

Determinants of Attainment of High Class of the Degree of University Students: The Sri Lankan Context

H.V.R.G. Hathella

Email: ruwandihathella@gmail.com

Abstract

The academic performance of undergraduates in Sri Lanka is a noticeable aspect in the higher education sector of the country. A high class in the degree is a common challenge for all university students when talking about their academic phase. Therefore, the extant research tries to identify the factors that affect the attainment of a high class in the degree of university students in Sri Lanka. A high class is conclusively referred to as a first class degree and a second class upper division degree. Data were collected from 148 fresh graduates of the year 2021, through the convenience sampling method. The survey design was used and thus, a structured questionnaire was distributed in the form of Google forms to the graduates for data collection. The Binary Logistic Regression was the statistical tool applied for the analysis process. Results of the study revealed that gender, A/L attempt to the university entrance, lecture attendance, time management, internet usage, and self-motivation were the significant determinants of achievement of a high class in the degree. The present study, therefore, brought out recommendations to support undergraduates, university lecturers, and administration to enhance the academic performance of undergraduates for the attainment of high class in the degree.

Keywords: high class of degree, university students

1. Introduction

Education is the most vigorous tool which someone can use to change the world. A country's productivity can be enhanced and improved by a regular education system and education levels of its people (Lalitha & Fernando, 2017). Therefore, governments have focused on investing more and more in higher education; university education, and at the same time extending enrollment of students to the university system (Priyadarshana & Kumari, 2020).

Sri Lanka is often regarded as a country where there exist relatively high barriers to university entrance. There are 15 state universities, where the students are enrolled totally based on the results of the General Certificate Examination of Advanced Level (G.C.E. A/L). Only the spirit of all the Grade 13 students in the country, who sit for this examination get the chance of entering a university, which is approximately 25000 per year. In the university, the undergraduates are evaluated and their academic performance is measured by the Grade Point Average (GPA) which is generally used in evaluating students following higher studies (Rowtho, 2018). At the first-degree undergraduate level, the students are awarded classes in the degree based on their total academic performance. Sri Lankan university system offer classes of degrees as First Class, Second Upper Class, Second Lower class, and Pass depending upon the GPA of students. The First Class and Second Upper Class are the high classes that could be achieved by an undergraduate. However, obtaining a high-class degree is considered a difficult to do the task for undergraduates. Thus, sizeable differences could be observed in the probability of students graduating with a first-class or a second upper class.

With special reference to the Faculty of Social Sciences and Languages, Sabaragamuwa University of Sri Lanka (Author's academic background), only 45% of the total number of students in the faculty have been able to achieve high classes in their degrees (Faculty Statistics, FSSL, SUSL 2019). Approximately 55% of the undergraduates graduate with second-class lower divisions and just pass. When finding facts, this situation is more similar to the conditions

of undergraduates in other universities in the country. Scholars have paid attention to the factors that affect the academic performance of university undergraduates, but most probably with regards to certain fields and certain academic institutions. Thayamathy & Elango (2020) state that gender, mother language, English proficiency are the most influential factors on Science undergraduates' academic performance. Self-determination, time management, lecture attendance have been found to positively affecting on undergraduates' academic performance by Lalitha & Fernando (2017). Sriyalatha (2016) has found that mother's education level and socioeconomic status can create effects on undergraduates' academic performance. Even though numerous research has been conducted worldwide on identifying factors influencing undergraduate academic performance, only the developed countries such as the United Kingdom have focused on the quality of the achieved degrees of undergraduates, by referring to their degree class levels. Sri Lankan studies have not given adequate attention to achieve high classes in the degrees and causable factors on the achievements. Because of the lack of empirical evidence on determinants of achieving a high class of degree of university undergraduates, the current study attempted to explore which factors may be highly influential on the fact, with special reference to Sri Lankan undergraduates. Thus, the study can be considered as timely salient at public as well as national level as it discusses a matter related to an education spirit of a country. To reach the objective, this paper adopts its outline as literature review at first, then synthesizing the research model, next the materials and methods used, later the discussion based on the obtained statistical results and finally the paper terminates by the conclusions, limitations plus directions for future researchers.

2. Literature Review

High Class of Degree

Higher education in Sri Lanka is publicly delivered in 17 state universities around the country. Most of the first-degree courses last for 3 or 4 years while degrees offered by medical and engineering faculties last for 5 years. Universities have the authority to design, deliver and award the respective degrees as well as they have control over the contents of the courses, examination procedures, and awarding of degrees. Therefore, sometimes it is said that there exist slight discrepancies between the quality of degrees according to the institution, field, and subject (Crawford, 2014). The most common degree classification in Sri Lankan university system is First class degree ($GPA \geq 3.7$), Second class upper division degree ($3.3 \leq GPA < 3.7$), Second class lower division degree ($GPA \text{ between } 3.0 \leq GPA < 3.3$) and Pass degree ($2.0 \leq GPA < 3.0$). Farsides and Woodfield (2007) have mentioned in their study that a degree that is awarded either first class or second upper class is often described as a 'good' degree. Hoskins et al. (1997) mention that it has become a theory explaining the point that a First class degree obtained in one subject or discipline is assumed to have equal weightage to a first class degree in any other subject. Baert & Verhaest (2021) state that a high class of degrees could be used as a charter for higher levels of hard skills achieved by undergraduates at their intra-curricular activities in the universities. They further explain a higher degree class is a representation of higher levels of intelligence, abilities, motivation, communication skills, and mathematical skills. Studies have shown that applicants with a high class in degrees are evaluated as more employable (Thoms et al., 1999).

Various scholars have focused on identifying which factors can affect achieving high performances in the degrees of undergraduates. Thayamathi & Elango (2020) has found that gender, mother language, English proficiency, studying stream, and attempts at GCE A/L are the most prominent factors that affect undergraduates' academic performance. Time

management also determines the academic performance of undergraduates (Lalitha & Fernando, 2017). According to Priyadarshana & Kumari (2020), lecture attendance and time spent outside the university are significant factors when evaluating academic performance. Further, studies have proven that parents' education level, socio-economic status, and motivation of the students make considerable influences on their performance at the university. Regression analysis, factor analysis, correlation tests are the most widely employed tools that had been used by past researchers when dealing with studies related to factors affecting undergraduates' academic results.

Even though the majority of the education scholars have focused on academic performance, they have not directly talked about the classes awarded to the undergraduates and their backgrounds. The literature does not provide evidence to show that they have investigated the point sufficiently, as only very few factors have been found to be influential in academic performance. Only the countries like the UK have paid advertence at the degree class of undergraduates, while Sri Lankan studies have been limited only to academic performance rather than investigating the class of the degrees; Sri Lankan higher education system is also categorizing the degrees and employment opportunities are still ranked, offered considering the degree classes at most of the times.

3. Methodology

The research is conducted for identifying the factors affecting the attainment of a high class of a degree by an undergraduate. This objective makes the memoir exploratory as it is going to tackle an issue on which little previous research has been done. The outcomes are unpredictable and thus the study is subjective and uses quantitative techniques based on positivism. The application of the findings is for solving a practical problem where the study could be identified as applied research.

The research uses a quantitative method for dealing with the research problem. Primary data has been taken for the analysis and also secondary data when needed. Those secondary data were gathered from previous reports related to the research problem. The population relevant to the study was fresh graduates in Sri Lanka, who were graduated in the year 2021. The author decided to use the convenience sampling technique to collect the data on the fact that the population is very large. Although the convenience sampling method was used, it was able to collect data of 148 fresh graduates in the year 2021 representing almost all the universities in the country. Data were collected in the form of a survey. It was totally conducted with questionnaires distributed as google forms. The structured questionnaire was constructed after carefully reviewing literature and was distributed after doing a pilot survey for the betterment of the data collection process.

The dependent variable was "Possession of a high class of the degree" while the determinants/factors affecting the achievement of a high class of the degree were the independent variables. The dependent variable consisted of two categories as "Yes" and "No" which represented the binary form. As the significant associations and effects also wanted to be identified, it was needed to use the regression analysis. Therein, the researcher decided to apply the Binary Logistic Regression model (often referred to simply as logistic regression) for analyzing the data. The statistical tool was well recognized for binary relationships as it could be used to predict the probability that an observation falls into one of the two categories of a dichotomous dependent variable based on one or more independent variables that can be either continuous or categorical. Finally, the best-fitted model was selected and the variables included in the

model were identified as the determinants of attainment of high class in the degree of Sri Lankan university students.

4. Analysis and Results

The study focused on 22 factors that can affect determining a high class of degree of an undergraduate. Table 01 depicts the variable identification at the first stage of the analysis.

Table 1: Variable Identification

	Variable	Measure	Test	Test Statistic	P-Value	Significance
1	University	Nominal	Chi-square	4.594	0.101	Not significant
2	Field	Nominal	Chi-square	39.266	0.000	Significant
3	Knowledge on achieving a class in the degree	Ordinal	Linear-by-linear association	9.820	0.000	Significant
4	Gender	Nominal	Chi-square	13.100	0.005	Significant
5	Residence	Nominal	Chi-square	2.354	1.529	Not significant
6	O/L English Result	Ordinal	Linear-by-linear association	46.858	0.014	Significant
7	A/L English Result	Ordinal	Linear-by-linear association	1.502	0.860	Not significant
8	A/L attempt for university entrance	Ordinal	Linear-by-linear association	31.526	0.010	Significant
9	Mother's education	Ordinal	Linear-by-linear association	44.311	0.008	Significant
10	Father's education	Ordinal	Linear-by-linear association	3.643	0.988	Not significant
11	Family support	Ordinal	Linear-by-linear association	4.216	2.362	Not significant
12	The family income per month	Ordinal	Linear-by-linear association	3.565	8.001	Not significant
13	Having elder graduates at home	Nominal	Chi-square	2.973	0.867	Not significant
14	Being an office bearer at university	Nominal	Chi-square	3.151	0.900	Not significant
15	Engaging in extra-curricular activities	Nominal	Chi-square	3.238	4.517	Not significant
16	Lecture attendance	Nominal	Chi-square	5.221	0.036	Significant
17	Following courses parallel to the degree	Nominal	Chi-square	4.625	4.112	Not significant
18	Having friends' support	Ordinal	Linear-by-linear association	2.386	6.351	Not significant
19	ICT literacy	Ordinal	Linear-by-linear association	2.444	1.017	Not significant

20	Time management	Ordinal	Linear-by-linear association	44.618	0.016	Significant
21	Using special learning strategies	Nominal	Chi-square	2.258	1.058	Not significant
22	Internet usage	Ordinal	Linear-by-linear association	40.740	0.000	Significant
23	Self-motivation	Ordinal	Linear-by-linear association	53.251	0.000	Significant
24	The motivation given by the university	Ordinal	Linear-by-linear association	3.412	5.269	Not significant
25	Career goals	Nominal	Chi-square	4.693	1.074	Not significant

Through the variables considered for the analysis, only ten (10) variables showed significance with the dependent variable, the possession of a high class in the degree. They were field, knowledge on achieving a class, gender, GCE Ordinary Level Examination English result, A/L attempt for university entrance, mother's education, lecture attendance, time management, internet usage, and self-motivation. Those statistically significant variables were taken into consideration for obtaining the best-fitted model to analyze the data.

The binary logistic regression model was applied through the forward selection procedure inserting the significant variables. The first category of each variable was taken as the reference category of corresponding categorical variables.

4.1 Binary Logistic Model

Table 2: Best model with only one variable

Variable	Parameter	Significance (P-value)
Gender	0.6397	0.000

The variable 'Gender' should be there on the model at 5% level of significance level.

Table 3: Best model with two variables

Variable	Parameter	Significance (P-value)
Gender	0.6089	0.000
Attempt	0.4223	0.000

When the variable 'Gender' is on the model, the predictor variable 'Attempt' should be there at 5% level of significance.

Table 4: Best model with three variables

Variables	Parameter	Significance (P-value)
Gender	0.6084	0.000
Attempt	0.3918	0.000
Lecture attendance	0.2394	0.000

When the variables ‘Gender’ and ‘Attempt’ are on the model, the predictor variable ‘Lecture attendance’ should be there at 5% significance level.

Table 5: Best model with four variables

Variable	Parameter	Significance (P-value)
Gender	0.5909	0.000
Attempt	0.3873	0.000
Lecture attendance	0.2144	0.001
Time management	0.3656	0.026

When the variables ‘Gender’, ‘Attempt’, and ‘Lecture attendance’ are on the model, the predictor variable ‘Time management’ should be there at 5% level of significance.

Table 6: Best model with five variables

Variable	Parameter	Significance (P-value)
Gender	0.5746	0.000
Attempt	0.3729	0.000
Lecture attendance	0.2084	0.004
Time management	0.3046	0.016
Internet usage	0.2890	0.004

When the variables ‘Gender’, ‘Attempt’, ‘Lecture attendance’ and ‘Time management’ are on the model, the predictor variable ‘Internet usage’ should be there at 5% level of significance.

Table 7: Best model with six variables

Variable	Parameter	Significance (P-value)
Gender	0.5623	0.000
Attempt	0.3696	0.000
Lecture attendance	0.2005	0.000
Time management	0.2978	0.001
Internet usage	0.2749	0.025
Self-motivation	0.6488	0.048

When the variables ‘Gender’, ‘Attempt’, ‘Lecture attendance’, ‘Time management’, and ‘Internet usage’ are on the model, the predictor variable ‘Self-motivation’ should be there at 5% level of significance.

4.2 The best fitted Binary Logistic Model

Possession of a high class in the degree = $-2.858 + 0.087 \text{ Gender (2)} + 0.3 \text{ Attempt (2)} + 0.485 \text{ Attempt (3)} + 0.499 \text{ Lecture attendance (2)} + 0.591 \text{ Time management (2)} + 0.616 \text{ Time management (3)} + 0.214 \text{ Internet usage (2)} + 0.219 \text{ Self-motivation (2)} + 0.248 \text{ Self-motivation (3)}$

Table 8: Odds Ratio

Variable	Parameter	Odds Ratio	Significance
Constant	-2.858		0.000
Gender			
Gender (2)	0.087	1.091	0.018
Attempt			
Attempt (2)	0.300	1.151	0.015
Attempt (3)	0.485	1.224	0.000
Lecture Attendance			
Lecture attendance (2)	0.499	1.648	0.004
Time management			
Time management (2)	0.591	1.306	0.000
Time management (3)	0.616	1.492	0.001
Internet usage			
Internet usage (2)	0.214	1.239	0.026
Self-motivation			
Self-motivation (2)	0.219	1.245	0.001
Self-motivation (3)	0.248	1.382	0.000

4.3 Model Validation

The Hosmer Lemeshow Test statistic was used for model validation, where the null hypothesis was taken as,

H0: The model fits data well, does not need interaction and non-linearity

Hosmer Lemeshow test statistic = 0.280

As $0.280 > 0.05$, do not have enough evidence to reject H0 at 0.05 significance level. Thus, the model fits data well, does not need interaction and non-linearity.

5. Discussion

- The odds of female undergraduates attaining a high class in the degree is 9% higher than the odds of male undergraduates attaining a high class in the degree when controlling for all other variables.
- The odds of students with second attempt to the university entrance attaining a high class in the degree is 15% higher than the odds of students with first attempt to the university entrance attaining a high class in the degree when controlling for all other variables.
- The odds of students with third attempt to the university entrance attaining a high class in the degree is 22% higher than the odds of students with the first attempt to the university entrance attaining a high class in the degree when controlling for all other variables.
- The odds of students with regular attendance to the lectures attaining a high class in the degree is 65% higher than the odds of students with irregular attendance to the lectures attaining a high class in the degree when controlling for all other variables.

- The odds of students with good time management skills attaining a high class in the degree is 31% higher than the odds of students with poor time management skills attaining a high class in the degree when controlling for all other variables.
- The odds of students with excellent time management skills attaining a high class in the degree is 50% higher than the odds of students with poor time management skills attaining a high class in the degree when controlling for all other variables.
- The odds of students with higher internet usage attaining a high class in the degree is 23% higher than the odds of students with poor internet usage attaining a high class in the degree when controlling for all other variables.
- The odds of students with moderate self-motivation attaining a high class in the degree is 24% higher than the odds of students with low self-motivation attaining a high class in the degree when controlling for all other variables.
- The odds of students with high self-motivation attaining a high class in the degree is 38% higher than the odds of students with low self-motivation attaining a high class in the degree when controlling for all other variables.

The results certify the findings of a few scholars relating to the academic performance of university students, regardless of their degree classes. Gender and number of attempts at GCE Advanced Level prior to the university entrance have been found to be influential on academic performance by Thayamathi & Elango (2020) which was also found as same in the current study. The result of time management tallies with the results of Lalitha & Fernando (2017) while lecture attendance has been denoted as important in deciding academic performance by Priyadarshana & Kumari (2020) as proven in this study. However, the factors: time management, internet usage, and self-motivation have been newly discovered by the present research indicating that they act as determinants of attainment of a high class in the degree of Sri Lankan university students.

6. Conclusion

The present research subscribes to contemporary research by analyzing the determinants of attainment of high class in the degree of Sri Lankan university students. The study has recognized that gender, attempt to university entrance, lecture attendance, time management skills, internet usage, and self-motivation are significant as influential factors. The other hypothesized factors considered in the study: university, the field of study, residence, O/L English result, A/L English result, mother's education, father's education, family support in academic activities, family income, presence of elder graduates at home, being an office-bearer in the university, engaging in extra-curricular activities, following courses parallel to the degree, having friends' support to the academic activities, ICT literacy and usage of special learning strategies did not appear as significant in the possession of a high class of degree for a university student. The research has been able to address empirical issues that have not been attended by the existing literature. No previous studies have been done by focusing on attaining high classes of the degree of university students in Sri Lanka. The found results are also known to be unique when comparing the results of former studies alike the current research matter.

The study revealed that female undergraduates are having the capability of attaining a high class of degree than males. Thus, male students should be encouraged more and more for the achievement of a high class. It was identified that the second attempt and third attempt students have shown successful results in having a high class in the degree. This may be because those

students are more mature than the first attempt students and they are well-aware of the work to do at the university as they have already missed one or two years of life at the attempting to entering to an university. Lecture attendance too is important for achieving a high class. Therefore, the undergraduates should have to attend lectures regularly and work hard for a better achievement. Those students who could manage their time well had been successful in attaining a high class. This shows the path to the undergraduates to manage time well among their academic activities as well other tasks. Referring books and usage other physical learning materials are now been deaden with the development of technology. Browsing the internet for academic purposes has been the best and easiest alternative. When internet usage is high, the academic performance plus the probability of high class achievement are high. It suggests that undergraduates to use more options on the internet for their academic activities for searching for new information and being updated. Self-motivation acts as important always. Here also, ones who have high self-motivation have achieved successful results in their degrees. There, the undergraduates have to give the highest priority to attain a high class.

The findings of this study would be salutary for undergraduates, lecturers, and university administrators to improve the academic performance of university students. Through this, the undergraduates are able to gain an idea of what should they have to improve themselves for attaining a high class in the degree. The lecturers and other responsible administrators can take necessary steps to motivate, encourage and make proper plans to increase the performance of undergraduates. When considering the study, it used the convenience sampling method to collect data, which is not a more successful method of data collection. It would be more successful and results would be more reliable if a better data collection technique was applied. The lack of literature was the main obstacle when finding existing facts for the research. It made the process of referencing difficult.

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