

# An Analysis of Factors Influencing Academic Performance of Undergraduate Students: A Case Study of Rabindra University, Bangladesh (RUB)

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## Abstract

*A proverb goes that education is the backbone of a nation. No nation can step up without educating the nation. Quality education is achieved by the better academic performance of the students. Indeed, the university is the tertiary education where the undergraduate students are enrolled to appropriate academic excellence that can be transformed to better the nation. There are a variety of positive and negative factors that affect the academic performance of undergraduate students. Here, this study endeavors to identify the success and failure factors influencing the academic performance of Rabindra University, Bangladesh. In doing so, this study is conducted based on primary data. Convenient and cluster random sampling method has been used. Two different questionnaires and opinionnaire are developed for both students and faculties as the instruments of data collection and the 4-point Likert scale of measurement is used to analyze the responses. The findings show that regular attendance, regular study, hard work, dedication & self-Confidence and Support by family members and others have a high impact on the academic performance of undergraduate students. On the other hand, insufficient effort in studying, lack of interest in the subject, the noisy and unfriendly environment in the institution influence inversely. This result will surely help the students, faculties and administration to design policies convenient for the education system of the university and the nation as a whole.*

**Keywords:** Academic performance, Success factors, Failure factors, Students' perspective, Teachers' perspective, Relationship, Implications

## Introduction

The public university is one entirely owned, financed, subsidized and managed by the government. At the same time, the private university is other than those institutions established by the public authority which don't receive funds from state legislatures and rely heavily on tuition and private contributions. Since the independence of Bangladesh back in 1971, an upsurge in higher education has been observed. Before the independence, only four public universities were available for tertiary education, whereas that figure is now more than 46 and 104 private universities approved by the University Grant Commission (UGC). These numbers are in no mood to impede shortly.

On the one hand, debates are going on whether such an ever-increasing number of institutions for higher education are still needed in a developing country like Bangladesh. The quality of higher education is in question as well. The focal point of this study is given to a specific issue regarding the academic performance of the students admitted at the undergraduate level in a public university.

Universities always face the challenge of providing evidence of their effectiveness to the society, government and international higher education. The top management of any university is concerned about the performance of their student to show their usefulness for the international community. In many countries in the world, the rate of graduated students, for example, has served as an indicator of the usefulness of the universities. Academic performance or achievements can be defined in terms of the performance of examinations and tests. As the students' academic performance is an important thing for both Universities and the countries of the world hence, determination and identifying of the factors that influence on student's academic performance is essential as well (Martha 2009).

Several factors are associated with the scholastic performance of undergraduate students. These factors include individual, social and institutional characteristics and so on. But very little researches have been conducted to identify the significant factors, especially in the case of Bangladesh. Generally, academic performance is concerned with achieving a higher Cumulative Grade Point Average (CGPA) as the main indicator. However, the family background, educational environment and financial conditions of the learners are crucial factors affecting academic performance. Besides, motivation and relationships between teachers and students are also directly related to achieving their academic goals.

### **Objective of the Study**

The specific purpose of the study is to identify both positive and negative factors that influence students' academic performance in a public university named Rabindra University, Bangladesh (RUB).

### **Research Questions**

To attain the objective of the study, it considers the following research questions:

- What are the success factors that boost the academic performances of undergraduate students at Rabindra University, Bangladesh (RUB)?
- What are the failure factors that retard the academic performances of undergraduate students at Rabindra University, Bangladesh (RUB)?

It is to mention that the two broad questions entail necessarily probe-questions needed for further research.

### **Study Area**

Student life is one of the most crucial parts of human life. This life is mostly enwrapped with academic activities and performances (i.e., performances of examination and tests conducted by the authority of concerned institution) conducted by schools, colleges and universities. Schools and colleges so far shape the assist of students for higher education and universities are the tertiary stage of education that provides human minds by providing necessary academic knowledge and information that navigate the success for the rest of life. Here our point of concentration is university education. The study area is the factors that influence the academic performances of undergraduates in both public and private universities in the context of Bangladesh.

### **Scope of Study**

The study aims to identify how the academic performance of the students gets affected by both positive and negative factors. Apart from this, this study stalwartly focuses on the results for a public university. Finally, suggestions are provided based on the result, which will be helpful to improve the academic performance of the public university.

### **Literature Review**

A variety of researches involving students' academic performances can be found around the world so far. Different research targets focusing on academic performances are different based on time, circumstance and need. For example, some

works are devoted to primary and secondary school students' academic performances. In contrast, others are devoted to academic performances of university students and the rest are devoted to university students' academic performances in a particular subject and profession.

Erdem and et al., (2007) aimed to determine the probability of the factors affecting the grade point average (CGPA) of university students. They showed that academic performances are mostly measured by cumulative grade point average (CGPA). It is influenced by gender, previous academic performance, living place and income level of family, social environment, the type and quality of the high school graduated, the high school grade point average (GPA), the score obtained from nationwide university entrance exam (OSS), time spend for studying, learning ability and living place during the university life.

On the other hand, Harb & El-Shaarawi (2007) identified using regression analysis that competency in speaking English is the most important factor that affects students' performance. Irregular students and stretched families are found to be negatively affecting their performances. Similar findings are observed by Eze & Inegbedion's (2015) where prior academic preparation, adjustment to foreign teaching methodology and pressure from performance expectations and workload issues, student-teacher relationship, study skills, plagiarism and group work; and culture are some other factors related to the academic performance of international students. Likewise, a study conducted by Bavani & Sanjivee (2015) in a private university in Malaysia revealed that teaching methods play a vital influence on students' academic performances.

Jama and et al. (2008) tried to capture the circle of progression of university students while identifying factors affecting them in the process. In the following year, Olani, A. (2009) revealed that prior academic achievement measures psychological factors that influence students' university GPA scores.

Martha (2009) worked on factors affecting the academic performance of undergraduate students at Uganda Christian University. She tried to find the relationship between admission points, parents' social, economic status, former school background

and academic performance of undergraduate students using correlation design. Along the line, Yigermal (2017), in his work of investigation to the determinant factors affecting the academic performance of regular undergraduate students of Arba Minch University (AMU) chamo campus students found a significant relationship between gender difference, university entrance exam, studying hours and academic performance (CGPA). Even, there was a significant relationship between students' former academic background, studying hours, and student's behavior on taking the alcoholic drug and chat on academic performance of students.

Another study conducted by Ali and et al. (2009) found that four, i.e., factors, demographic, active learning, students' attendance and involvement in extracurricular activities, are positively related to students' performance. On the contrary, course assessment was found to be negatively related to students' performance.

Additionally, Thawabieh (2016) identified four broad categories of factors that affect university students' achievement. These are the type of course enrollment, the procedure of test administration, the quality of students and faculties are some factors which somehow affect students' achievement. Finally, Mohamed et al. (2018), in their study, found that that learning technique, home-related aspects, study habits and physical resources have a strong positive relationship with the academic performance of university students.

A similar kind of work is rare to find in Bangladesh. However, a study conducted by Alam et al., (2014) examined different factors influencing socio-economic background and the academic performance of undergraduate students enrolled at International Islamic University Chittagong (IIUC). Their result revealed that age, gender, past academic track, medium of education and absence in the classes had influenced the academic performances. Likewise, Ahmmmed & Salim (2018) conducted research using the combination of both qualitative and quantitative analysis on the students of the International University of Business Agriculture and Technology (IUBAT). They found out that result of pre-university public examinations, gender, class attendance, teacher-student relationship, self-

confidence level of the students, depression and amount of credit hours completed have a significant impact on academic performance.

Another study covering a private university by Banik & Kumar (2019) summarized that idiosyncratic variables such as cognitive skill, effort, motivation and willingness to study, socio-economic variables such as age, gender, family income, parents' education and institutional variables like class environment, class performance, teacher-student relationship with information literacy skills influence academic performance of university students.

However, this study lacks to identify the degree of influence of each variable mentioned in the study. Most of the studies were done considering private universities and it is hardly found any research considering both public and private universities in Bangladesh. This study will not only find out the factors influencing academic performance but also will make a more concrete conclusion and policy prescriptions for further studies.

## Methodology

This study is based on primary data and the population is a newly established public university (i.e., Rabindra University, Bangladesh (RUB)).

## Sample Selection Criteria

The selection of the sample has been made through a convenient and cluster random sampling method. At the first stage, RUB has been selected conveniently. Secondly, these populations are divided into two categories (i.e., students & teachers). Finally, each category is divided into clusters and samples are taken proportionately from each cluster.

Thus, the sample size for the study is 130 (118 from students and 12 from teachers), combining students and teachers of Rabindra University, Bangladesh (RUB).

## Data Collection Procedure

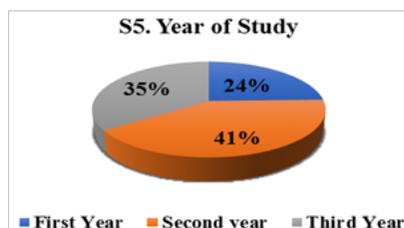
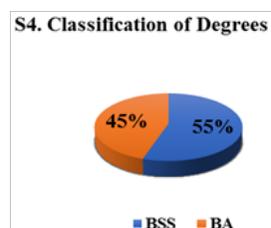
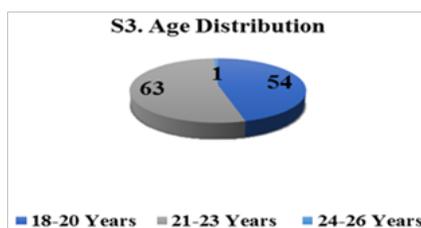
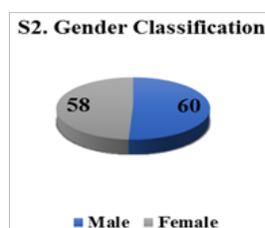
The instrument for data collection for students is the "Students' Academic Performance Questionnaire (SAPQ)." In the case of teachers, both questionnaire and opinionnaire are considered. Both the response scale is structured in line with the 4-point Likert scale of measurement: Highly Influential (HI) = 4 points;

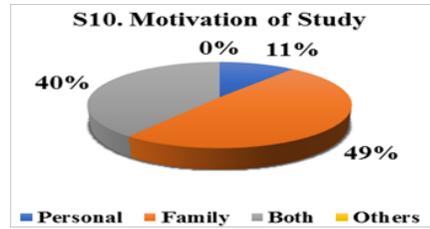
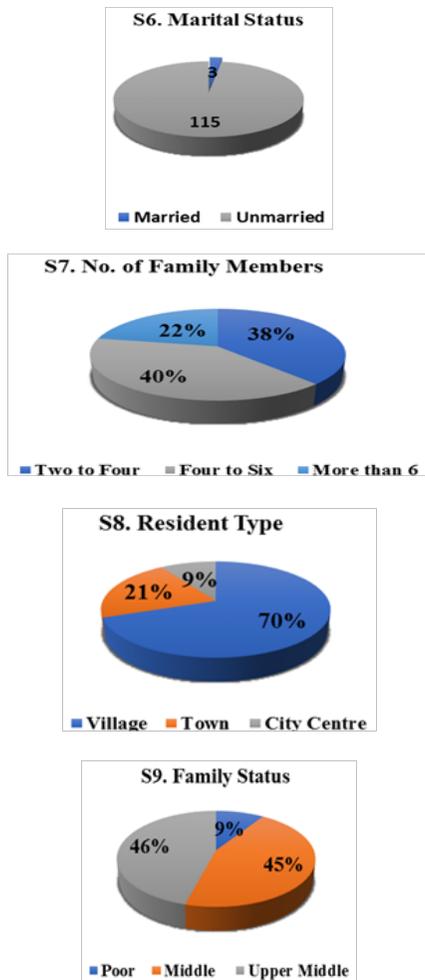
Moderately Influential (MI) = 3 points; Slightly Influential (SI) = 2 points and Not Influential (NS) = 1 point. Simple descriptive methods along with appropriate regression analyses are used. Tables are constructed from the results of the analyses providing answers to the researcher question in the study.

## Analysis of the Study

### Section A: Personal Information of Students

This section allows the classification, distribution, categorization and properties of personal information of the undergraduate students of Rabindra University, Bangladesh (RUB). The data is collected from 118 students based on a questionnaire. Statement two (S2.) of questionnaire gathers information on gender classification of the data set and it depicts that 60 male and 58 female students have been surveyed for analysis. This reflects gender neutrality of the study.





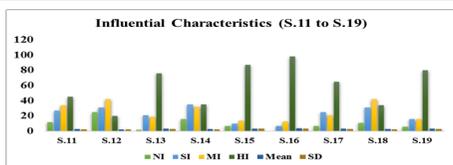
**Figure 1: Different Properties of Personal Information (source: Primary data)**

**Interpretation:** As this research is based on undergraduate students, it justifies the age distribution (S3.), i.e., 54 students are from 18-20 years, 63 students are from 21-23 years and only a student from 24-26 years. 55% of the students are pursuing the BSS degree, whereas 45% of students are enrolled in BA degree shown by S4. Additionally, S5. indicates the year of the study. As this is a newly established university, most students are from the early years of graduation. As rightly shown by S5. 76% of surveyed students are from the first and second year and the rest are from the third year. S6. It shows the marital status where 97% of students are unmarried whereas the rest 3% is married. 38% of students are from a family of two to four members, but 62% are from more than four members. 70% of RUB students are from the village, while the rest are from the town and city center (S8.). S9. It shows only 9% of students are from low-income family however the rest are from well of family. Only 11% of the students are self-motivated for higher study, 49% are family motivated and 40% are by both self and family motivated.

**Section B: Academic Information (Success Factors)**

**Table 1: Influential Statements and their Outcomes (S.11 to S.19)**

Statement	NI	SI	MI	HI	Mean	Standard Deviation (SD)
S.11- Parents' Education	12	27	34	45	2.95	2.60
S.12- Family Social Status	25	31	42	20	2.48	2.17
S.13- Interest of Study	2	21	19	76	3.43	3.01
S.14- Medium of Study (i.e. Bengali/ English version)	16	35	32	35	2.73	2.40
S.15- Regular Study	7	10	14	87	3.53	3.12
S.16- Hard work, Dedication & Self-Confidence	0	7	13	98	3.77	3.28
S.17- Support by Family members and others	7	25	21	65	3.22	2.85
S.18- Fully Equipped Class Rooms	11	31	42	34	2.84	2.47
S.19- Regular Attendance	6	16	16	80	3.44	3.04



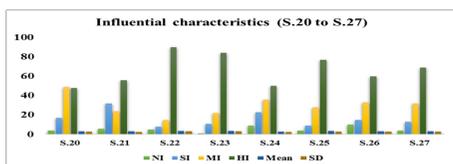
**Figure 2: Influential Characteristics and their Properties of S.11 to S.19**  
(Source: Primary Data)

**Interpretation:** The above table-1 and Figure-2 simultaneously show the influential statements, i.e.

(S.11 to S.19) and their outcomes in Likert format. It can be further seen from the table that parents' education, interest in the study, regular study, hard work, dedication & self-confidence, regular attendance and support by family members and others have a high impact on the academic performance of undergraduate students. In contrast, family social status, the medium of study (i.e., Bengali/ English version) and fully equipped classrooms are less influential. The mean and standard deviation of each statement strongly support the analysis.

**Table 2: Influential Statements and their Outcomes (S.20 to S.27)**

Statement	NI	SI	MI	HI	Mean	Standard Deviation (SD)
S.20- Having Own Resources (e.g. Textbooks, personal computer etc.)	4	17	49	48	3.19	2.77
S.21- Academic Routine	6	32	24	56	3.10	2.73
S.22- Timely and Regular Preparation for Examination	5	8	15	90	3.61	3.17
S.23- Adequate Class Works (i.e. Class Tests, Assignments & Presentations, Field works)	1	11	22	84	3.60	3.14
S.24- Students-Faculty Ratio	9	23	36	50	3.08	2.70
S.25- Good Academic Relationship Between Faculties and Students	4	9	28	77	3.51	3.07
S.26- Scholarships and Waivers	10	15	33	60	3.21	2.83
S.27- Extra-Curricular Activities (Debate, Seminar, Symposium, Conference and Job Fair etc.)	4	13	32	69	3.41	2.98



**Figure 3: Influential Characteristics and their Properties of S.18 to S.27**  
(Source: Primary Data)

**Interpretation:** The table shows influential statements and their outcomes for S.20 to S.27. It can be observed from the table that most of the statements are ranked moderately and highly influential. Fully equipped classrooms and having their resources (e.g., textbooks, personal computers, etc.) are marked as

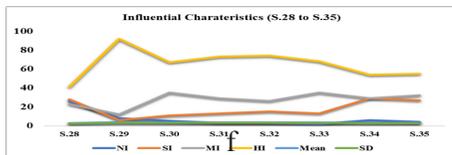
moderately influential. It seems that students weigh more on timely and regular preparation for the examination and adequate class works (i.e., class tests, assignments & presentations, field works). Besides, most students think that faculty-ratio is another important catalyst to improve students' academic performances. The following figure-3 clearly shows the level of influence of different statements. It helps to understand the importance and the depth of necessity of different factors needed most in improving the educational quality of education. Additionally, the students firmly believe that good academic relationship between teachers and students highly influences their education.

**Section C: Academic Information (Failure Factors)**

**Table 3: Influential Statements and their outcomes (S.28 to S.35)**

Statement	NI	SI	MI	HI	Mean	Standard Deviation (SD)
S.28- Non-Preferred Subject to Study	26	28	23	41	2.67	2.41
S.29- Noisy and Unfriendly Environment in Institution	8	6	12	92	3.59	3.17

S.30- Irregularity in Class Attendance	5	11	35	67	3.39	2.96
S.31- Insufficient Effort in Studying	3	13	29	73	3.46	3.02
S.32- Lack of interest in the subject	3	15	26	74	3.45	3.02
S.33- Lack of Lectures Capturing Capability	2	13	35	68	3.43	2.99
S.34- Improper Orientation and Foundation at Elementary Level (i.e. First Year)	6	29	29	54	3.11	2.73
S.35- Little usage of Library, Seminar and Other Facilities Provided by The Institution	4	27	32	55	3.17	2.77



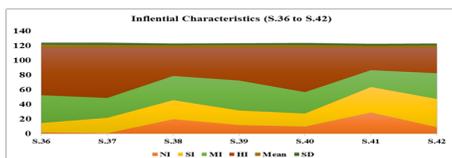
**Figure 4: Influential Characteristics and their Properties of S.28 to S.35 (Source: Primary Data)**

**Interpretation:** It can be observed from the figure that most of the failing factors are highly

influential. Among them, the noisy and unfriendly environment in the institution, insufficient effort in studying and lack of interest in the subject are the factors that negatively affect the most the study of the undergraduates. Other factors also adversely affect the performance, but the degree of influence is slightly lower than those mentioned above. The mean and standard deviation (SD) of the statements supports the findings.

**Table 4: Influential Statements and their Outcomes (S.35 to S.42)**

Statement	NI	SI	MI	HI	Mean	Standard Deviation (SD)
S.36- Communication Gap Between Faculties & Students	2	13	38	65	3.41	2.96
S.37- Incompetency of Faculties to Deliver Lectures	1	21	27	69	3.39	2.96
S.38- Involvement in Politics	20	26	33	39	2.77	2.47
S.39- Lack of Refreshment Activities (Cultural Activities, Sports, Excursion etc.)	12	20	41	45	3.01	2.65
S.40- Insufficient Financial Support	10	18	29	61	3.19	2.83
S.41- Previous Bad Academic Result	29	35	23	31	2.47	2.22
S.42- Pressure Created by Academic Curriculum	9	39	35	35	2.81	2.45

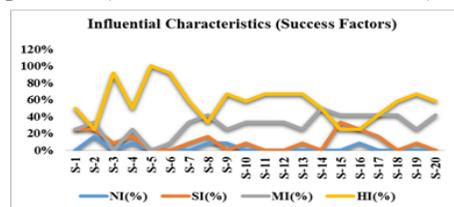


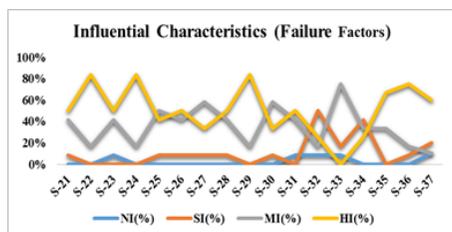
**Figure 5: Influential Characteristics and their Properties of S.36 to S.42 (Source: Primary Data)**

**Interpretation:** The statements from S.36 to S.42 are generally termed as highly influential in the negative sense. Nevertheless, the negativity of the statements is in between moderately influential to highly influential. The students exactly pointed to the fact that incompetency of the faculties, insufficient financial support are some factors that hinder their academic growth severely.

In the opinion section, Students stress proper effort, a beautiful, quiet environment and regularity in their academic activities to get success academically. They further press on the issue that institutions should develop in such a way that they can transform raw intellect into human capital.

#### Section D: Academic Information from Teacher's Perspectives (Success and Failure Factors)





**Figure 6: Influential Characteristics and their Properties of S.1 to S.37 (Source: Primary Data)**

**Interpretation:** According to the observation of the teachers of Rabindra University, Bangladesh (RUB), the factors such as interest in study (92%), regular study (100%), hard work, dedication & Self-Confidence (92%) are the most influential factors that affect the academic performance of the undergraduate students. Academic routine (67%), timely and regular preparation for examination (67%), adequate class works (i.e., class tests, assignments & presentations, field works (67%), time for consultation with teachers (67%) are marked with moderately influential factors.

On the other hand, the factors that negatively affect the students are as follows- noise and the unfriendly environment in the institution (83%), session lag (75%), involvement in politics (60%) are highly influential; competencies of the faculty (83%), access to the internet (75%) are moderately influential and previous bad academic Results (50%) is slightly influential.

In the opinion section, Teachers weigh on hard work, dedication, timely and regular preparation for examinations for academic success and irregularity and insufficient effort are recognized for failure.

In conclusion, the study sheds light on the opinion of the students of Rabindra University, Bangladesh. According to the findings, regular study, hard work, dedication & self-Confidence, regular attendance, support by family members and others have a high impact on the academic performance of undergraduate students. On the other hand, the noisy and unfriendly environment in the institution, insufficient effort in studying and lack of interest in the subject impact negatively. These findings may have a significant contribution to the teachers, administrations, students and their families to understand which factors impact students' academic success and failures.

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