support the hypothesis that students' performance depends on various socio-economic, environmental and psychological factors. Keeping in all views of the research findings reported by different researchers the following variables and research objectives that are recognizable in Sri Lankan setting were chosen.

The main objective of the study was to analyse the effect of level of English and IT knowledge, the level of internet usage, lecture and tutorial participation, employment, the level of library and reference books usage, and the level of socio-economic status, parents' education level on students' academic performance. This study aims to contribute to the existing knowledge by documenting the factors associated with students' academic performance in the USJP, in Sri Lanka. The research question of this study is formed based on this background information and it is given below.

*What are the important factors that affect students' academic performance?*

University academics highlight different factors to answer this question in general. They include ability, motivation, the school the student attended, the area they lived in, family background and the financial condition of the family. Of these factors, university administrators in Sri Lanka place high weight on ability, attendance policy, financial problems and language skills on the basis of academic achievement of student at the FMSC. However, despite the importance to higher education decision making of knowledge of the determinants of university students' performance, there have been relatively few academic studies on this theme in Sri Lanka.

The study may provide valuable information to the University administration, academics, policy makers in the country and parents and the students. It especially, helps the university administration to design and implement the policies to improve the students' performance and the quality of education by changing the attitude of students towards learning, facilitating students and modifying the curricula as well as teaching methods. Parents can use the findings of the study to solve the students' problems relating to family. Meanwhile results may enhance awareness levels among students about their level of knowledge of particular subjects like English and IT.



### **3. Objectives of the Study**

The main objective of this study is to examine the factors that affect the academic performance of undergraduate students at the FMSC.

Secondary objectives of the study are to determine the relationship between selected variables and students' performance. Further the study aims to identify the relationship between the average GPA of the students and the proportions for male and female, working and non-working, students staying at home and other places and so on.

### **4. Methodology and Analysis**

This study was carried out in the University of Sri Jayewardenepura, one of the largest universities, in terms of the number of students, in Sri Lanka, which is located in the Western Province of the country. According to the records of registered students in the faculty, there were about 2,500 registered students for the 2011/2012 and 2012/2013 academic years. The sample consisted of 200 3<sup>rd</sup> year and 4<sup>th</sup> year undergraduate students selected from this population of the FMSC. The 200 respondents were selected using random sampling based on the data of the students' attendance records for management undergraduates from the faculty. The data were collected through structured questionnaires.

Ordinary least squares multiple regression analysis was used to identify the impact of independent variables on the dependent variable. The study used academic performance as a dependent variable and we measured academic performance based on GPA. Independent variables were identified based on previous research as follows. They are the level of English and IT knowledge, socio-economic status, lectures and tutorial participation, library usage, use of references and extra reading materials, usage of internet, residence of the students, their working status, education level of parents, involvement of extra-curricular activities and skill development programmes. To identify the mean differences among different student groups, the null hypothesis was tested by employing an independent sample T- test. Further the study employed correlation analysis to identify association between selected variables.

### **5. Results and Discussion**

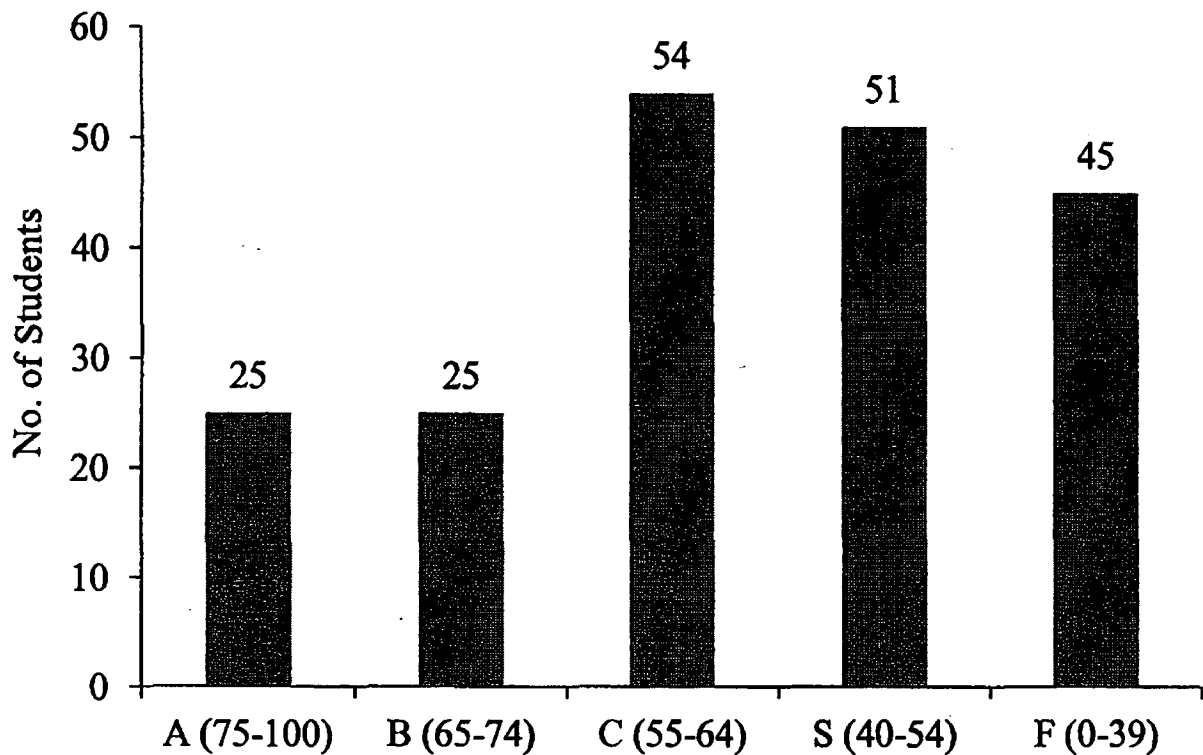
A random sample of 200 students from the FMSC was asked to complete a questionnaire for this study. Table 02 summarizes the demographic characteristics of the participants. It shows that 59% of the students were males, while the remaining 41% were females. Majority of them (74%) resided on other than their own residence place while the 24% lived with their family in their own residence. In respect of performance, the results showed that the Grade Point Average (GPA) of 3.12, indicating that more than half of the students would graduate with a second class lower degree which is not a very impressive performance.

**TABLE 02**  
**Demographic Characteristics of the Sample**

|                | Variable     | Frequency | Percent |
|----------------|--------------|-----------|---------|
| Gender         | Male         | 118       | 59.0    |
|                | Female       | 82        | 41.0    |
| Working        | Yes          | 155       | 77.5    |
|                | No           | 45        | 22.5    |
| Students Stay  | at Home      | 52        | 26.0    |
|                | Other Places | 148       | 74.0    |
| Urban students |              | 119       | 59.5    |
| Rural students |              | 81        | 40.5    |
| Average GPA    |              | 3.1152    |         |

*Source:* Author compiled based on survey data.

**FIGURE 01**  
**Results of English as a Subject of Advanced Level Examination**



*Source:* Survey data.

As indicated in Figure 01 about 22.5% (25 students) have earned below 40 marks for English while 25.5% students belonged to average (40-54) marks.

### **5.1. Reliability of the Data**

To get an idea of reliability of the data, researcher has randomly selected 10 questionnaires and cross checked with the available data at the Faculty of Management Studies and Commerce. After confirmation of the reliability of the data, we have used the following analytical tools to achieve said objectives of the study.

Further, the study employed Cronbach's Alpha (reliability coefficient) which is a measure of internal consistency and content validity of the questionnaire. In social sciences, Cronbach's alpha 0.60 coefficients are acceptable (Nunnally (1978) and Hair et al. 2007). The reliability coefficient on average showed 0.623, and indicating that the items in this study have a relatively high internal consistency.

### **5.2. Statistical Analysis of Hypotheses**

*H<sub>01</sub>: There is No Significant Difference in Students' Performance and Gender*

Null hypothesis was analysed by using independent sample T- test which tested the differences in performances by gender. Null hypothesis was rejected at 1 % level of significant and it shows that the mean GPA for female student (3.2071) was higher than the male students (see Table 03). Results show that there is a significant difference between performance of male and female students. Woodfield and Earl-Novell (2006) showed that female students outperformed the male students. Therefore, female students are being more conscientious and less likely to miss lectures.

*H<sub>02</sub>: There is No Significant Difference in Students' Performance and Place of Residence*

Table 03 shows that the mean score for students who stay at their home during the university life (3.3792) was higher than the mean score for students who stay outside places in their university life (3.0224), the difference was significant,  $t(198)=5.994$ ,  $p=.000$ . This result was in accordance with the research carried out by Tho (1994) indicated that there is a significant positive correlation between residential status and student performance.

*H<sub>03</sub>: There is No Significant Difference in Students' Performance and Level of English Knowledge*

Table 03 (3<sup>rd</sup> row) showed the result of the independent T-test which analysed the differences between performance and level of English knowledge among students. From the table,  $t(198) = 7.209$ ,  $p \leq 0.000^*$ . There was a significant difference between performance and level of English knowledge. Higher level of English knowledge indicates a higher level of performance and the mean value was 3.3933. Thus, the above null hypothesis ( $H_{03}$ ) was rejected since the p-value is less than 0.01.

**TABLE 03**  
**Results of the Independent T-test**

| Variable                                       | Category      | Mean   | t      | Sig.<br>(2-tailed) | Decision                    |
|--|---------------|--------|--------|--------------------|-----------------------------|
| Gender   | Male          | 3.0513 | -2.751 | 0.006**            | H <sub>01</sub> - Rejected  |
|  | Female        | 3.2071 |        |                    |                             |
| Residence of Student                           | Home          | 3.3792 | 5.994  | 0.000**            | H <sub>02</sub> - Rejected  |
|  | Other         | 3.0224 |        |                    |                             |
| Level of English Knowledge                     | High          | 3.3933 | 7.209  | 0.000**            | H <sub>03</sub> - Rejected  |
|  | Low           | 2.9959 |        |                    |                             |
| Level of IT Knowledge                          | High          | 3.2554 | 3.450  | 0.001**            | H <sub>04</sub> - Rejected  |
|  | Low           | 3.0507 |        |                    |                             |
| Level of Socio-economic Status (Family Income) | High          | 3.3916 | 5.561  | 0.000**            | H <sub>05</sub> - Rejected  |
|  | Low           | 3.0372 |        |                    |                             |
| Home Town of the Students                      | Urban         | 3.2439 | 5.975  | 0.000**            | H <sub>06</sub> - Rejected  |
|  | Rural         | 2.9259 |        |                    |                             |
| Extra-curricular Activities                    | Yes           | 3.1693 | 2.320  | 0.021*             | H <sub>07</sub> - Rejected  |
|  | No            | 3.0372 |        |                    |                             |
| Professional Courses                           | Yes           | 3.1282 | 1.382  | 0.168              | H <sub>08</sub> - Accepted  |
|  | No            | 2.9980 |        |                    |                             |
| Skill Development Programs                     | Always attend | 3.1496 | 0.682  | 0.496              | H <sub>09</sub> - Accepted  |
|  | Not always    | 3.1496 |        |                    |                             |
| Participation Level of the Lectures            | Low           | 3.0738 | -3.367 | 0.001**            | H <sub>010</sub> - Rejected |
|  | High          | 3.3242 |        |                    |                             |
| Working Status                                 | Yes           | 3.1041 | -0.722 | 0.471              | H <sub>011</sub> - Accepted |
|  | No            | 3.1531 |        |                    |                             |
| Reference and Recommended Readings             | Low           | 3.0840 | -2.260 | 0.025*             | H <sub>012</sub> - Rejected |
|  | High          | 3.2438 |        |                    |                             |
| Level of Internet Usage                        | Low           | 3.0892 | -1.102 | 0.272              | H <sub>013</sub> - Accepted |
|  | High          | 3.1526 |        |                    |                             |
| Level of Library Usage                         | High          | 3.1407 | 1.469  | 0.143              | H <sub>014</sub> - Accepted |
|  | Low           | 3.0478 |        |                    |                             |

\*\* Mean difference is significant at the 0.01 level (2-tailed)

\* Mean difference is significant at the 0.05 level (2-tailed)

Source: Author constructed based on survey data.

*H<sub>04</sub>: There is No Significant Difference in Students' Performance and Level of IT Knowledge*

Similar to H<sub>03</sub>, 4<sup>th</sup> line indicates that there was a significant difference between performance and level of IT knowledge. It shows the mean score for students with higher level of IT knowledge (3.2554) was higher than the those who have lower level of IT knowledge group (3.0507) and the difference was significant {t (198)= 3.450, p =0.001}

*H<sub>05</sub>: There is No Significant Difference in Students' Performance and Level of Socio-economic Status of the Family*

The results reported in Table 03 (5<sup>th</sup> line) indicates that the students who belongs to higher income family (higher level of socio-economic status), earned higher performance than low income family students. Thus, the performance of the students differs from family income levels. The high income family students' mean of 3.3916 is higher than the mean of the low income family students at 3.0372.

*H<sub>06</sub>: There is No Significant Difference in Students' Performance and Home Town*

Table 03 shows, the mean score for students who come from urban areas (3.2439) was higher than the students who enter into the university from rural areas (2.9259). The p-value for this test was reported as t (198) = 5.975, p>.01, indicating that we have strong evidence to reject the null hypothesis, H<sub>06</sub>, in favour of the alternative hypothesis.

*H<sub>07</sub>: There is No Significant Difference in Students' Performance and Extra-curricular Activities*

Table 03 line 7 shows the mean score for students who are involved in extra-curricular activities was higher than the other group and the difference was nearly significant t (198)= 2.320, p = .021.

According to the analysis, it shows that hypotheses H<sub>08</sub>, H<sub>09</sub>, H<sub>011</sub>, H<sub>013</sub>, and H<sub>014</sub> have accepted at 1% significant level.

*H<sub>10</sub>: There is No Significant Difference in Students' Performance and Participation Level for Lectures*

Table 03 shows the mean score for students with good attendance for lecturers (3.3242) was higher than the poor attendance group (3.0738) and the difference was significant at 1% level { t (198)= -3.367, p = 0.001}.

*H<sub>12</sub>: There is No Significant Difference in Students' Performance and Recommended Readings / References*

An Independent T-test was performed on the independent variable of referring level recommended readings and the dependent variable of the GPA achievement. Table 03 shows the mean score for students with higher usage level of the recommended readings (3.2438) was higher than the mean score for students with lower reading habits (3.0840), the difference was significant,  $t(198) = -2.260$ ,  $p = 0.025$ .

**6. Results of Regression Analysis**

In order to identify the important factors which influence students' performance, the study employed ordinary least square (OLS) method to estimate the following model.

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \beta_8X_8 + \beta_9X_9 + \beta_{10}X_{10} + \beta_{11}X_{11} + \beta_{12}X_{12} + U_i \quad \text{Equation (1)}$$

Here, 'α' is a constant, β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub> etc. are regression coefficients, Y is the academic performance (dependent variable) measured by the GPA of the students in semester examination and X<sub>1</sub>, X<sub>2</sub>, X<sub>3</sub>, etc. are independent variables. U is a random term that accounts for unobserved factors.

**TABLE 04  
Model Summary**

| R     | R Square | Adjusted R Square | Std. Error of the Estimate | F     | Sig.  | Durbin-Watson |
|-------|----------|-------------------|----------------------------|-------|-------|---------------|
| 0.617 | 0.381    | 0.338             | 0.32591                    | 8.799 | 0.000 | 1.922         |

*Source:* Author constructed based on survey data.

The adjusted R<sup>2</sup> value, presented in Table 04 illustrate the extent to which variance in each independent variable explains variance in the dependent variable. For this sample, the group of independent variables shared nearly 38% of variance with the dependent variable included in the regression analysis. The F value gives the overall significance of the regression model. The F-test value (8.799) shows that the model was statistically significant at 1% level.

All variables specified in the above equation (1) have positive impacts on students' performance except fathers' education level. Based on standardized coefficients of the regression results, English knowledge, mothers' education level, socio-economic status and lecture participation were accounted for approximately 24.2%, 28.6%, 19.2%, and 23.2% variation in students' academic performance; respectively at 1% significant level (see Table 05). The coefficient of mothers'

education level shows that one unit increase in the education level of mothers' results in an increase in academic performance of the student by 0.286, holding other factors constant. It has nearly 29% positive influence on students' performance, and the t-value is significant at 1% significant level. Therefore, it is clear that mothers' education level has an effect on students' performance; those whose mothers are at above secondary education level have more success as compared to those whose mothers are illiterate or and primary education level.

**TABLE 05**  
**Determinants of Academic Performance of Students**

| Model                        | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|------------------------------|-----------------------------|------------|---------------------------|--------|-------|
|                              | B                           | Std. Error | Beta                      |        |       |
| (Constant)                   | 1.28                        | 0.361      |                           | 3.542  | 0.001 |
| English Knowledge            | 0.159                       | 0.052      | 0.242                     | 3.06   | 0.003 |
| Mother Education Level       | 0.121                       | 0.036      | 0.286                     | 3.347  | 0.001 |
| Socio-economic Status        | 0.066                       | 0.026      | 0.192                     | 2.584  | 0.011 |
| Lecture Participation        | 0.11                        | 0.031      | 0.239                     | 3.565  | 0.0   |
| Library Usage                | 0.04                        | 0.021      | 0.117                     | 1.916  | 0.049 |
| Father Education Level       | -0.029                      | 0.036      | -0.075                    | -0.814 | 0.417 |
| Reference Usage              | 0.106                       | 0.166      | 0.245                     | 0.639  | 0.524 |
| Internet Usage               | 0.031                       | 0.028      | 0.067                     | 1.11   | 0.268 |
| Working Status               | 0.0                         | 0.057      | 0.001                     | 0.009  | 0.993 |
| Extra- curricular Activities | 0.038                       | 0.052      | 0.047                     | 0.739  | 0.461 |
| Skill Development Program    | 0.019                       | 0.029      | 0.044                     | 0.665  | 0.507 |
| IT Knowledge                 | 0.011                       | 0.047      | 0.017                     | 0.235  | 0.815 |

Dependent Variable: Overall GPA

Source: Author constructed based on survey data.

Level of English knowledge has about 24% positive influence on students' performance; hence if students are able to enhance their English knowledge, it leads to improve their performance by 24%. The coefficients of socio-economic status shows that a unit increases in income cause of increase in academic performance by 0.192, holding other factors as constant. This coefficient is significant at 1% level of significance. The results show that the higher a family income level, the higher the academic performance of the students. These findings are consistent with the study done by Kyei and Nemaorani (2014). They found that socio-economic status of parents is a very important factor that affects the academic performance of students. Level of reference usage has nearly 25% positive influence on students' performance, but the t-value is insignificant. Therefore, the null hypothesis, that level of reference usage has a significant effect on students' achievements, can be rejected. Further, extra-curricular activities, IT knowledge and Internet usage also have positive influences on students' performance, but the t-values are insignificant.

### 6.1. Correlation Analysis

For further analysis, the Pearson correlation was conducted to examine the relationship between selected variables and performances, based on each student's GPA scores. The results are summarized in Table 06. Results show that the strength of association between dependent (Students' GPA) and independent variables (English knowledge, mothers' education level, socio-economic status, lecture participation and library usage). Table 6 shows that the GPA and all independent variables have a positive correlation. Mothers' education is one of the most important factors affecting the student performance. The correlation strength among mothers' education (0.462) and students' performance is positive and greater than the other factors. The correlation between level of English knowledge and students' achievement showed strong positive significant relationship,  $p = 0.000$  (see Table 06). The correlation between library usage and students' achievement showed a significant relationship,  $p = 0.030$ . However, as shown by the correlation, the relationship was relatively weak.

**TABLE 06**  
**Results of Correlation Analysis**

| Description |                     | Overall GPA | English Knowledge | Mother's Education Level | Socio-economic Status | Lecture Participation | Library Usage |
|-------------|---------------------|-------------|-------------------|--------------------------|-----------------------|-----------------------|---------------|
| Overall GPA | Pearson Correlation | 1           | 0.441**           | 0.462**                  | 0.385**               | 0.230**               | 0.153*        |
|             | Sig. (2-tailed)     |             | 0.000             | 0.000                    | 0.000                 | 0.001                 | 0.030         |

(Table 06 continued)



(Table 06 continued)

|                        |                     |         |         |         |         |          |         |
|------------------------|---------------------|---------|---------|---------|---------|----------|---------|
| English Knowledge      | Pearson Correlation | 0.441** | 1       | 0.354** | 0.362** | 0.227**  | 0.030   |
|                        | Sig. (2-tailed)     | 0.000   |         | 0.000   | 0.000   | 0.001    | 0.678   |
| Mother Education Level | Pearson Correlation | 0.462** | 0.354** | 1       | 0.515** | 0.042    | 0.117   |
|                        | Sig. (2-tailed)     | 0.000   | 0.000   |         | 0.000   | 0.550    | 0.098   |
| Socio-economic Status  | Pearson Correlation | 0.385** | 0.362** | 0.515** | 1       | -0.143*  | 0.143*  |
|                        | Sig. (2-tailed)     | 0.000   | 0.000   | 0.000   |         | 0.043    | 0.043   |
| Lecture Participation  | Pearson Correlation | 0.230** | 0.227** | 0.042   | -0.143* | 1        | -0.205* |
|                        | Sig. (2-tailed)     | 0.001   | 0.001   | 0.550   | 0.043   |          | 0.004   |
| Library Usage          | Pearson Correlation | 0.153   | 0.030   | 0.117   | 0.143*  | -0.205** | 1       |
|                        | Sig. (2-tailed)     | 0.030   | 0.678   | 0.098   | 0.043   | 0.004    |         |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Source: Author constructed based on survey data.

## 7. Conclusion

This study was conducted to identify the main factors that influence students' academic performance at the FMSC. Fourteen hypotheses were tested by employing an independent sample T- test in the study to explore whether the mean values of GPA among student groups are equal or not. The null hypothesis is that the mean value of GPA of the two groups is equal. Nine null hypotheses were rejected at 1% level of significance. The study found that female students performed better than male students. The study conducted by Manan and Mohamad (2003) and Chambers and Schreiber (2004) revealed that the female students perform better than the male students. This finding is in accordance with their findings.

Further, the results show that there is a relationship between place of residence and their performance. The students who stay at their home have higher performance than the other students. Similar findings were recorded by Tho (1994), that there is a significant positive correlation between residential status and student performance but it is not a significant explanatory variable in the regression model.

The study found that socio-economic status (family income) had a significant effect on students' performance. The students who belong to higher income families achieve higher results than those whose parents are at low level socio-economic status. This is because families with low income levels suffer setbacks; and on the other hand, the higher economic status of parents give them the ability to provide

materials like stationary, text books, etc. and an ability to provide guidance and financial support for improving their study environment. This finding is consistent with the findings of Kingdon (1996), Aslam (2003), Wenglinsky (2007) and Kirkup (2008).

Students who regularly attend lectures perform better than those who miss lectures. It was perceived that lecture attendance influences students' performance in the FMSC, since the students who did not miss lectures had a higher mean score as compared to those who sometimes missed lectures. This result is consistent with the findings of Ogweno et al. (2014). Further, Ogweno et al. (2014) mentioned that as stated by Mwinzi and Kimengi (2006) the impact of missing classes have various outcomes on the students; including increasing chances of dropping out, discouraging hard work, and increasing the stress levels of the students while they are trying to cover missed lectures; hence, increase probability of failing.

In this study, students' English and IT knowledge seems to be influencing their academic performance. The students who have higher knowledge in English and IT achieve higher performance than those who have lower knowledge and skills in these subjects. Another main factor that influence students 'performance is that their home town. The students who come from rural areas earned lower a GPA than those who come from urban areas.

As revealed from the regression results, we conclude that the most significant impact indicted by mothers' education level on students' performance. Furthermore, father's education has a negative and insignificant effect on the academic performance of students. The educated mothers' contribution to their children's overall performance by motivating them to study is at a higher level. Significant impact of mother's education is observed by Suryadarma et al. (2004), Duncan and Sandy (2007) and Byamugisha (2010).

Further, it shows that another important factor that determines students' performance is competence in English. Harb and El- Shaarawi (2006) showed that the most significant factor is student's competence level in English. This finding, therefore, is consistent with other studies.

Karemera et al (2003) found that students' performance is significantly correlated with satisfaction with academic environment and facilities such as library, computer lab and etc. in the institution. The results of this study also revealed that there was a significant relationship between library usage and students' performance.

Students who regularly attend lectures perform better than those who miss lectures sometimes. This finding is in line with the findings of Ogweno et al. (2014). Further Ong Yu (2016) proposes that although there is a correlation between attendance rate and Students' performance, the correlation is relatively weak. They suggest that university lecturers and counsellors need to work together closely to improve students' attendance. The study revealed that there is a strong correlation between absenteeism rate and failure rate. If students have more than 20% absentee rate in lectures it causes them to fail their final exam.

As we see from our findings, the socio-economic status of family is a very important factor that affects the academic performance. Garzon (2006), Kahlenberg (2006), and Kirkup (2008) revealed that students who belong to high level socio-economic status families perform better than those whose parents are of low level socio-economic status.

Implications of the study indicate that social and economic policies should be put in place to enable student to get equal opportunities to advance knowledge as well as skills.

The government should provide better facilities that meet all students' requirements in different areas; especially in rural areas. Because it is not easy for parents with low socio-economic status to afford buying extra materials for learning, finding boarding places, etc. Further, parents, teachers, lecturers should encourage students to read English literature books and English magazines etc. at all times. They must also engage in English discussions and debates. They are equally advised to listen to English programmes on the television to help them improve their skills and knowledge in English.

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