

RESEARCH REPORT

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# Teaching and Learning Experience at the National University Affiliated Tertiary Colleges in Bangladesh

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Badrun Nessa Ahmed  
Rizwana Islam



**Bangladesh Institute of Development Studies (BIDS)**

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**Badrun Nessa Ahmed  
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## List of Acronyms

BIDS	Bangladesh Institute of Development Studies
BOU	Bangladesh Open University
BSS	Baseline Satisfaction Survey
CEDP	College Education Development Project
CSPro	Census and Survey Processing System
DID	Difference in Difference
FGD	Focus Group Discussion
GoB	Government of Bangladesh
IDGs	Institutional Development Grants
IDP	Individual Development Plan
IT	Information Technology
KII	Key Informant Interview
NAEM	National Academy for Educational Management
NGO	Non-Government Organisation
NU	National University
PMU	Project Management Unit
PRA	Participatory Rapid Appraisal
ToR	Terms of Reference
UGC	Bangladesh University Grants Commission
UNMC	University of Nottingham Malaysia Campus

## Abstract

The Government of Bangladesh is currently implementing the College Education Development Project (CEDP) to improve participating colleges' teaching and learning environment and strengthen the strategic planning and management capacity of National University (NU) affiliated tertiary colleges in Bangladesh. The focus of CEDP is to improve the capacity of the National University College system to plan, manage, implement, and monitor institutional programs, as well as strengthen the foundation for the next phase of development activities. CEDP promotes institution-led activities that focus on creating quality teaching-learning environments in government and non-government colleges through the availability of competitive grants.

The achievement of the College Education Development Project (CEDP) is the satisfaction level of students, teachers, and employers in terms of the quality and relevance of teaching. To measure the satisfaction level of the relevant stakeholders (i.e., students, teachers, and employers), three beneficiary feedback surveys (i.e., baseline, mid-term, and endline) are planned to be conducted, among which the baseline was carried out in 2019.

The Bangladesh Institute of Development Studies (BIDS) conducted the Mid-term Satisfaction Survey in May-June 2022. The mid-term survey is the second of the three planned surveys of the CEDP, measuring the mid-term satisfaction level of the stakeholders, students and teachers of National University-affiliated colleges, and employers of NU graduates. This study uses data from the Mid-term Satisfaction Survey to assess the mid-term satisfaction level of students, teachers, and employers.

The study was designed using a mixed-method approach, both quantitative and qualitative, to address the objectives of this study. Data analysis has used both the baseline data collected in 2019 and the mid-term data collected in this study. Using the baseline and mid-term data, a two-round panel data was constructed at the college level. Depending on the specific indicators, the program's effect at the college level was calculated.

We compare the overall satisfaction level regarding all the relevant indicators by stakeholder types, i.e., principals, teachers, and students, and observe differences among the average satisfaction levels. The overall teaching and learning environment satisfaction level is 3.81 among college principals, 2.95 among teachers, and 2.57 among students. A similar pattern is also found for other indicators except the collaboration of colleges with industries. The satisfaction level regarding the collaboration of colleges with industries is noted as the lowest for principals (1.62) and teachers (1.76), and for students, it is slightly higher (2.10 on a scale of 5). The lowest satisfaction level among students is recorded for connectivity through the internet (1.89), and the highest for teaching skills (3.92).

The regression results show that for the full sample, the Difference-in-Difference (DiD) of the satisfaction scores on the quality of academic infrastructure, the quality of internet connection, and the quality of facilities for students' soft skill improvement are statistically significant. The DiD for the

other two satisfaction scores, namely, the teaching and learning environment and the degree of industry linkage, are not statistically significantly different from zero.

These results show that the colleges that received Institutional Development Grants (IDGs) have made a positive and statistically significant impact on the improvement of the quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skill compared to those who did not receive this grant. However, the grant has made some changes in the teaching and learning environment and the degree of industry linkage between IDG-awarded colleges and IDG non-recipient colleges. These changes are not statistically significant.

The overall findings from the mid-term satisfaction survey highlighted that: (1) Institutional Development Grant (IDG) has made positive and statistically significant impact on the improvement of quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skill compared to those who did not receive this grant; (2) The grant has made some changes in the teaching and learning environment and the degree of industry linkage between IDG-awarded colleges and IDG non-recipient colleges. These changes are not significant enough to increase the satisfaction level of the students, teachers, and principals.

Therefore, this study proposes these recommendations for increasing the overall satisfaction level of all stakeholders: (1) The poor level of industry collaboration has been highlighted by all types of beneficiaries. To facilitate industry collaboration, job fairs should be organised every year, preferably at the district level; (2) Introducing short course facilities can increase the job market opportunities of the NU-affiliated colleges; (3) Subject-based pedagogical training for the NU teachers is highly recommended; (4) The interrelation and collaboration between NU-affiliated colleges and universities should be increased. The colleges that are not well equipped with enough facilities can collaborate with the universities to share their equipment, such as computer labs, libraries, scientific labs, etc. This will help the less privileged colleges provide quality teaching and learning facilities to the students; (5) Forming and activating the activities of Alumni Associations in the NU-affiliated colleges; (6) There should be funds available for the renovation of old academic buildings, addition to an existing building, and upgrading labs and research facilities for teachers wherever appropriate, (7) There should be some provision of need-based funds/emergency grant that might be used or made available to the college authorities in case of sudden emergency or need (e.g., a sudden flash flood in Sylhet division).



# CHAPTER 1

## INTRODUCTION

---

### 1.1 Background

Improving skills and productivity are critical for Bangladesh to accelerate economic growth and, thus, become a middle-income country.<sup>1</sup> However, the current levels of skill of the existing labour force are unlikely to meet future market demands. Although there are plenty of low-skilled workers, there is a strong demand for graduates with higher cognitive and non-cognitive skills and a demand for job-specific technical skills. This demand would necessitate increasing the quality and relevance of tertiary education so that educational institutions can produce graduates with more market-relevant skills. Therefore, the Government of Bangladesh (GoB) intends to implement a new project called "College Education Development Project (CEDP)" through the Ministry of Education with support from the World Bank as part of its commitment to improve the quality and governance mechanisms of the college subsector as articulated in the 6th Five Year Plan (2011-2015) and the Strategic Plan for Higher Education.

In order to fulfil the human development needs of the country, the College Education Development Project (CEDP) was incepted in 2016. The GoB is currently implementing the CEDP to improve the teaching and learning environment of participating colleges as well as strengthen the strategic planning and management capacity of National University (NU) affiliated tertiary colleges in Bangladesh. The project concentrates on the NU, which educates roughly two-thirds of all tertiary students studying in around 2,200 government and non-government colleges in Bangladesh.

CEDP promotes institution-led activities that focus on creating quality teaching-learning environments in government and non-government colleges through the availability of competitive grants.

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<sup>1</sup> Accessed from <https://cedp.gov.bd/about-the-project/>

The Institutional Development Grants (IDGs) focuses on areas such as:

- a) upgrading basic teaching-learning facilities and internet connectivity;
- b) improving market relevance of college education through the development of soft skills of students and linkages with the industry/employers,
- c) introducing quality assurance;
- d) strengthening management capacity and upgrading the fiduciary system in the colleges.

CEDP promotes the professional development of the teacher by establishing a Training Consortium. The Training Consortium is made up of national training offering agencies and the University of Nottingham Malaysia as an international partner to ensure global best practices in teacher training. In addition, the project aims to fill teacher vacancies in government colleges and improve the teacher recruitment process in non-government colleges.

## **1.2 The Beneficiary Feedback Surveys to Measure the Impact**

The achievement of the College Education Development Project (CEDP) is the satisfaction level of students, teachers, and employers in terms of the quality and relevance of teaching. To measure the satisfaction level of the relevant stakeholder (i.e., students, teachers, and employers), three beneficiary feedback surveys (i.e., baseline, mid-term, and endline) are planned to be conducted, among which the baseline was carried out in 2019.

### ***The Baseline Satisfaction Survey***

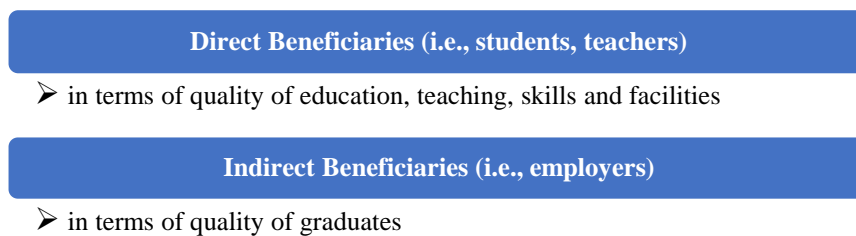
The Bangladesh Institute of Development Studies (BIDS) conducted the Baseline Satisfaction Survey (BSS) to determine student, teacher, and employers' satisfaction with the colleges' teaching-learning environment. The findings of this survey are the benchmark satisfaction levels of the college principals, teachers, students, and employers. The baseline study identified several challenges for improvement in NU-affiliated colleges' teaching and learning environments to improve overall satisfaction and retention.

The results of this survey show us the level of satisfaction of the beneficiaries (i.e., college principals, teachers, students, and employers) at the benchmark levels to evaluate the impact of IDG implementation in NU-affiliated colleges.

## ***The Mid-term Satisfaction Survey***

BIDS has conducted the Mid-term Satisfaction Survey on May-June 2023. The mid-term survey is the second of the three planned surveys of the CEDP, measuring the mid-term satisfaction level of the stakeholders, students and teachers of National University-affiliated colleges, and employers of NU graduates. This survey assesses the mid-term satisfaction level of two types of beneficiaries (Figure 1). The satisfaction level of students and teachers, who are considered direct beneficiaries, has been assessed in terms of quality of education and teaching, skills, and facilities. The satisfaction level of employers has been assessed in terms of the quality of graduates.

**Figure 1.1: Assessment Structure in terms of Beneficiaries**



### **1.3 The Rationale of Conducting the Mid-term Satisfaction Survey**

The mid-term survey measures the mid-term satisfaction level of the stakeholders, students, and teachers of National University-affiliated colleges and employers of NU graduates. One of the activities of the project is to conduct a mid-term satisfaction survey to measure the satisfaction level indicators by the middle of 2022. The mid-term indicators will show the improvement in the target areas and also the needs that are better taken into account within the commune investment plan to achieve the targeted goals by the end of the project implementation.

It is also important to know the opinions of students and teachers about existing college facilities and investments, areas needing improvement, and opinions and satisfaction on the quality of teaching and learning, including gender aspects. The mid-term satisfaction survey will provide this information to the implementing authority.



Also, the results of the survey will be shared with respective stakeholders so that they will better take into account the concerns of the students and teachers within the commune investment plans.

#### **1.4 Study Objectives**

The main objective of this study is to measure the satisfaction levels of all relevant stakeholders, including students, teachers, principals, and employers of the sampled colleges in the midst of IDG implementation in NU-affiliated honours and master's colleges. The survey focuses on the following aspects:

- Understanding the academic environment, facilities, and human resources of the NU-affiliated honours and master's colleges;
- Opinions of students and teachers about existing college facilities and investments, and areas needing improvement, and opinions and satisfaction on the quality of teaching and learning, including gender aspects;
- Opinions of employers on a match between current skills and desired skills of graduates.

#### **1.5 Research Questions**

Based on the above objectives, this study answers the following questions:

- What is the typical profile in terms of the academic environment, facilities, and human resources of the NU-affiliated honours and maser's colleges?
- What are the opinions of students and teachers about the level of utilisation, effectiveness, impacts, limitations and constraints, needs for improvement, and sustainability issues of the existing college facilities and investments?
- What are the opinions of employers about the knowledge and skills of NU graduates in terms of efficiency and relevance? What are the impacts of COVID-19 on the job market?
- What are the levels of satisfaction and opinions regarding the quality of teaching and learning environment and teachers' teaching skills in colleges, including gender aspects?

## **1.6 Limitation of the Study**

The sampling was based on a given population of the colleges that were on the list of CEDP. Further, the treatment and control colleges were chosen in different proportions to accommodate the higher number of government colleges from maximum districts as per the ToR. Hence, the sample may not be a representative one.

The respondents, such as the teachers and the students, are not the same as those in the baseline satisfaction survey. Therefore, a direct comparison of the results of the mid-term satisfaction survey with that of the baseline satisfaction survey for the teachers and students survey particularly might not be appropriate in some cases.

The IDG interventions made so far have been focused more on the infrastructure and extrinsic factors of the colleges. The need for these changes has been necessarily asked by the respective colleges. Therefore, no initiatives are taken to build links with the job market and for students' soft-skill development.

The IDG is a part of CEDP's development activities. Other than the disbursement of this fund, many other activities, such as training for teachers and distributing electronic tablets (e-tabs), have been initiated. These initiatives are for NU-affiliated colleges, irrespective of whether they have received IDG funds. In such cases, some IDG non-recipient college teachers might receive benefits from these CEDP initiatives. Therefore, this might affect the outcome of our survey between IDG-awarded and IDG non-recipient colleges.

The worldwide COVID-19 pandemic outbreak has also had a significant impact on the outcome indicators of the mid-term satisfaction survey. The next chapter provides the sample selection procedure and detailed methodology to address the research objectives.



## **CHAPTER 2**

### **METHODOLOGY**

---

This chapter provides a brief description of the sample selected for this study and the methodology used for the analysis. It is to be noted that the mid-term satisfaction survey is the second of the three planned surveys of the CEDP. Therefore, the sampling procedure followed in the baseline satisfaction survey mostly remains unchanged in this study.

#### **2.1 Sampling Approach**

The population for the study is the National University (NU)-affiliated honours and master's colleges in Bangladesh. As per May 2019 data available from the CEDP-PMU, there are around 757 colleges under the NU with honours and master's programs. We selected 10 per cent of the population as our sample, and hence, 75 colleges were selected based on the ToR to meet the study objectives. The following paragraphs explain the background and approaches of the sample selection procedure as discussed in the baseline satisfaction survey report.

#### **2.2 Sample Selection Procedure**

Consistent with the baseline study, this study surveyed stakeholders at four different levels: principals, students, teachers, and employees. For all four levels, the sampling procedure followed in the baseline satisfaction survey remained unchanged in the mid-term satisfaction survey.

##### **a) Selection of colleges**

###### ***45 treatment colleges***

Treatment group colleges were located across 41 districts of the country, where the non-government colleges were situated in 16 districts, and government colleges were located across 33 different districts. For selecting the treatment colleges, the following process was followed:

**Step 1:** Selecting 18 non-government colleges from 16 districts:

- Sixteen colleges from 16 distinct districts.
- Two additional colleges from Dhaka district because Dhaka has the highest number of non-government awardees.

**Step 2:** Selecting 27 government colleges

Government colleges of the treatment population are located across 33 different districts. For maximum geographic variation, we selected the government colleges by excluding the districts where the sample non-government colleges are located.

- Twenty-five colleges from 25 different districts excluding the districts from where 16 non-government colleges are located.
- Additional two colleges from Chattogram district because Chattogram has the highest (5) number of awardees.

### ***30 control colleges***

The control college sample was drawn from the list of 238 workshop attendees, excluding 168 IDG applicants.

**Step 1:** Selecting 12 non-government colleges

- There were 24 common districts where there were both treatment and control colleges. Out of these 24 districts, 12 districts had non-government colleges.
- Twelve non-government colleges were chosen from these districts, one from each district; for districts with more than one non-government college, the “A” category college had been chosen purposively.

**Step 2:** Selecting 18 government colleges

- In the other 12 districts where the non-government control colleges were not located, 18 government colleges were found in the entire control population list. Therefore, all 18 government colleges were selected from the list.

- One of the control colleges in Dhaka district was Government Music College. It is a specialised college with only one honours and one master’s program. Therefore, this college was dropped from the list and replaced with a government college in Dhaka. However, as no other government college was in the control population, the Music College was replaced with a non-government college from Dhaka. This resulted in the change of some government and non-government colleges in the sample (See Tables 2.1 and 2.2).

**Table 2.1: Revised Distribution of the Sample Colleges**

Type of Colleges	Treatment	Control	Total
Government	27	17	44
Non-Government	18	13	31
<b>Total</b>	<b>45</b>	<b>30</b>	<b>75</b>

**Source:** Baseline satisfaction survey, BIDS, 2019.

The final colleges' sample is representative at the divisional level as government or non-government colleges were selected from all eight administrative divisions. The division-wise sample distribution is as follows:

**Table 2.2: Division-wise Distribution of College**

Division	Government College	Non-Government College	Total Colleges
Barishal	5	0	5
Chattogram	10	4	7
Dhaka	10	10	20
Khulna	7	4	11
Mymensingh	3	4	7
Rajshahi	5	6	11
Rangpur	2	1	3
Sylhet	2	2	4
<b>Total</b>	<b>44</b>	<b>31</b>	<b>75</b>

**Source:** Baseline Satisfaction Survey, BIDS, 2019.

## b) Selection of students

Students were selected based on a certain class, preferably 3rd or 4th-year undergraduate students and master’s students studying in sample colleges. Students from each college were surveyed on an announced day, and the surveys were conducted in the classroom.

**c) Selection of teachers and college heads**

Teachers from the same department/program were surveyed. All heads of colleges were also interviewed face to face with a structured questionnaire to collect relevant information on the colleges' physical facilities, human resources, and overall academic environment.

**d) Selection of employers**

Employers were divided into two broad categories, i.e., government and private. Employers included government and non-government agencies, educational institutions (schools and colleges), companies, firms, NGOs, and commercial banks. For the employer survey, direct supervisors or line managers were interviewed to collect relevant information.

**2.3 Sample Size**

In the baseline, three departments at honours levels with an additional two departments at master's levels (if the college had a master's program) were randomly selected from each college. This resulted in a total of 255 departments considering properties such as level (honours/master's) and subject type (science/non-science).

Therefore, during the mid-term satisfaction survey, 12 students and five teachers were randomly selected from each department to participate in the survey. Therefore, a total of 3,060 (255 x 12) students and 1,275 (255 x 5) teachers were surveyed. The study surveyed all the principals of the 75 colleges.

The baseline study also surveyed employers who hired National University students. Following the baseline, a total of 200 employers were surveyed during the mid-term satisfaction survey, divided equally among government and non-government organisations. The sample distribution described above is summarised in Table 2.3.

**Table 2.3: Sample Size and Techniques**

Group		Sample Size	Survey Technique
Colleges	Government	44	
	Non-Government	31	
Department		255	
Principals or heads of colleges (institution heads)		75	Questionnaire Survey & interview
Students (3 <sup>rd</sup> or 4 <sup>th</sup> -year undergraduate students and master's level)		(255*12)=3060	Questionnaire Survey & FGD
Teacher		(255*5)=1275	Questionnaire Survey & FGDs
Employer	Government	100	Questionnaire Survey & KIIs
	Non-government	100	

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

## 2.4 Methodology

The survey was designed using a mixed-method approach (both quantitative and qualitative) to address the objectives. According to the terms of reference (ToR) of this study, the sample consisted of two groups of colleges, i.e., IDG-awarded colleges and IDG non-recipient colleges, based on the baseline satisfaction survey.

Data analysis has made use of both the baseline data collected in 2019 and the mid-term data collected in this study. Using the baseline and mid-term data, we have constructed two-round panel data at the college level. Depending on the specific indicators, we wanted to find out the program's effect at the college level.

However, the dataset on students, teachers, principals, and employers does not have panel properties, as we did not survey the same set of individuals in the mid-term satisfaction survey. Given the limitations of a two-round (non-panel) cross-section dataset at the individual level (i.e., student, teacher, principal, employer), we have used all the appropriate quantitative and qualitative techniques to analyse the dataset.

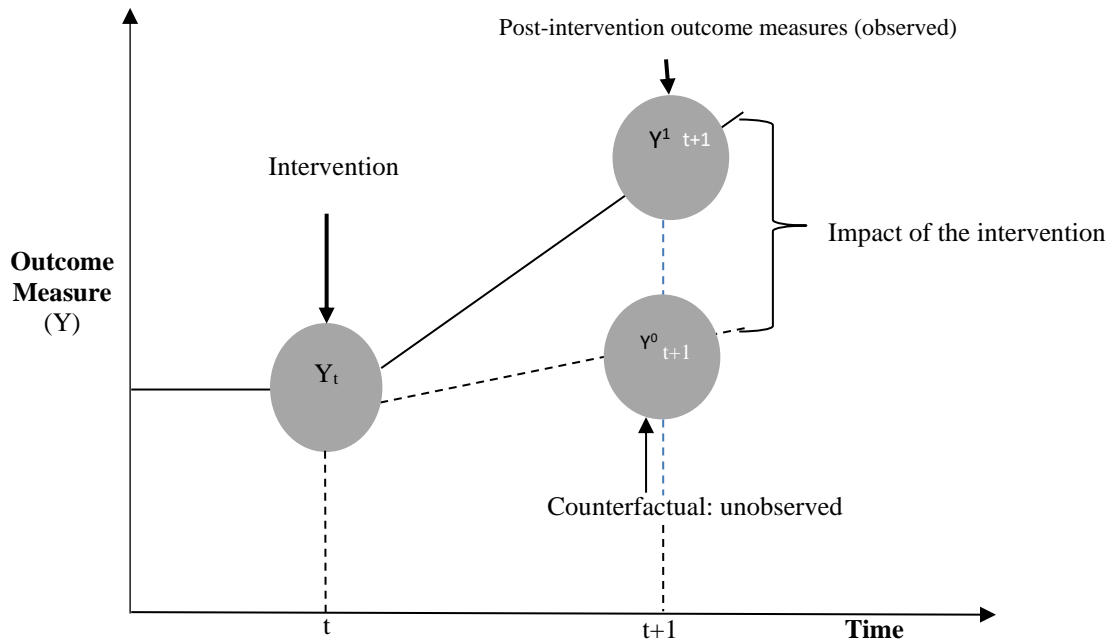
### **Impact of Institutional Development Grant (IDG) on NU-affiliated Colleges**

Impact evaluations measure treatment effects, for which treatment means being exposed to an intervention, such as a new policy or project; effects are the difference that exposure makes to outcomes, such as income, employment, enrollment, completion, productivity, poverty, and many other aspects. An impact evaluation is based on a counterfactual analysis that compares what would have happened in the absence of an intervention to actual outcomes.



Figure 2.1 portrays impact evaluation visually. An intervention occurs in time  $t$  when the level of our outcome of interest is  $Y_t$ . After the intervention, the outcome of interest becomes  $Y_{1t} + 1$ , while it would have been only  $Y_{0t} + 1$  without the intervention. The latter is the counterfactual value of  $Y$ .

**Figure 2.1: Illustration of an Impact Evaluation**



Impact evaluation, as illustrated in Figure 2.1, can be stated algebraically in the following equation:

$$Impact = Y_{1t+1} - Y_{0t+1}$$

where  $Y$  is the outcome of interest, such as income, poverty headcount, etc. The subscript  $t + 1$  refers to the point of time after the intervention, or sufficiently far into the intervention, to reasonably expect that there has been an effect on the outcome. Superscript 1 indicates the outcome when taking part in the intervention, i.e., the factual. The 0 superscript indicates the same outcome for the same group of people at the same point in time had they not taken part in the intervention, i.e., the counterfactual (White & Raitzer, 2017).

***Difference-in-difference (DID) estimation method:***

The baseline and mid-term satisfaction survey data used in the study are not fully random. However, this does not limit us in evaluating the impact of the IDG program. The non-random feature of the dataset warrants the use of quasi-experimental methods of Impact Evaluation. Quasi-experimental methods are used to identify the impact of a program (i.e., treatment) by comparing some outcome variables between treatment and control groups. To identify the IDG program effect, this study applied the Difference in Difference (DiD) estimation method and a variety of quasi-experimental methods.

DiD estimation technique requires outcome data for both treatment (the group that receives the program) and control (the group that does not receive the program) groups- both before and after the program has been implemented. In DiD, observed changes in outcome over time for the control group provide the counterfactual for the treatment group.

Let the outcome variable under treatment is:

$$Y_{it}^T = Y_{it}^C + G_{it} \quad (1)$$

where,  $G_{it}$  is the impact or gain due to the program,

$Y_{it}^C$  is the counterfactual outcome,

$i$  is the index of individual observation and

$t$  is the index of time (in a two-round panel,  $t = 1, 2$ . In our case,  $t = 1$  corresponds to the baseline, and  $t = 2$  corresponds to the midline).

Let  $\hat{Y}_{it}^C$  = estimate from comparison group.

Then, the Difference in Difference (DiD) estimator is defined as:

$$DD = E[(Y_{i2}^T - \hat{Y}_{i2}^C) - ((Y_{i1}^T - \hat{Y}_{i1}^C))] \quad (2)$$

The estimator  $DD$  provides an unbiased estimate of the program effect (i.e., the gain due to the program) under the following two conditions:

1. Parallel trend: The change over time for the comparison group reveals the change in counterfactual outcomes. That is:

$$E\Delta Y_{it}^C = E\Delta \hat{Y}_{it}^C \quad (3)$$

2. The baseline is uncontaminated by the program, which is:

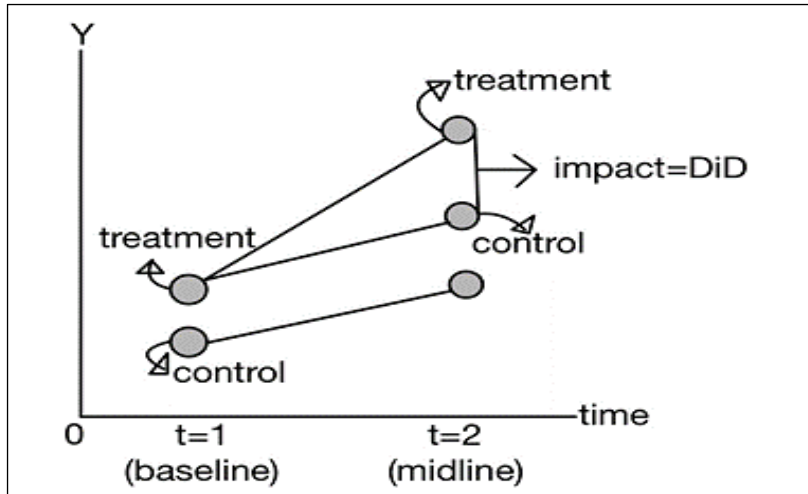
$$G_{i1} = 0 \quad (4)$$

Under these two assumptions, we have

$$DD = E[(Y_{i2}^T - \hat{Y}_{i2}^C) - (Y_{i1}^T - \hat{Y}_{i1}^C)] = E(G_{i2}) = \text{Average Treatment Effect} \quad (5)$$

**The graphical representation of the DiD estimator:**

**Figure 2.2: Impact Using Difference in Difference Estimation Technique**



**Regression implementation of DiD with two time periods (i.e., baseline and midline):**

$$Y_{it} = \alpha_i + \beta_i D_{it} + \gamma_i + \varepsilon_{it}; \quad \text{where } i = 1, 2, \dots, n; t = 1, 2 \quad (6)$$

$$\text{If } E(\varepsilon_{it} | D_{it}) = 0, \text{ then } \beta_i = E(Y_{it} | D_{it} = 1) - E(Y_{it} | D_{it} = 0)$$

We assume that once an observation is treated, it stays treated throughout the program period. Also, according to the parallel trend assumption, the time trend in the  $Y_{it}$ 's are the same for all  $i$ ; however, their mean values ( $\alpha_i$ ) can differ.

Confounding heterogeneity in initial conditions (i.e., in the baseline) that affect the trajectories over time can bias the DiD estimator. To see if there is any such heterogeneity, one or both of the following can be done.

- test for significant differences in baseline characteristics;
- differences in trends in the variable of interest before the program is implemented.

In our analysis, as the previous trend information is not available, we check for the test of significance differences in baseline characteristics.

## **2.5 Ethical Consideration**

The researchers applied all ethical considerations while conducting this study. In this regard, involvement in this study, the participants were not subjected to harm in any way. Before the study, full consent was obtained from the participants, the students, teachers, and the graduates' employers from NU-affiliated colleges. In addition, the privacy of research participants was also ensured. The voluntary participation of respondents in the research was treated as very important. Moreover, the respondents willingly provided their personal information. It has been assured that the information they provided was kept confidential and used only for research purposes.

The next chapter provides an analysis of the academic environment, facilities, and human resources based on principal responses from the sampled colleges.



# **CHAPTER 3**

## **TEACHING AND LEARNING ENVIRONMENT IN BANGLADESH: A COMPREHENSIVE REVIEW**

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Bangladesh is known worldwide for its exceptional socioeconomic development and potential to become a regional economic powerhouse. The country has had significant success in economic growth and poverty reduction over the last decade despite having a population of about 160 million people. In the last ten years, Bangladesh's GDP has grown at an average pace of 6.1 per cent, resulting in a significant reduction in poverty rates. Besides political strife, natural disasters, and financial shocks, the economy has grown at an astounding rate over the years. To ensure the country's transition to a middle-income status, human development, education, and health progress are all necessary to produce a healthier and better-educated working population (Rahman et al., 2019; World Bank, 2016a).

### **3.1 Current Scenario of Human Skill Development in Bangladesh**

Human skill development and productivity are critical to economic progress; therefore, the country needs to prepare its workforce for the emerging challenges of a dynamic economy in an increasingly globalised world. A better educated and skilled workforce is in demand in the labour market (World Bank, 2016a). More recently, technology advancements are rapidly altering production and service delivery methods. Firms must not only adapt their business and production models to technology developments on a continuous basis but also have highly skilled staff to support such change processes. Although Bangladesh's young and rising workforce presents a chance to boost productivity and accelerate economic growth, it is critical to provide the young generation with the necessary employment skills (Rahman, T. et al., 2019).

In Bangladesh, most workers are undereducated, with 76 per cent having a secondary education or less, 22 per cent having a tertiary education degree, and roughly 2 per cent having a technical vocational education and training (TVET) certificate or diploma in one of five major fields of study (commerce, education, finance, manufacturing, and public administration). While there is an abundance of low-skilled workers, there is a strong demand for graduates with higher cognitive and non-cognitive skills and job-specific technical skills. This would necessitate raising the quality and relevance of postsecondary education so that educational institutions can create graduates with more marketable skills (World Bank, 2016a).

### **3.2 The College Education Development Initiative of Bangladesh**

The Government of Bangladesh, with the assistance of the World Bank, aims to improve the quality and relevance of tertiary college education in Bangladesh to boost graduate employability and develop the management system of the college education subsector (Government City College, Chattogram, 2021).

Bangladesh's government launched the College Education Development Project (CEDP) by prioritizing educational development. The CEDP aims to improve the teaching and learning environment of tertiary colleges in Bangladesh that are associated with the National University (BIDS, 2019).

Bangladesh Institute of Development Studies (2019) has carried out a Baseline Satisfaction Survey of the College Education Development Project to assess the satisfaction level of four different stakeholders: students, teachers, principals, and employers. The findings of this survey will be used to examine the impact of CEDP's Institutional Development Grant (IDG) given to a selection of NU-affiliated colleges across the country.

### **3.3 Student's Satisfaction Level**

The learning environment of educational institutions can have a big impact on student's ability to get a good education. According to the baseline survey conducted by BIDS (2019), government IDG college students are comparatively more satisfied with all teaching and learning metrics than non-IDG college students. When comparing IDG college students to students from non-IDG colleges, the percentage of students who use the library facility is higher (80 per cent vs 61 per cent). In comparison to their IDG colleges, non-IDG college students spend much more time in the lab (4.34 hours vs 2.99 hours). The internet has become an integral part of our everyday lives, and the younger generation devotes a large amount of time to it for a variety of reasons. According to the baseline survey, students spend nearly 60 per cent of their study time on the Internet. Students in the IDG group study for 82 minutes out of 136 minutes, while students in the non-IDG group study for 81 minutes out of 139 minutes. The overall satisfaction level of students depends on various factors, such as career development, social networking, and soft skill development. Overall, students are more satisfied with the teacher's teaching skill (mean satisfaction level 3.86 on a 5-point scale) than with soft skill development (mean satisfaction level 1.94). In comparison to IDG beneficiary college students, non-recipient college students are reported to be more contented.

In another report by the World Bank (2016a), it has been found that inadequate learning facilities make the classroom setting difficult to manage and negatively impact teaching and learning quality. To improve the teaching and learning environment in the colleges by supporting the following quality management activities:

- Upgrading basic teaching-learning facilities and internet connectivity
- Improving market relevance of college education through the development of soft skills of students and linkage with the industry
- Introducing the quality assurance
- Strengthening management capacity and upgrading the fiduciary system in the college

World Bank (2016a) shows that the teaching and learning environment at honours and master's colleges has increased by almost 70 per cent, and the satisfaction level of students and teachers of grant-supported teaching and learning environment is about to increase by 30 per cent from the baseline by December 2021. The study also includes female beneficiaries, which is about to increase by 50 per cent at the end of the project.

### **3.4 Teacher's Satisfaction Level**

BIDS (2019) shows that IDG college teachers are more satisfied with the majority of the current academic environment metrics. Teachers at government colleges are also happier with the use of multimedia-equipped classrooms, multimedia teaching facilities, and so on. Non-IDG government college teachers, on the other hand, are happier than their IDG counterparts. Private college teachers are found to be more satisfied in terms of industry linkage and growth of soft skill development of the students (BIDS, 2019)

BIDS (2018) evaluates the stakeholders' satisfaction level with higher education institutions' overall teaching, learning, and academic environment. In terms of overall satisfaction, AIF departments have much higher average satisfaction scores in both the teaching and research environments. Compared to non-AIF department faculty members, AIF faculty members have been found to be more satisfied with an average agreement level of 3.99 for the teaching environment and an average agreement of 3.54 for the research environment. The quality of teaching has increased because of positive developments in technology, teaching, and research environments, according to KIIs and focus group discussions with faculty members.



### **3.5 Principal's Satisfaction Level**

BIDS (2019) showed that there is no significant difference in the average satisfaction levels of these two categories regarding teaching and learning environment and quality of academic infrastructure as well as industry collaboration. Non-IDG college principals have been found to be happier with their students' soft-skill development. In most situations, soft-skill development is perceived as occurring through cultural and extracurricular activities, even though no such courses are offered to build soft skills. In comparison to IDG colleges, non-IDG college administrators are generally more satisfied with their college's internet connection speed (BIDS, 2019).

### **3.6 Employer's Satisfaction Level**

In Bangladesh, both government and non-government colleges produce the most tertiary graduates (nearly two-thirds of total tertiary enrollments). Even though non-government colleges have three times the number of students as government colleges, student enrollments are roughly equal. The majority of college graduates are engaged in the public sector, particularly in the management and teaching profession. NU's curriculum is more humanities and arts-focused, making it less marketable. There is also a growing demand for them in priority areas in the private sector (World Bank, 2016a).

From the employment perspective, the result of the baseline survey of the college education development project in 2019 states that 94 per cent of government institutions have indicated that they hire NU graduates as employees. Almost 39.14 per cent of NU graduates belong to different government institutions. Trusts and foundations hire the fewest NU graduates. Employers in the private sector have stated that NU graduates account for around one-fifth of total employment. Reliability, integrity, workplace behaviour, teamwork, positive personality, and verbal communication are the top six attributes employers are extremely satisfied with. Employers believe NU students should enhance their talents in five major areas: computer/ICT knowledge, English language competence, communication skills, presentation skills, and technical knowledge (BIDS, 2019).

### **3.7 Structural and Non-Structural Measures in the Colleges**

Inadequate finance and deteriorating facilities are typical obstacles to providing excellent, relevant education for both government and non-government colleges. Government colleges

get money from the Ministry of Education through the DSHE, leaving them with little financial flexibility to pursue development programs to meet constantly changing economic and social demands. On the other hand, non-government colleges have financial autonomy, yet most lack the resources to pursue development programs within their schools. Non-governments are privately supported but have limited access to government funds through monthly pay orders, which are a type of salary subvention (MPOs). Government development programs have upgraded the physical facilities and infrastructure facilities of some non-government colleges. Because of its high number of government and non-government institutions, enrollment, and broad network, the NU is a crucial subsector for achieving the essential quantitative and qualitative reforms in the tertiary education sector. However, the college sector has several deep-seated issues, including-

- insufficient planning, governance, and management practices,
- poor teaching-learning quality practices,
- insufficient resources and financial management, and
- limited access (World Bank, 2016).

Therefore, CEDP encompasses three major components, including strengthening management capacity, improving the teaching-learning environment and communication, monitoring, and evaluation, where the NU-affiliated colleges have taken a broad range of structural and non-structural measures through the grant of IDG. World Bank (2016) shows that management in IDG grant participating colleges has been strengthened by 80 per cent from 2016 to 31 December 2021. The authors also mentioned that a total number of 8,000 teachers and managers in honours and master's colleges had been trained in the subject and pedagogical training under the project following the timeline.

World Bank (2016b), in the report on the Project Appraisal Document of the College Education Development Project, mentioned a scarcity of trained teachers, incentives, and accountability structures to encourage better performance. Existing training facilities are also insufficient for the increased number of college professors. As a result, the project will help the government to recruit 2,700 new teachers. Few college professors have recent disciplinary training, pedagogical training, or qualifications beyond a master's degree. The project will also assist DSHE in conducting a Teacher Needs Assessment in 2020 to guarantee that

government instructions are properly deployed. Some structural and non-structural measures have been taken throughout the project that ensure:

- upgrading internet access and fundamental teaching-learning facilities
- market-relevant soft-skill development
- training of the teachers
- capacity building for college principals, policymakers, leaders, and managers in the sub-sector
- interventions at the system and institutional levels
- supporting non-government colleges
- developing strategic plans for college sub-sectors
- ensuring the availability of the IDG grants

Some key expected outcomes through these initiatives include:

- enhancement of knowledge, skills, and methodologies in related areas
- enhancement of English language proficiency
- enhancement of the use of technology in education
- development of sustainable communities of practices
- alignment of teaching-learning provisions across NU colleges and to the international educational standard
- development of a pool of local trainers to support the sustainability of the program

The project's intermediate result indicators show us that after IDP activities in specific sectors, the teaching and learning environment at NU-affiliated honours and master's colleges have improved by 70 per cent from 2017 to the end of 2021. Again, the grant-supported colleges have strengthened their management system by 80 per cent following the timeline. Also, awareness-raising activities have been conducted regularly by the grant-supported colleges.

Among the various activities through IDP, some major structural activities are to modernise the basic infrastructure, including advanced technologies, renovation or refurbishment of classes/auditorium/library/laboratory/washrooms, procurement of curriculum-related scientific instruments/equipment/multimedia devices, arrangement for recreational indoor game facilities, improving security facilities and power supply, etc. On the other hand, some non-structural measures taken by IDG are- improving the connectivity through existing Bangladesh Research and Education, developing soft-skill and industry linkage, institutional quality assurance, and strengthening the management capacity of the colleges (National University, n.d.).

According to the baseline study of CEDP conducted by BIDS (2019), the qualitative analysis reveals that students begin their trip at NU with strong interest and optimism; nevertheless, they gradually lose interest in seriously continuing the study and frequently wind up disillusioned, with little possibility of having a decent profession or a dignified life in sight. Key issues include various structural and non-structural measurements and lack of work possibilities.

Quantitative data from 50 government colleges and 27 private colleges across the country, the average per-student spending in a government institution and a private institution (enlisted for MPO) are Tk 18,441 and Tk 37,766, respectively. In other words, private universities invest twice as much in a student as a public college. This finding is significant because it implies that private institutions have more financial resources to take structural and non-structural measurements than public colleges (Khan Mamun, 2019).



## **CHAPTER 4**

# **ACADEMIC ENVIRONMENT, FACILITIES, AND HUMAN RESOURCES OF THE NU-AFFILIATED COLLEGES: RESPONSES FROM COLLEGE PRINCIPALS**

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The survey was conducted in 73 colleges.<sup>2</sup> Among them, 45 colleges have received Institutional Development Grants (IDG). In this chapter, we have summarised the findings from interviewing the college principals. The survey takes principals' opinions based on understanding the academic environment, available facilities, and human resources of the NU-affiliated honours and masters colleges.

### **4.1 Background Characteristics of the Colleges**

Table 4.1 provides basic characteristics of NU-affiliated honours and Masters college disaggregated by category of college (i.e., government and non-government) and status of IDG recipient (i.e., IDG-awarded and IDG non-recipient). Columns 5 to 7 show that there exists a significant difference (at 1 per cent level) between IDG-awarded and IDG non-recipient colleges in the case of the existing number of departments. IDG-awarded colleges have an additional four honours departments on average compared to IDG non-recipient colleges, where the number of honours departments is only eight. The difference between the number of master departments in IDG-awarded and IDG non-recipient colleges is also significantly different. On average, IDG-awarded colleges have more master's programs than IDG non-recipient colleges. At the disaggregated level, this difference also prevails between government and non-government colleges. In both government and non-government colleges, the average number of honours and master departments is significantly higher in IDG-awarded colleges compared to IDG non-recipient colleges.

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<sup>2</sup> Under Mid-term Satisfaction Survey, the study team was unable to collect information of 2 colleges from Sylhet division due to sudden and prolong flash flood.

In the case of human resource availability, such as the number of teachers (full-time and part-time), professors (assistant and associate), and lecturers in the college, the IDG-awarded colleges are more enriched compared to IDG non-recipient colleges. The average numbers are significantly higher in the IDG-awarded colleges.

The gender disaggregated picture shows that the prevalence of male teachers is higher in all colleges. The average number of male teachers is significantly higher in the IDG-awarded colleges compared to IDG non-recipient colleges. IDG-awarded colleges have 58 male teachers on average, whereas there are only 35 in IDG non-recipient colleges. At the disaggregated level, the difference also remains the same between government and non-government colleges. In government and non-government colleges, the average number of male teachers is, in fact, much higher in IDG-awarded colleges than in IDG non-recipient colleges.

**Table 4.1: Institutional Characteristics of NU-Affiliated Colleges**

Details	Categories	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Government college		Private college		All			All college
		IDG college	Non-IDG college	IDG college	Non-IDG college	IDG colleges	Non-IDG colleges	Difference (p-value)	Mean (SD)
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Departments in the college	Honours	12.31 (4.25)	7.86 (4.37)	11.6 (5.32)	8.40 (4.03)	12.05 (4.62)	8.03 (4.21)	4.018*** 0.00	10.29 (4.85)
	Master	7.12 (5.87)	3.14 (5.17)	4.13 (4.98)	2.3 (3.23)	6.02 (5.69)	2.88 (4.61)	3.15* (0.01)	4.64 (5.44)
Teachers in the college	Male	52.15 (24.93)	33.50 (25.67)	68.33 (48.47)	38.7 (16.92)	58.07 (35.68)	35.13 (23.13)	22.95** (0.00)	48.01 (33.22)
	Female	16.31 (13.61)	15.41 (9.76)	34.87 (19.23)	24.90 (15.84)	23.10 (18.09)	18.38 (12.54)	4.72 (0.21)	21.03 (15.97)
Full-time teachers in college	Male	49.62 (27.01)	31.41 (25.80)	63.2 (48.02)	34.4 (20.67)	54.59 (36.15)	32.78 (23.79)	22.24** (0.00)	44.84 (32.99)
	Female	15.58 (13.16)	15.23 (9.75)	31.53 (16.09)	21.4 (14.97)	21.42 (16.10)	17.16 (11.75)	4.26 (0.21)	19.55 (14.42)
Part-time teachers in the college	Male	2.54 (9.13)	2.09 (5.96)	5.13 (10.11)	4.30 (8.82)	3.49 (9.46)	2.78 (6.91)	0.71 (0.72)	3.18 (8.39)
	Female	0.73 (2.89)	0.18 (0.66)	3.33 (5.84)	3.5 (6.21)	1.68 (4.33)	1.22 (3.73)	0.46 (0.63)	1.48 (4.06)
Teachers holding Ph.D	Male	2.19 (2.58)	1.82 (2.70)	1.27 (1.53)	0.7 (0.95)	1.85 (2.28)	1.47 (2.34)	0.39 (0.48)	1.69 (2.30)
	Female	0.27 (0.60)	0.46 (1.10)	0.27 (0.59)	0.3 (0.68)	0.27 (0.59)	0.41 (0.98)	-0.14 (0.46)	0.33 (0.78)
Professors in the college	Sanctioned posts	4.31 (4.54)	5.59 (10.88)	2.93 (6.04)	2.80 (7.86)	3.81 (5.11)	4.72 (9.99)	-0.91 (0.61)	4.21 (7.60)
	Currently working	4.19 (4.00)	4.82 (9.67)	1.80 (4.59)	2.80 (7.86)	3.32 (4.33)	4.19 (9.07)	-0.87 (0.59)	3.70 (6.78)

(Contd. Table 4.1)

Details	Categories	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Government college		Private college		All			All college
		IDG college	Non-IDG college	IDG college	Non-IDG college	IDG colleges	Non-IDG colleges	Difference (p-value)	Mean (SD)
		Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Associate Professors in the college	Sanctioned posts	13.00 (8.48)	9.36 (12.39)	7.93 (13.74)	1.20 (3.80)	11.15 (10.82)	6.81 (11.09)	4.33 (0.10)	9.25 (11.07)
	Currently working	12.46 (8.07)	8.50 (8.83)	6.20 (9.94)	1.20 (3.80)	10.17 (9.20)	6.22 (8.29)	3.95 (0.06)	8.44 (8.97)
Assistant Professors	Sanctioned posts	20.27 (11.22)	16.36 (12.70)	24.27 (17.76)	19.70 (12.33)	21.73 (13.89)	17.41 (12.48)	4.325 (0.17)	19.84 (13.38)
	Currently working	18.58 (10.54)	12.82 (10.84)	20.53 (14.82)	20.20 (13.68)	19.29 (12.13)	15.13 (12.08)	4.17 (0.15)	17.47 (12.20)
Lecturers in the college	Sanctioned posts	37.42 (21.17)	28.41 (15.68)	68.93 (49.63)	27.20 (25.85)	48.95 (37.13)	28.03 (19.00)	20.92** (0.01)	39.78 (32.10)
	Currently working	28.12 (22.86)	22.27 (16.40)	56.27 (45.97)	31.10 (33.93)	38.42 (35.42)	25.03 (23.10)	13.38 (0.07)	32.55 (31.17)
MPO listed teachers	Male	0 (0.00)	1.32 (5.36)	24.67 (13.12)	23.90 (13.19)	9.02 (14.32)	8.38 (13.53)	0.65 (0.84)	8.74 (13.88)
	Female	0 (0.00)	0.64 (2.77)	11.67 (6.07)	11.00 (6.72)	4.27 (6.73)	3.88 (6.49)	0.39 (0.80)	4.10 (6.58)
Demonstrators in the college	Sanctioned posts	3.73 (1.54)	2.64 (2.32)	3.13 (2.45)	3.30 (0.82)	3.51 (1.91)	2.84 (1.99)	0.67 (0.15)	3.22 (1.96)
	Currently working	1.35 (1.02)	1.14 (1.46)	2.40 (2.26)	2.40 (1.08)	1.73 (1.64)	1.53 (1.46)	0.20 (0.59)	1.64 (1.56)

Source: Mid-term Satisfaction Survey, BIDS, 2022. Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels.

Column (5-7) also shows that there exists a significant difference (at a 5 per cent level) between IDG-awarded colleges and IDG non-recipient colleges in the case of the number of full-time male teachers. IDG-awarded colleges have 55 full-time teachers on average, whereas the number is only 33 for IDG non-recipient colleges. At the disaggregated level, this difference also prevails between government and non-government colleges. The average number of full-time male teachers is higher in IDG-awarded government and non-government colleges compared to that of IDG non-recipient colleges. In the case of Ph.D. holding by teachers, these two groups are not different.

However, in the case of the number of lecturers with sanctioned posts, there exists a significant difference (at a 5 per cent level) between IDG-awarded and IDG non-recipient colleges (columns 5-7). IDG-awarded colleges have 49 lecturers with sanctioned posts, whereas this is only 28 for IDG non-recipient colleges. The difference between government and non-government colleges prevails at the disaggregated level. The average number of lecturers with



sanctioned posts is significantly higher in IDG-awarded government and non-government colleges compared to that of IDG non-recipient colleges.

It is highly encouraging that the baseline satisfaction survey found that the non-government colleges had no post above the assistant professor level (BIDS, 2019). However, over time, it changes, and in the mid-term satisfaction survey, we find that the departments of the non-government colleges are also well equipped with experienced faculty members.

Table 4.2 shows the average number of current students in honours and masters' level with the students who graduated from the NU-affiliated colleges disaggregated by gender of the students. Columns 7 to 9 show that there exists a significant difference between IDG-awarded colleges and IDG non-recipient colleges in the case of the number of male students who are currently studying at the honours level. The average number of male students at an honours level in IDG-awarded colleges is greater than the IDG non-recipient college students by 1,637, and the difference is statistically significant at a 5 per cent level.

At the disaggregated level, these results also prevail in the case of IDG-awarded government colleges. The average number of male students at honours level in IDG-awarded government colleges is greater than that of the IDG non-recipient college students by about 1,712, and the difference is statistically significant at a 5 per cent level.

Table 4.2 also shows that among all student categories, government colleges have a significantly higher number of students than non-government colleges, and the mean number of honours students exceeds the number of masters students. The number of students completing either honours or masters level is lower than the admitted students. Again, the number of male students- currently studying and completing both honours and masters level- is found to be higher in government and non-government colleges. This result implies that students discontinue their studies at some point in their journey at honours or masters level study, and this discontinuation is higher for female students than male students.

**Table 4.2: Number of Students Currently Studying and Completing Education from NU-Affiliated Colleges**

Number of students	Categories	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Government college			Private college			All		
IDG		Non-IDG	Difference (p-value)	IDG	Non-IDG	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	
College		College		College	college		Mean	Mean		
Mean		Mean	Mean	Mean	Mean	Mean	Mean	Mean		
(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)			
Students studying in Honours	Total	5832.69 (4088.52)	4168.96 (3732.56)	1663.74 (0.151)	2947.13 (2946.03)	1501.50 (1604.26)	1445.63 (0.17)	4777.00 (3932.59)	3335.38 (3429.72)	1441.63 (0.105)
	Male	4110.33 (2154.96)	2398.63 (2080.32)	1711.71* (0.02)	2484.00 (2011.32)	1052.78 (1325.24)	1431.22 (0.08)	3551.28 (2217.42)	1914.12 (1930.02)	1637.16** (0.005)
	Female	2512.81 (2098.28)	2424.50 (2161.07)	88.31 (0.89)	1125.53 (997.97)	615.56 (509.16)	509.98 (0.17)	2005.27 (1886.26)	1899.32 (2008.72)	105.95 (0.82)
	Total	995.77 (1366.32)	380.46 (872.36)	615.32 (0.08)	340.00 (563.52)	217.30 (337.09)	122.70 (0.54)	755.85 (1174.80)	329.47 (744.57)	426.39 (0.08)
	Male	747.06 (778.89)	542.43 (567.80)	204.63 (0.54)	370.86 (442.32)	326.75 (281.79)	44.11 (0.86)	641.72 (712.99)	464.00 (478.64)	177.72 (0.46)
	Female	592.52 (689.14)	508.11 (654.70)	84.41 (0.76)	250.40 (298.32)	144.33 (113.42)	106.07 (0.59)	482.16 (608.06)	362.60 (332.50)	119.56 (0.52)
Students completing honours each year	Total	973.12 (775.20)	676.94 (783.99)	296.18 (0.28)	551.10 (686.37)	299.83 (266.39)	251.27 (0.42)	816.82 (758.96)	574.09 (696.76)	242.72 (0.25)
	Male	541.24 (446.43)	356.93 (449.70)	184.31 (0.23)	367.18 (420.43)	201.29 (184.75)	165.90 (0.34)	481.41 (438.92)	307.41 (387.40)	174.00 (0.14)
	Female	436.77 (401.97)	386.15 (406.82)	50.62 (0.68)	178.27 (195.83)	121.44 (84.72)	56.82 (0.42)	342.2 (360.97)	304.00 (360.40)	38.20 (0.66)
	Total	976.2 (1243.42)	712.29 (790.08)	263.91 (0.61)	319.71 (607.60)	376.00 (220.15)	-56.29 (0.88)	767.32 (1110.92)	611.40 (673.28)	155.92 (0.69)
	Male	566.63 (797.90)	376.43 (358.32)	190.20 (0.55)	215.86 (388.08)	439.00 (387.44)	-223.14 (0.38)	472.19 (720.91)	399.18 (350.80)	73.01 (0.75)
	Female	451.14 (636.37)	333.44 (370.80)	117.69 (0.61)	106.00 (180.24)	344.00 (366.86)	-238.00 (0.11)	343.28 (556.94)	337.21 (355.03)	6.07 (0.97)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

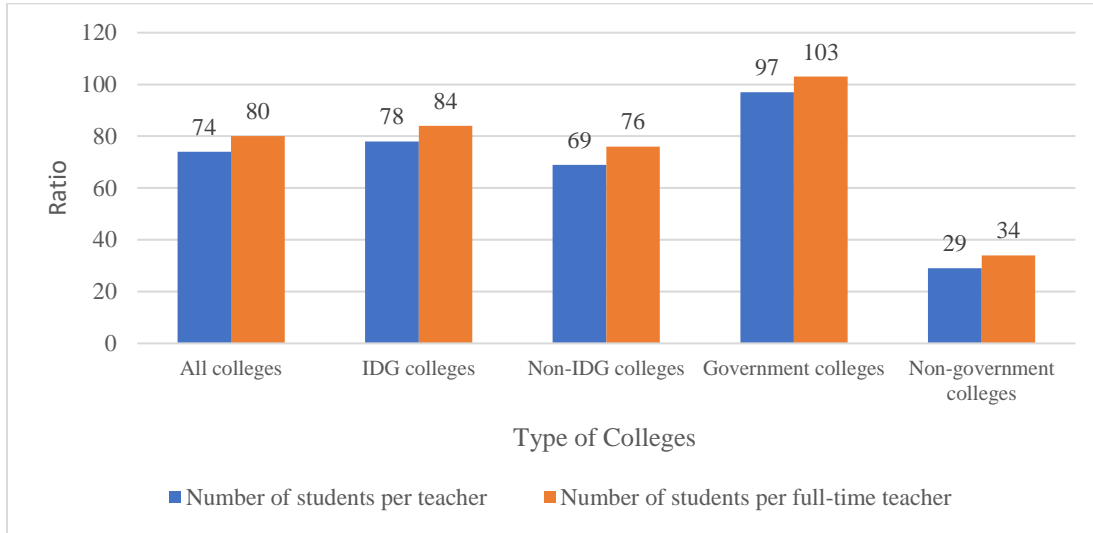
Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

The focus group discussion among the female students reveals that the female students who discontinue are the students who usually get married. According to them, a large proportion of female students in NU-affiliated colleges get married in the second or third year. Their parents thought it was high time for their children to get married, considering their age and the demand in the marriage market. Interestingly, a high proportion of students who attended the FGD discussion were married, and some of them had children. This picture is mainly true of colleges outside Dhaka city.

Figure 4.1 provides the overall picture of the number of college students per teacher. We disaggregate it further by IDG and management category. The student-teacher ratio measures available teaching resources in an educational institution. A lower student-to-teacher ratio helps students develop and maintain closer academic relationships with their teachers, receive quick feedback, and get involved in more interactive discussions which are essential for quality learning (CEDP, 2021). Within the pool of our 73 sample colleges, the number of students per teacher in a college is 74. When we look at the ratio considering only full-time teachers, this number jumps to 80.

The disaggregated picture shows that IDG-awarded colleges have a higher student-teacher ratio compared to IDG non-recipient colleges. Besides, the student-teacher ratio in government colleges is the worst and the highest (97) among all as well. It is more inspiring that non-government colleges under NU maintain a low number of students (29) per teacher.

**Figure 4.1: Student-Teacher Ratio in NU-Affiliated Colleges**

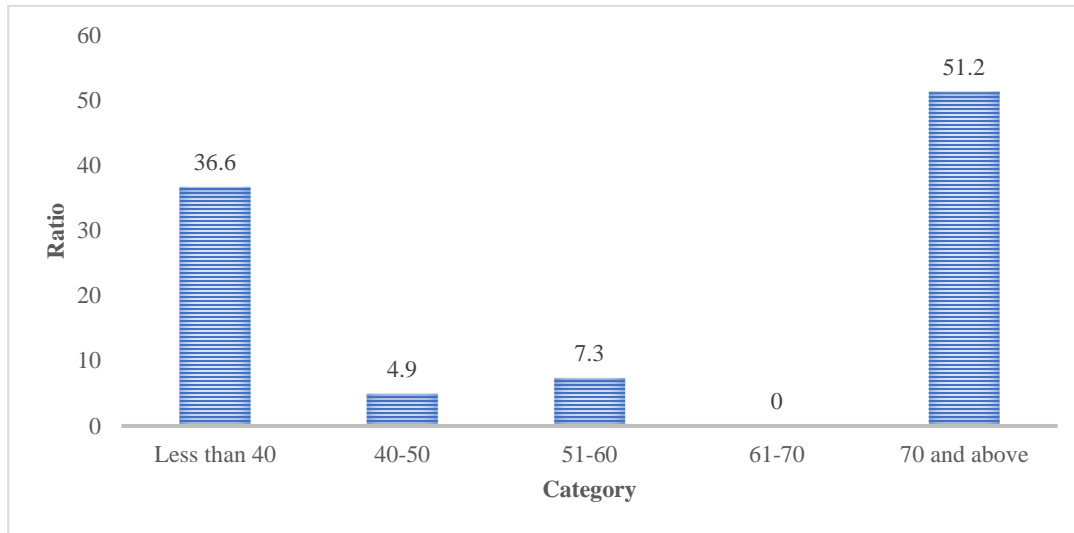


**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

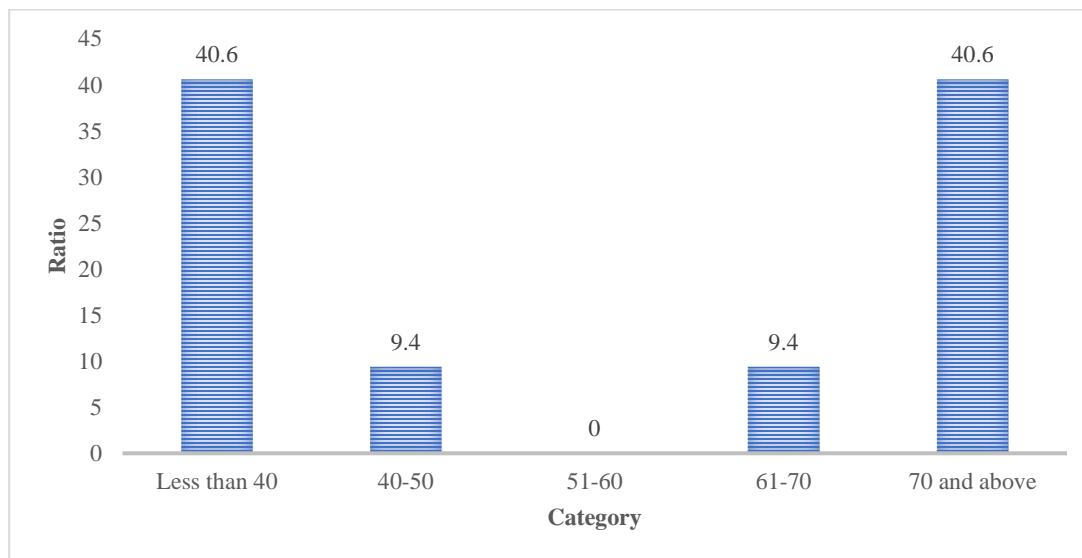
The distribution of colleges by student-teacher ratio shows that around 67 per cent of government colleges have a ratio over 70:1, and 19 per cent have a ratio that is less than 40 (Figure 4.4). On the other hand, the distribution of non-government colleges shows that only around 8 per cent of colleges have a ratio over 70:1, and 76 per cent of colleges have a ratio of less than 40 per cent (Figure 4.5). A comparative analysis between the government and non-government colleges shows that the situation of non-government colleges is better than that of the government colleges.

Moreover, the distribution of student-teacher ratio by IDG category shows that around 51 per cent of IDG-awarded colleges have a ratio over 70:1, and 37 percent have a ratio less than 40 (Figure 4.2). On the other hand, around 41 per cent of IDG non-recipient colleges have a ratio over 70:1, and 41 per cent have a ratio less than 40 per cent (Figure 4.3). A comparative analysis between the IDG-awarded and IDG non-recipient colleges shows that IDG non-recipient colleges have a lower student-teacher ratio compared to IDG-awarded colleges, but the ratio is not encouraging. The above result shows that the student-teacher ratio is high in all types of colleges irrespective of their IDG status and management status (i.e., government vs. non-government).

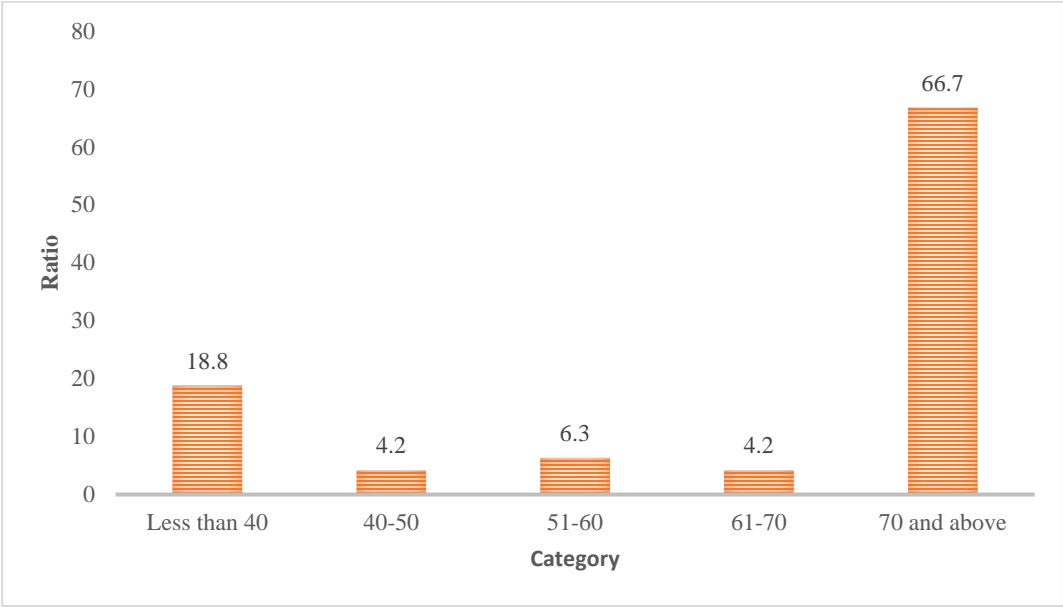
**Figure 4.2: Distribution of Teacher-to-student Ratio in IDG-awarded Colleges**



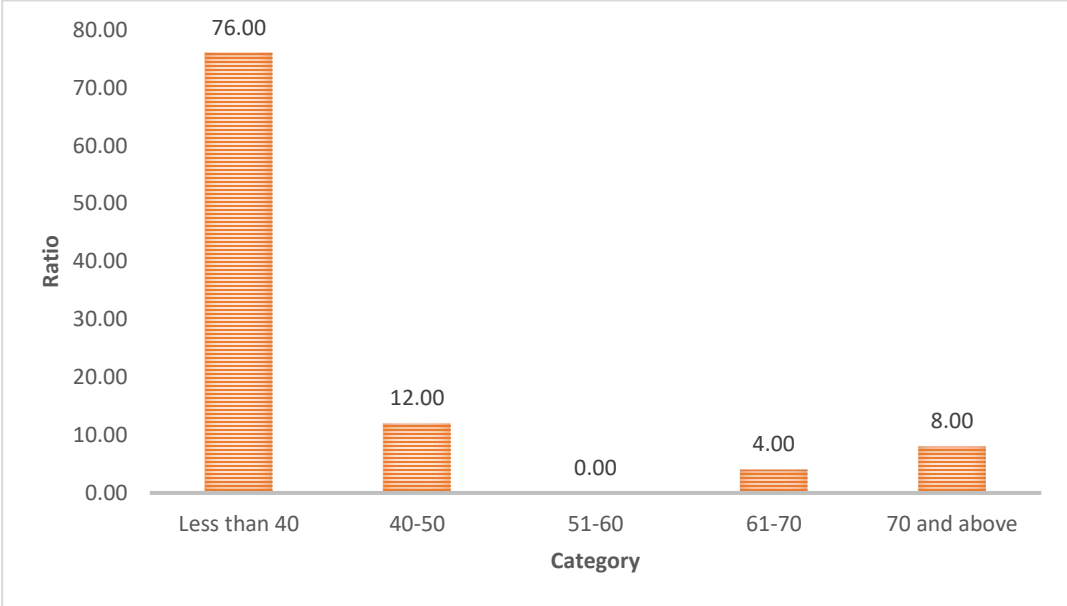
**Figure 4.3: Distribution of Teacher-to-student Ratio in IDG Non-recipient Colleges**



**Figure 4.4: Distribution of Teacher-to-student Ratio in Government Colleges**



**Figure 4.5: Distribution of Teacher-to-student Ratio in Non-government Colleges**



Source: Mid-term Satisfaction Survey, BIDS, 2022.

## 4.2 Facilities in the Colleges

We asked the principals to provide their feedback on various facilities available in their colleges. We focused mainly on four facilities available in the college, i.e., classroom, multimedia classroom, laboratories, and computer labs. We also asked them about the presence of other facilities with “yes” or “no” answer options.

Table 4.3 shows the availability of selected facilities at the colleges. The first four variables present the results in number per 100 students, and the remaining variables show the proportion of principals saying “yes” for selected facilities.

The number of classrooms and multimedia classrooms per 100 students in a college is, on average, 3.10 and 0.57, respectively. The IDG-awarded colleges have a higher number of classrooms per 100 students and a higher number of classrooms equipped with multimedia per 100 students compared to IDG non-recipient colleges. This is true for both government and non-government colleges.

The principals from IDG-awarded colleges have also reported having a higher number of laboratories and computer labs in their colleges. However, non-government colleges have a higher number of these facilities than government colleges.

In terms of other facilities such as libraries, hostels, and transport, both for teachers and students, a higher proportion of IDG-awarded colleges have these facilities available compared to IDG non-recipient colleges.

Overall, 21.95 and 38.46 per cent of principals from IDG-awarded colleges said that they have hostel accommodation for teachers and students in their college, whereas only 15.63 and 34.38 per cent of principals from IDG non-recipient colleges gave a positive response for accommodation availability for teachers and students. On the other hand, transportation facilities for both students and teachers are also better in IDG-awarded colleges than in IDG non-recipient colleges, as reported by the college principals.

The mother’s corner provides an opportunity for new mothers to continue breastfeeding while back to work or college. It is a new addition to the NU-affiliated colleges. The result shows that the IDG grant is effective in terms of providing the mother’s corner at the colleges. According to the survey result, almost 49 per cent of principals from IDG-awarded colleges informed us that they have mother’s corner on their campus, whereas only 25 per cent of principals of IDG non-recipient colleges gave a positive response. The difference between the IDG and non-IDG colleges is positive and statistically significant at a 10 per cent level.

For the diverse needs of special children, they need special arrangements and facilities availability on the college campus. From the result, it can be said that the IDG grant successfully

worked on the availability of facilities for special needs students. On average, 70 per cent of principals from IDG-awarded colleges said their colleges have facilities for special needs students. On the other hand, 43.75 per cent of IDG non-recipient college principals responded positively to the availability of these facilities. The difference is statistically significant at the 10 per cent level.

**Table 4.3: Available Facilities in College**

Variables	Government college			Private college			All			All Mean (SD)	
	IDG college	Non-IDG college	Chi <sup>2</sup> / Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Difference (p-value)		
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)			
Number of class rooms per 100 students	1.99 (5.19)	0.93 (0.71)	1.06 (0.347)	5.94 (9.11)	6.79 (7.98)	-0.85 (0.816)	3.37 (6.97)	2.76 (5.14)	0.61 (0.679)	3.10 (6.19)	
Number of multimedia equipped class rooms per 100 students	0.50 (0.74)	0.27 (0.28)	0.23 (0.195)	1.10 (1.77)	0.53 (0.89)	0.57 (0.381)	0.72 (1.23)	0.35 (0.54)	0.37 (0.136)	0.57 (1.02)	
Number of laboratories per 100 students	0.30 (0.61)	0.17 (0.11)	0.13 (0.39)	0.47 (0.70)	1.35 (1.17)	-0.88 (0.053)	0.36 (0.64)	0.51 (0.82)	-0.16 (0.404)	0.42 (0.71)	
Number of computer labs per 100 students	0.09 (0.17)	0.06 (0.05)	0.03 (0.35)	0.20 (0.20)	0.21 (0.24)	-0.01 (0.911)	0.13 (0.19)	0.10 (0.15)	0.03 (0.463)	0.12 (0.17)	
Is it a single-campus college?	Yes	100	95.45	1.21 (0.272)	80.00	90.00	0.45 (0.504)	92.68	93.75	0.03 (0.858)	93.15
Central library	Yes	100	100	-	100.00	100.00	-	100.00	100.00	-	100.00
Open space/playground	Yes	92.31	90.91	0.03 (0.861)	100.00	90.00	1.56 (0.211)	95.12	90.63	0.57 (0.450)	93.15
Hostel accommodation for the teachers	Yes	19.23	9.09	0.98 (0.321)	26.67	30.00	0.03 (0.856)	21.95	15.63	0.47 (0.496)	19.18
Transport facilities for teachers	Yes	8.00	9.09	0.02 (0.894)	6.67	0.00	0.69 (0.405)	7.50	6.25	0.04 (0.836)	6.94
Transport facilities for students	Yes	26.92	13.64	1.28 (0.259)	26.67	10.00	1.04 (0.307)	26.83	12.50	2.26 (0.133)	20.55
Hostel accommodation for the students	Yes	40.00	27.27	0.84 (0.358)	35.71	50.00	0.49 (0.484)	38.46	34.38	0.13 (0.722)	36.62
Partial hostel accommodation for the students	Yes	60.00	50.00	0.31 (0.576)	12.50	40.00	1.31 (0.252)	43.48	47.62	0.08 (0.783)	45.45
Student association	Yes	4.17	14.29	1.42 (0.234)	33.33	40.00	0.12 (0.734)	15.38	22.58	0.59 (0.442)	18.57
Student wing of a political party	Yes	29.17	13.64	1.63 (0.202)	13.33	30.00	1.04 (0.307)	23.08	18.75	0.20 (0.657)	21.13
Have a mother's corner	Yes	42.31	18.18	3.23 (0.072)	60.00	40.00	0.96 (0.327)	48.78	25.00	4.30* (0.038)	38.36
Facilities for special needs students	Yes	64.00	36.36	3.58 (0.059)	80.00	60.00	1.19 (0.275)	70.00	43.75	5.04* (0.025)	58.33
Counselling or mental health support system	Yes	38.46	27.27	0.67 (0.413)	33.33	40.00	0.12 (0.734)	36.59	31.25	0.23 (0.634)	34.25
Primary health care facilities	Yes	73.08	59.09	1.05 (0.306)	60.00	70.00	0.26 (0.610)	68.29	62.50	0.27 (0.605)	65.75

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

Overall, we do not find any significant differences between IDG-awarded and IDG non-recipient government and non-government colleges in terms of classroom, multimedia classroom, laboratory, and computer lab. However, the availability of these facilities is higher in non-government colleges than in government colleges.

Table 4.4 provides the principals' opinions regarding selected qualitative information regarding their colleges. Data reveals that most of the principals (89 per cent) feel the necessity of opening new departments in their colleges. This response is higher among non-government IDG-awarded colleges compared to that of IDG non-recipient colleges (100 per cent and 66.67 per cent, respectively).

Thesis for students is mandatory only in 20.55 per cent of colleges, and research work for teachers is considered a criterion for promotion in 34.72 per cent of colleges. Moreover, almost 70 per cent of college principals reported students' involvement in different activities in their college to develop their soft skills. The percentage was higher in non-government colleges compared to government colleges. Also, the percentage was significantly higher at a 10 per cent level in IDG-awarded colleges compared to IDG non-recipient colleges.

**Table 4.4: Selected Qualitative Information Regarding Colleges**

Variables		Government colleges			Private colleges			All			All Colleges
		IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Activities involving the development of students' soft skills	Yes	73.08	50.00	2.71 (0.100)	93.33	70.00	2.43 (0.12)	80.49	56.25	5.02* (0.03)	69.86
Research work for teachers considered a criteria for promotion	Yes	20.00	22.73	0.05 (0.82)	60.00	60.00	0.00 (1.00)	35.00	34.38	0.003 (0.96)	34.72
Mandatory thesis for students	Yes	26.92	9.09	2.49 (0.12)	26.67	20.00	0.15 (0.70)	26.83	12.50	2.26 (0.13)	20.55
Teachers supervise students' thesis work	Yes	50.00	26.32	2.57 (0.11)	46.67	50.00	0.03 (0.87)	48.78	34.48	1.42 (0.24)	42.86
Necessity to open a new department	Yes	88.00	90.91	0.11 (0.75)	100.00	66.67	5.72* (0.02)	92.50	83.87	1.30 (0.26)	88.73

**Source:** Mid-term Satisfaction Survey on Principals, BIDS, 2022

**Note:** \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.



#### 4.2.1 Adequacy of selected facilities in the college

This section provides principals' responses regarding the number of different educational facilities available in the colleges and their adequacy. The level of adequacy is measured in the Likert Scale from 1 through 5 (1= not adequate at all, 5= more than adequate). Table 4.5 lists the average number of facilities available in the colleges disaggregated by IDG status and management status, while Table 3.6 shows the adequacy of the facilities from the college principals' point of view.

Table 4.5 shows the pictures of available facilities in the colleges. This table demonstrates that IDG-awarded colleges have more facilities such as classrooms, exam halls, seminar rooms, libraries, common rooms, and washroom facilities available on campus than IDG non-recipient colleges. The mean differences between them are statistically significant. This implies colleges that received IDG grants used it successfully to increase and make necessary facilities available for students on the college campus.

**Table 4.5: Number of Facilities Available at the Colleges**

Facilities	Government college			Non-government college			All			All colleges
	IDG	Non-IDG	Difference (p-value)	IDG	Non-IDG	Difference (p-value)	IDG	Non-IDG	Difference (p-value)	
	College	College		College	College					
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)			
Classrooms	38.77 (20.88)	25.41 (17.96)	13.36* (0.02)	45.13 (36.71)	26.90 (12.75)	18.23 (0.15)	41.10 (27.45)	25.88 (16.32)	15.22** (0.007)	34.43 (24.31)
Exam halls	15.58 (23.80)	8.27 (11.42)	7.31 (0.20)	13.47 (32.35)	11.20 (13.74)	2.27 (0.84)	14.81 (26.86)	9.19 (12.04)	5.62 (0.28)	12.34 (21.70)
Seminar/meeting rooms for teachers	4.54 (6.09)	1.46 (0.67)	3.09* (0.02)	6.07 (8.41)	1.60 (2.37)	4.47 (0.12)	5.10 (6.96)	1.50 (1.39)	3.60** (0.005)	3.52 (5.57)
Washrooms/toilets for teachers	17.54 (9.13)	9.77 (14.38)	7.77* (0.03)	14.13 (9.28)	6.20 (5.56)	7.93* (0.03)	16.29 (9.22)	8.66 (12.33)	7.64** (0.003)	12.95 (11.28)
Washrooms/toilets for female teachers	7.46 (10.001)	3.09 (5.01)	4.37 (0.07)	5.73 (7.45)	2.00 (1.83)	3.73 (0.14)	6.83 (9.09)	2.75 (4.27)	4.08* (0.02)	5.04 (7.61)
Common rooms for students	2.00 (2.94)	1.32 (0.65)	0.68 (0.29)	1.53 (1.13)	1.00 (0.82)	0.53 (0.21)	1.83 (2.43)	1.22 (0.71)	0.61 (0.17)	1.56 (1.89)
Washrooms/toilets for students	22.23 (17.98)	10.32 (7.63)	11.91** (0.01)	25.73 (27.31)	9.00 (6.63)	16.73* (0.07)	23.51 (21.59)	9.91 (7.25)	13.61** (0.001)	17.55 (18.11)
Separate Washrooms/toilets for Girls	10.46 (9.40)	5.23 (6.08)	5.24* (0.03)	11.53 (12.36)	4.70 (4.22)	6.83 (0.11)	10.86 (10.44)	5.06 (5.50)	5.79** (0.006)	8.32 (9.05)
Library facilities	56.08 (263.92)	3.59 (2.26)	52.49 (0.36)	5.93 (6.25)	3.30 (3.43)	2.63 (0.24)	37.73 (210.11)	3.50 (2.63)	34.23 (0.36)	22.73 (157.55)
Library facilities (Book, Journal, etc.)	11162.35 (22742.88)	1361.73 (3035.78)	9800.62 (0.05)	7728.67 (16689.76)	502.10 (1580.41)	7226.57 (0.19)	9906.12 (20580.81)	1093.10 (2670.60)	8813.03* (0.02)	6042.88 (16055.37)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

Table 4.6 shows whether the available facilities provided are sufficient for the college. At least 27.40 per cent of the principals responded that their colleges do not have sufficient seminar/meeting rooms, libraries (25.71 per cent), and exam halls (34.25 per cent). In terms of training facilities for teachers, 36.62 per cent of the principals reported that the facility is not available at all, and almost 18.31 per cent of them replied that a training facility is provided once every five years.

**Table 4.6: Perception of Adequacy of Facilities at the Colleges (% of responses)**

Adequacy of facilities	Not at all	Somewhat adequate	Adequate	More than enough
Classrooms	15.07	41.10	23.29	20.55
Exam halls	34.25	30.14	21.92	13.70
Seminar/Meeting rooms for teachers	27.40	28.77	32.88	10.96
Washrooms/toilets for teachers	8.33	20.83	54.17	16.67
Washrooms/toilets for female teachers	32.88	27.40	30.14	9.59
Common rooms for students	39.73	24.66	19.18	16.44
Washrooms/toilets for students	12.68	32.39	39.44	15.49
Separate Washrooms/toilets for Girls	21.92	36.99	30.14	10.96
Library facilities	25.71	32.86	21.43	20.00
IT facilities	12.33	32.88	32.88	21.92
Library facilities (Book, Journal, etc.)	15.07	47.95	21.92	15.07
Training facilities for teachers	36.62	28.17	18.31	16.90

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

Table 4.7 shows that the mean level of satisfaction (adequacy) for most of the facilities was below three except for wash room facility availability in the college. This indicates that the facilities are somewhat adequate. We have identified significant differences between the responses of college principals regarding the adequacy of facilities in their colleges by college type (Government vs. non-government, or IDG-awarded vs. IDG non-recipient colleges). However, on average, IDG-awarded college principals considered that the number of meeting rooms, exam halls, classrooms, toilet/washroom facilities for teachers and students, common rooms for students, and library facilities were adequate in their colleges than the IDG non-recipient colleges. The difference in adequacy level between them was statistically significant. At the disaggregated level, principals from IDG-awarded non-government colleges considered that the number of facilities was more adequate than that of the IDG-awarded government colleges.

**Table 4.7: Mean Adequacy Level of Different Facilities (based on the perception of principals)**

Name of facilities	Government college			Private college			All			All colleges
	IDG	Non-	Difference (p-value)	IDG	Non-	Difference (p-value)	IDG	Non-	Difference (p-value)	
	College	IDG College		College	IDG College		college	IDG college		
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)		
Classrooms	2.73 (0.96)	2.00 (0.87)	0.73** (0.009)	3.07 (1.03)	2.30 (0.95)	0.77 (0.073)	2.85 (0.99)	2.09 (0.89)	0.76** (0.001)	2.52 (1.02)
Exam halls	2.50 (1.21)	1.68 (0.84)	0.82* (0.010)	2.80 (1.32)	1.90 (0.74)	0.90 (0.063)	2.61 (1.24)	1.75 (0.80)	0.86** (0.001)	2.23 (1.15)
Seminar/Meeting rooms for teachers	2.69 (1.16)	2.05 (1.00)	0.65* (0.046)	3.07 (1.39)	2.10 (1.20)	0.97 (0.085)	2.83 (1.24)	2.06 (1.05)	0.77** (0.007)	2.49 (1.21)
Washrooms/toilets for teachers	3.42 (0.90)	2.82 (1.01)	0.61* (0.033)	3.53 (0.92)	2.67 (1.32)	0.87 (0.071)	3.46 (0.90)	2.77 (1.09)	0.69** (0.004)	3.17 (1.03)
Washrooms/toilets for female teachers	2.46 (1.21)	2.05 (1.05)	0.42 (0.213)	3.07 (1.39)	1.80 (1.03)	1.27* (0.022)	2.68 (1.29)	1.97 (1.03)	0.71* (0.013)	2.37 (1.23)
Common rooms for students	2.58 (1.21)	1.59 (0.73)	0.99** (0.002)	2.60 (1.24)	1.60 (0.97)	1.00* (0.043)	2.59 (1.20)	1.59 (0.80)	0.99*** (0.000)	2.15 (1.15)
Washrooms/toilets for students	3.16 (0.99)	2.29 (0.85)	0.87** (0.003)	3.40 (1.21)	2.20 (1.14)	1.20* (0.016)	3.25 (1.03)	2.26 (0.93)	0.99*** (0.000)	2.82 (1.10)
Separate Washrooms/toilets for Girls	2.69 (1.09)	2.00 (0.82)	0.69* (0.018)	3.27 (1.28)	1.90 (0.99)	1.37** (0.009)	2.90 (1.18)	1.97 (0.86)	0.93*** (0.000)	2.49 (1.14)
Library facilities	2.53 (1.10)	1.91 (0.77)	0.63* (0.031)	2.93 (1.22)	2.00 (1.07)	0.93 (0.084)	2.68 (1.15)	1.93 (0.84)	0.75** (0.004)	2.37 (1.09)
Library facilities (Book, Journal, etc.)	2.69 (1.01)	2.05 (0.79)	0.65* (0.019)	2.80 (1.15)	2.10 (0.88)	0.70 (0.116)	2.73 (1.05)	2.06 (0.80)	0.67** (0.004)	2.44 (1.00)

Source: Mid-term Satisfaction Survey, BIDS, 2022

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 4.3 Quality of Teaching in the NU College

Teaching quality is expressed here by the frequency of teachers' assessments, regularity of academic council meetings, time allocation, and availability of training facilities for the teachers.

Table 4.8 shows that about 96 per cent of principals reported that they have regular meetings of the academic council, and, on average, 10 meetings are held per academic year, which seems relatively high. From each college, on average, 17 teachers received training in Bangladesh, and 2 received training abroad in the last 12 months. This number was 36 and 3 for training in Bangladesh and abroad in the last 5 years, respectively. However, the teachers who received training abroad in the last 5 years were very close to the figure for the last 12 months.

About half of the principals reported that newly recruited teachers received pedagogical training, and 65.75 per cent of the principals said that this training is used as a criterion for the promotion of the teachers. On the other hand, almost 38 per cent of teachers have received on-job/foundation training, and only 8 per cent have received NU subject-based training in the last 12 months.

At the disaggregated level, it is seen that a higher number of teachers in both government and non-government IDG-awarded colleges have received training in Bangladesh than in IDG non-recipient colleges, but the difference is not statistically significant. The table also shows that a higher per cent of private and government IDG-recipient college principals reported that their teachers are assessed by the students and senior staff.

The table also shows that a higher percentage of non-government college principals reported that their teachers are assessed by the students and senior teachers, and they have provided opportunities for pedagogical training to newly recruited teachers. On the other hand, a larger proportion of government college principals said that they arrange academic council meetings regularly, and the number of times they meet is higher than that of non-government colleges.

**Table 4.8: Teaching Environment in the NU-Affiliated Colleges**

Variables	Response categories	Government college			Private college			All			All college Mean (SD)
		IDG College	Non-IDG College	Chi <sup>2</sup> / Difference (p-value)	IDG College	Non-IDG College	Chi <sup>2</sup> / Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Difference (p-value)	
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Are the teachers assessed by the students? (%)	Yes	30.77	31.82	0.006 (0.938)	46.67	40.00	0.108 (0.742)	36.59	34.38	0.038 (0.845)	35.62
Are the new teachers assessed by the senior teachers? (%)	Yes	64.00	59.09	0.119 (0.730)	73.33	70.00	0.033 (0.856)	67.50	62.50	0.196 (0.658)	65.28
Is there a regular meeting of academic council? (%)	Yes	96.15	100.00	0.864 (0.353)	93.33	90.00	0.091 (0.763)	95.12	96.88	0.140 (0.708)	95.89
How many times on average a meeting is held per session?	-	11.39 (4.71)	9.64 (3.40)	1.75 (0.154)	8.33 (3.79)	11.00 (7.73)	-2.67 (0.261)	10.27 (4.59)	10.06 (5.06)	0.21 (0.856)	10.18 (4.77)

(Contd. Table 4.8)

Variables	Response categories	Government college			Private college			All			All college
		IDG College	Non-IDG College	Chi <sup>2</sup> / Difference (p-value)	IDG College	Non-IDG College	Chi <sup>2</sup> / Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Difference (p-value)	Mean (SD)
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
How many teachers have received training during the last 12 months?	In Bangladesh	20.39 (23.88)	10.55 (8.23)	9.84 (0.072)	25.93 (25.79)	6.60 (5.97)	19.33* (0.030)	22.42 (24.42)	9.31 (7.73)	13.10** (0.005)	16.67 (20.00)
	Abroad	3.69 (9.95)	0.82 (2.26)	2.87 (0.192)	2.33 (6.25)	0.00 (0.00)	2.33 (0.253)	3.20 (8.72)	0.56 (1.90)	2.63 (0.098)	2.04 (6.744)
How many teachers have received training during the last 5 years?	In Bangladesh	42.31 (38.85)	25.73 (19.76)	16.58 (0.077)	51.467 (50.78)	19.10 (14.69)	32.37 (0.064)	45.66 (43.19)	23.66 (18.36)	22.00** (0.009)	36.01 (36.09)
	Abroad	5.54 (11.68)	1.32 (2.59)	4.22 (0.104)	2.53 (6.45)	0.00 (0.00)	2.53 (0.230)	4.44 (10.10)	0.91 (2.22)	3.53 (0.056)	2.89 (7.87)
Pedagogical training for newly recruited teachers (%)	Yes	52.00	27.00	2.971 (0.085)	73.33	50.00	1.418 (0.234)	60.00	34.38	4.673 (0.031)	48.61
On- the job/foundation training to the newly recruited teachers? (%)	Yes	50.00	45.45	0.099 (0.753)	13.33	22.22	0.320 (0.572)	36.59	38.71	0.034 (0.854)	37.50
Pedagogical training as a criterion for promotion of the Teachers (%)	Yes	76.92	72.73	0.112 (0.738)	46.67	50.00	0.027 (0.870)	65.85	65.63	0.000 (0.984)	65.75
How many teachers received NU subject-based training in the last 12 months?	-	9.54 (10.77)	6.41 (12.71)	3.13 (0.360)	10.07 (15.39)	5.20 (6.05)	4.87 (0.354)	9.73 (12.47)	6.03 (10.97)	3.70 (0.189)	8.11 (11.90)

Source: Mid-term Satisfaction Survey, BIDS, 2022

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

#### 4.4 Employment Opportunities for the Students

Table 4.9 provides information regarding employment opportunities facilitated by the college authorities. About 36 per cent of non-government colleges and 10.42 per cent of government colleges collaborated with industries for job placement of the students. Moreover, 36 and 8.89 per cent of the non-government and government colleges maintained an alumni association, respectively.

On the other hand, only 7.69 per cent of IDG recipient government colleges collaborated with industries for job placement of the students, which is 33 per cent for non-government IDG colleges. This implies that non-government colleges collaborated more with industries for the job placement of students compared to government colleges, as reported by the college principals.

Although the college principals had a high level of satisfaction with the academic results of their students, their satisfaction level in terms of students' job market outcomes was not the same. There exists a difference in the level of satisfaction regarding academic results and job market outcomes of students according to the responses of the college principals. The results were also true for both IDG-awarded colleges and IDG non-recipient colleges.

**Table 4.9: Employment Opportunities for Students in NU-Affiliated Colleges**

Variable	Government college			Non-government college			All			All		
	IDG College	Non-IDG College	Chi <sup>2</sup> /Difference (p-value)	IDG College	Non-IDG College	Chi <sup>2</sup> /Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> /Difference (p-value)	Government college	Non-government college	Chi <sup>2</sup> /Difference (p-value)
Have collaboration with industry for job placement (%)	7.69	13.64	0.45 (0.50)	33.33	40.00	0.12 (0.74)	17.07	21.88	0.27 (0.61)	10.42	36.0	6.94 (0.008)***
Have alumni association for students (%)	4.17	14.29	1.42 (0.234)	33.33	40.00	0.12 (0.734)	15.38	22.58	0.59 (0.442)	8.89	36.0	7.81 (0.005)***
Mean level of satisfaction with the academic results of students <sup>a</sup> (mean)	3.23 (1.07)	3.18 (0.80)	0.05 (0.860)	3.67 (0.72)	3.70 (0.48)	-0.03 (0.90)	3.39 (0.97)	3.34 (0.75)	0.05 (0.82)	3.21 (0.94)	3.68 (0.63)	-0.472** (0.028)
Mean level of satisfaction with the job-market outcome of students <sup>b</sup> (mean)	2.85 (1.16)	2.67 (0.91)	0.18 (0.57)	3.07 (0.88)	2.90 (0.88)	0.17 (0.65)	2.93 (1.06)	2.74 (0.89)	0.19 (0.44)	2.77 (1.05)	3.00 (0.87)	-0.234 (0.342)

**Source:** Mid-term Satisfaction Survey, BIDS, 2022

**Note:** a, b: Level of satisfaction is measured on a 5-point scale, where 1= very dissatisfied and 5= very satisfied; \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

#### 4.5 Overall Satisfaction of Principals with Selected Indicators

Principals were asked to provide their opinions regarding several important factors that could be used to identify and describe the actual teaching and learning facilities available in the surveyed colleges. This sub-section presented the overall satisfaction level of the college principals disaggregated by the government versus non-government colleges and IDG-awarded versus IDG non-recipient colleges. The level of satisfaction was measured on a Likert Scale from 1 through 5 (1= highly dissatisfied, 5= very satisfied).

In Table 4.10, we enlisted the percentage of respondents who were very satisfied with the selective five indicators of the teaching-learning environment, quality of the academic infrastructures, the speed and reliability of the internet, the effectiveness of developing soft skills in the colleges, and industry collaboration for employment of the students.

It is observed from the table that overall, almost 14 per cent of the college principals were very satisfied with the teaching and learning environment facilities available at their colleges. Only 6 per cent of the college principals seemed to be very satisfied with the quality of the academic infrastructure of the college. Data indicates that the infrastructure of the colleges still has much room for improvement. Likewise, the internet connection and speed at the college premises are found to be very satisfying for only 6 per cent of the college principals.

For the quality of soft-skills development among students, only 1.39 per cent of college principals were found to be highly satisfied, whereas it was only 1 per cent for provisions for developing soft skills among the students and collaboration initiatives for giving them access to job markets.

**Table 4.10: Overall Satisfaction Regarding Selected Indicators**

Variables	Mean level of satisfaction	% of respondents 'very satisfied'
Teaching and learning environment at the college	3.81	13.89
Quality of academic infrastructure of the college	2.96	5.56
Internet connection and speed	2.82	5.56
Quality of soft skills development of the students	2.56	1.39
Collaboration of the colleges with industries to help students regarding job	1.62	1.00
Average of all indicators	2.75	

**Source:** Mid-term Satisfaction Survey on Principals, BIDS, 2022.

**Note:** As only 'very satisfied' respondents have been taken for preparing this table, '0' value indicates that respondents have given their answers in either dissatisfied, somewhat satisfied, neutral, or are of satisfied opinions.

The overall satisfaction level regarding selected indicators shows that, only in the case of the teaching and learning environment at the college, principals are almost satisfied with the existing facilities. The mean level of satisfaction is 3.81, which is close to 4 (i.e., satisfied) on the Likert scale of satisfaction.

On the other hand, the mean level of satisfaction for other variables shows that, on average, principals of all the surveyed colleges seem to be neither satisfied nor dissatisfied with the quality of academic infrastructure and existing internet connection and speed, which is close to 3 on the Likert scale. Moreover, the quality of soft-skill development initiatives is 2.56, which is in the middle of dissatisfied and neither satisfied nor dissatisfied. The mean level of satisfaction for employment collaboration opportunities with industries is 1, which is the lowest among all other values on the Likert scale, implying the principals are not satisfied at all with the existing collaboration facilities created by the colleges.

In Table 4.11, we have disaggregated the mean level of satisfaction for IDG-awarded and IDG non-recipient colleges within government and non-government sub-samples. We have

found statistically significant differences in four overall satisfaction variables except for collaboration with industries for students' job placement. IDG-awarded government college principals reported that they are more satisfied with the existing teaching and learning environment, quality of academic infrastructure, internet connection at college, and soft-skill development of the students compared to IDG non-recipient government colleges.

We do not find significant differences between the IDG-awarded non-government colleges and IDG non-recipient non-government colleges in any of the five satisfaction indicators. However, a highly significant difference exists between IDG-awarded and IDG non-recipient colleges in the case of two satisfaction indicators. The IDG-awarded college principals reported being more satisfied with the academic infrastructure of the college and the quality of soft-skills development of the students compared to IDG non-recipient colleges.

**Table 4.11: Overall Satisfaction Regarding Selected Indicators by College Type**

Variables	Government college			Private college			All			All colleges
	IDG College	Non-IDG College	Difference (p-value)	IDG College	Non-IDG College	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	
	Mean	Mean		Mean	Mean		Mean	Mean		Mean
	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)	(SD)		
Teaching and learning environment at the college	4.12 (0.65)	3.57 (0.81)	0.54* (0.01)	3.53 (0.83)	3.90 (0.57)	-0.37 (0.24)	3.90 (0.77)	3.68 (0.75)	0.23 (0.22)	3.81 (0.76)
Quality of academic infrastructure of the college	3.19 (0.94)	2.29 (1.06)	0.91** (0.00)	3.53 (1.19)	2.90 (0.74)	0.63 (0.15)	3.32 (1.04)	2.48 (1.00)	0.83*** (0.00)	2.96 (1.09)
Internet connection and speed	3.12 (0.86)	2.52 (1.03)	0.59* (0.04)	2.67 (1.18)	2.90 (1.20)	-0.23 (0.63)	2.95 (1.00)	2.65 (1.08)	0.31 (0.22)	2.82 (1.04)
Quality of soft-skills development of the students	2.92 (0.98)	2.05 (0.87)	0.88** (0.00)	2.73 (1.10)	2.40 (1.08)	0.33 (0.46)	2.85 (1.01)	2.16 (0.93)	0.69** (0.00)	2.56 (1.03)
Collaboration of the colleges with industries to help students regarding job	1.65 (0.80)	1.40 (0.68)	0.25 (0.26)	1.80 (1.08)	1.70 (1.06)	0.10 (0.82)	1.71 (0.90)	1.50 (0.82)	0.21 (0.32)	1.62 (0.87)
Average of all indicators	3.00 (0.62)	2.37 (0.59)		2.85 (0.83)	2.76 (0.46)		2.95 (0.70)	2.50 (0.57)		2.75 (0.68)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.





## CHAPTER 5

# QUALITY OF TEACHING, TEACHING SKILL, LEVEL OF SATISFACTION AND LEARNING ENVIRONMENT IN COLLEGES: RESPONSES FROM COLLEGE TEACHERS

This chapter focuses on the quality of the teaching and learning environment, the teaching abilities of the teachers, and the overall satisfaction of the teachers from the surveyed colleges. A total of 1,245 teachers have been surveyed instead of 1,275 due to sudden flooding in the Sylhet division. The teachers from the selected colleges have provided their insightful thoughts on the general teaching and learning facilities, the physical environment of the college, the teacher's qualification, soft skill development, and industry linkage at the respective college grounds by responding to a variety of survey-style questions in this part. We have analysed their responses to determine the overall level of teachers' satisfaction at the NU-affiliated colleges.

### 5.1 Distribution of Teachers in NU-Affiliated Colleges

Distribution of the teachers includes percentage distribution of teachers at program participation level, college management level, gender at a disaggregated level, etc.

#### 5.1.1 Distribution of Teachers by Gender

Among the surveyed teachers, the proportion of male teachers was greater than that of their female counterparts in all the colleges (Table 5.1). In the IDG-awarded and IDG non-recipient colleges, these percentages are 72 per cent and 63 per cent, respectively. We have found and interacted with more female teachers in the surveyed non-government colleges than in government colleges.

**Table 5.1: Distribution of Teachers by Gender**

Gender	Government colleges			Non-government colleges			All			All college
	IDG college	Non-IDG college	Total	IDG college	Non-IDG college	Total	IDG college	Non-IDG college	Total	
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Male	390 (79.27)	215 (66.56)	605 (74.23)	147 (57.87)	97 (55.43)	244 (56.88)	537 (71.98)	312 (62.65)	849 (68.25)	849 (68.25)
Female	102 (20.73)	108 (33.44)	210 (25.77)	107 (42.13)	78 (44.57)	185 (43.12)	209 (28.02)	186 (37.35)	395 (31.75)	395 (31.75)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

### 5.1.2 Distribution of Teachers by Designation

We tried to involve teachers from all spheres of teaching experience and abilities. Thus, we incorporated professors, associate professors, assistant professors, lecturers, lab demonstrators, and others into the survey. There is no statistically significant difference in the proportion of teachers surveyed from different positions between IDG and non-IDG colleges except for two exceptions.

**Table 5.2: Distribution of Teachers by Designation**

Academic positions of the teachers	Government college			Private college			All			All college
	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)
Professor	0.59 (0.93)	0.19 (0.51)	0.40 (0.08)	0.143 (0.363)	-	0.14 (0.20)	0.43 (0.80)	0.12 (0.42)	0.31* (0.05)	0.30 (0.68)
Associate Professor	4.77 (2.62)	3.47 (2.82)	1.30 (0.10)	1.14 (2.07)	0.81 (1.53)	0.32 (0.66) 1.699 (0.159)	3.53 (2.98)	2.56 (2.74)	0.97 (0.15)	3.10 (2.90)
Assistant Professor	6.66 (2.89)	5.00 (3.43)	1.66 (0.07)	5.00 (2.93)	3.45 (2.65)	1.54 (0.18)	6.09 (2.98)	4.46 (3.23)	1.62* (0.02)	5.38 (3.17)
Lecturer	5.92 (3.14)	6.61 (4.18)	-0.69 (0.51)	12.07 (5.32)	11.54 (3.80)	0.52 (0.78)	8.02 (4.93)	8.31 (4.65)	-0.28 (0.80)	8.10 (4.78)
Lab Demonstrator	0.07 (0.26)	-	0.07 (0.21)	-	-	-	0.04 (0.21)	-	0.04 (0.21)	0.02 (0.16)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, & \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 5.1.3 Distribution of Teachers by Highest Degree Achieved

Most of our surveyed teachers have a Master's degree (94.11 per cent), followed by a Ph.D. degree (2.66 per cent) and M.Phil. degree (2.50 per cent). As a bachelor's (Honours) degree is not a sufficient requirement for application as a teacher at the entry-level, we do not find many with this degree. This is also true for all colleges. However, for three degree levels, i.e., Ph.D., M.Phil., and Honours, the IDG-awarded colleges are seen higher in proportionately compared to the IDG non- recipient colleges (Table 5.3).

**Table 5.3: Distribution of Teachers by the Highest Degree Achieved**

Proportion of teachers interviewed	Government college			Non-government college			All			All college
	IDG-awarded college	Non- IDG recipient college	Total	IDG-awarded college	Non- IDG recipient college	Total	IDG-awarded college	Non- IDG recipient college	Total	
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Ph.D.	18 (3.66)	11 (3.43)	29 (3.57)	2 (0.79)	2 (1.14)	4 (0.94)	20 (2.69)	13 (2.62)	33 (2.66)	33 (2.66)
M.Phil.	11 (2.24)	10 (3.12)	21 (2.58)	5 (1.98)	5 (2.86)	10 (2.34)	16 (2.15)	15 (3.02)	31 (2.50)	31 (2.50)
Masters	458 (93.09)	299 (93.15)	757 (93.11)	242 (96.03)	168 (96.00)	410 (96.02)	700 (94.09)	467 (94.15)	1167 (94.11)	1167 (94.11)
Honours	5 (1.02)	1 (0.31)	6 (0.74)	3 (1.19)	0 (0.00)	3 (0.70)	8 (1.08)	1 (0.20)	9 (0.73)	9 (0.73)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

## 5.2 Teaching Skills of the Teachers

To be a great teacher, one should be an effective communicator and a critical thinker. These qualities can only be gained through time and experience. It can be assumed that the more experience and exposure the teachers have in practical life, the more capable they are of providing a good quality education and teaching.

### 5.2.1 Teacher's Working Experience

The mean years of experience of the teachers is around 12 years in NU-affiliated colleges. The difference in experience between IDG-awarded and IDG non-recipient colleges is not statistically significant.

The mean years of experience for teachers at current institutions is around 8 years for the government colleges, 11 years for the non-government colleges, and 9 years for all colleges. None of the mean differences (between IDG and non-IDG colleges) is statistically significant.

The average number of in-service training received by the NU teachers is around 4. The mean difference for years of in-service training between IDG and non-IDG colleges is not statistically significant.

**Table 5.4: Teachers' Working Experience**

Teaching experience (years)	Government college			Private college			All			All college
	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Experience of teaching at honours level	12.67 (8.34)	12.07 (6.62)	0.60 (0.27)	11.22 (7.29)	11.06 (6.23)	0.16 (0.81)	12.18 (8.02)	11.71 (6.51)	0.46 (0.28)	11.99 (7.45)
Experience of teaching at the current institute	7.69 (5.06)	8.37 (5.38)	-0.68 (0.06)	11.49 (8.01)	10.87 (6.38)	0.61 (0.40)	8.98 (6.47)	9.26 (5.87)	-0.27 (0.44)	9.09 (6.24)
Experience of teaching after obtaining Ph.D. degree	7.09 (5.52)	6.57 (2.87)	0.51 (0.81)	4.50 (5.91)	4.66 (8.91)	-0.16 (0.18)	6.69 (5.54)	8.76 (4.29)	2.07** (0.00)	7.05 (5.38)
In-service training (number)	4 (4)	4 (3)	0.1 (0.6)	8 (72)	2 (2)	55 (0.4)	(40)	3 (3)	2 (0.4)	4 (31)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 5.3 Workload of the Teachers

Teachers’ workload has a direct effect on their teaching abilities, which in turn impacts the colleges teaching-learning experience, which is a major concern of our study. To evaluate that, we include the following information and continue our analysis of the following aspects from the teachers’ point of view.

#### 5.3.1 Average Teaching Load of College Teachers

On average, lecturers take most courses per semester in the colleges. Survey data in Table 5.5 shows that lecturers generally take 9 courses per semester/year, and this number is similar to the number of courses taken by government and private IDG colleges. Lecturers in IDG colleges take more classes than the lecturers in IDG non-recipient colleges.

Associate professors, assistant professors, and professors take 9, 8, and 2 courses per semester/year consecutively. It is also seen that lecturers, associate professors, assistant professors, and professors in IDG colleges are involved in more courses and related activities than their non-IDG counterparts. Data for professors in non-government colleges were not very distinguishable as we could not get hold of many professors from there.

**Table 5.5: Average (number) Teaching Load of College Teachers by IDG Status**

Number of courses taught per semester/year	Government college			Private college			All			All college
	IDG college	Non- IDG college	Difference (p-value)	IDG college	IDG Non-college	Difference (p-value)	IDG college	IDG Non-college	Difference (p-value)	
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Professor	3.59 (6.04)	1.14 (3.07)	2.45 (0.09)	0.928 (2.55)	-	-	2.68 (5.24)	0.75 (2.52)	1.93 (0.05)	1.83 (4.35)
Associate Professor	14.58 (16.36)	9.05 (6.50)	5.52 (0.15)	2.70 (4.21)	2.01 (3.16)	0.68 (0.65)	10.52 (14.57)	6.63 (6.48)	3.88 (0.16)	8.82 (11.82)
Assistant Professor	9.59 (6.72)	7.69 (4.50)	1.89 (0.27)	7.26 (1.64)	4.30 (2.65)	2.95** (0.00)	8.79 (5.61)	6.53 (4.24)	2.26 (0.06)	7.80 (5.15)
Lecturer	10.52 (7.54)	9.32 (3.56)	1.20 (0.50)	7.32 (2.30)	7.00 (1.23)	0.31 (0.68)	9.42 (6.41)	8.52 (3.15)	0.90 (0.46)	9.03 (5.22)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

#### 5.3.2 Weekly Teaching Load of Teachers

Professors, on average, take three classes per week. Associate professors, assistant professors, and lecturers, respectively, take higher numbers of classes per week (10, 15, and 17 classes on average, respectively). Teachers in IDG colleges take more classes than teachers in the IDG non-recipient colleges.

**Table 5.6: Weekly Teaching Load of Teachers by IDG Status**

Number of classes taken per week	Government college			Private college			All			All college
	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	Mean (SD)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Professor	5.08 (7.73)	2.40 (6.34)	2.67 (0.20)	1.92 (5.04)	-	-	4.07 (7.08)	1.57 (5.22)	2.50 (0.09)	2.98 (6.42)
Associate Professor	12.22 (5.84)	12.27 (7.09)	-0.05 (0.97)	5.75 (8.35)	5.40 (7.50)	0.34 (0.91)	10.13 (7.29)	9.91 (7.84)	0.25 (0.88)	10.06 (7.49)
Assistant Professor	16.08 (5.60)	13.66 (6.43)	2.42 (0.16)	15.52 (3.70)	12.50 (7.90)	3.01 (0.23)	15.90 (5.03)	13.26 (6.87)	2.64 (0.06)	14.74 (6.01)
Lecturer	18.21 (4.87)	15.59 (4.19)	2.62 (0.05)	16.07 (3.34)	16.06 (5.53)	0.01 (0.99)	17.53 (4.51)	15.75 (4.61)	1.78 (0.10)	16.75 (4.61)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

## 5.4 Perception of Existing Teaching-Learning Facilities

The respondents were surveyed by throwing different relevant questionnaires regarding the existing teaching and learning facilities in the respective college premises. Teaching and learning facilities include a percentage of adherence to the academic calendar, changing the course curriculum and syllabus, bringing about innovation in the course curriculum and exam syllabus, and using digital equipment, i.e., multimedia during lecture time.

### 5.4.1 Percentage of Adherence to Academic Calendar

The academic calendar provided by the NU is followed on most occasions, which is evident from 96 per cent of the cases in the IDG-awarded colleges and 95 per cent of the cases in the IDG-non-awarded colleges. The difference between the IDG and non-IDG colleges is not statistically significant. Respectively, 75 per cent and 70 per cent of the IDG-awarded and IDG non-recipient colleges distribute the academic calendar among the students at the beginning of the semester/year.

**Table 5.7: Percentage of Adherence to Academic Calendar**

Variables (YES)	Government college			Private college			All			All college
	IDG-awarded college	Non-IDG recipient college	p-value (Chi-test)	IDG-awarded college	Non-IDG recipient college	p-value (Chi-test)	IDG-awarded college	Non-IDG recipient college	p-value (Chi-test)	
	%	%		%	%		%	%		%
Academic calendar provided by the NU is followed accordingly	94.92	96.88	0.177	99.21	93.14	0.001	96.38	95.56	0.469	96.05
Academic calendar is distributed among the students at the beginning of the semester/year	74.75	66.56	0.012	75.79	76.00	0.961	75.10	69.92	0.045	73.04

Source: Mid-term satisfaction survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 5.4.2 Changing Course Curriculum and Syllabus by National University

Around 12 per cent of the teachers from the IDG-awarded colleges responded that the academic curriculum is changed on a yearly frequency. The percentage for the IDG non-recipient colleges is around 11 per cent, and the mean difference is statistically insignificant. Around 86 per cent of the colleges have reported changing the academic syllabus other than three monthly, six monthly, and yearly frequencies.

**Table 5.8: Changing Course Curriculum and Syllabus by National University**

Duration	Government college			Private college			All			All college
	IDG-awarded college	Non-IDG recipient college	p-value	IDG-awarded college	Non-IDG recipient college	p-value	IDG-awarded college	Non-IDG recipient college	p-value	
	%	%		%	%		%	%		%
Every three months	0.87	0.96	0.409	1.21	2.35	0.038	0.99	1.46	0.770	1.18
Every six months	1.30	1.29		2.02	0.59		1.55	1.04		1.35
Every year	9.33	13.18		15.79	7.65		11.58	11.23		11.44
Other Frequencies	88.50	84.57		80.97	89.41		85.88	86.28		86.04

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 5.4.3 Interval of Arranging Academic Meetings by the Department

Data in Table 5.9 exhibits that almost 85 per cent of IDG-awarded colleges are supposed to hold an academic meeting every month. In the case of IDG non-awarded colleges the percentage is 87. In terms of holding academic meetings every three and six months, the IDG-awarded colleges are seen to have a higher percentage in comparison to the IDG-non-awarded ones, i.e., 12 per cent and 2.44 per cent, respectively. Around 85 per cent of colleges, including the IDG and non-IDG colleges, arrange their monthly meeting at regular intervals.

**Table 5.9: Interval of Arranging Academic Meetings by the College/Department**

Duration	Government college			Private college			All			All college
	IDG-awarded college	Non-IDG recipient college	p-value	IDG-awarded college	Non-IDG recipient college	p-value	IDG-awarded college	Non-IDG recipient college	p-value	
	%	%		%	%		%	%		
Every month	86.89	91.90	0.077	80.08	76.88	0.008	84.57	86.64	0.010	85.40
Every three months	11.27	6.54		13.55	18.50		12.04	10.73		11.52
Every six months	1.02	0.31		5.18	0.58		2.44	0.40		1.62
Every year	0.82	1.25		1.20	4.05		0.95	2.23		1.46

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

#### 5.4.4 Scope for Innovation in Course Curriculums and Examination

Around 31 per cent of the teachers in IDG-awarded colleges responded that the course teachers can improve or update the syllabus and course curriculum. The percentage of respondents is around 36 for the IDG non-awarded colleges. However, the mean difference is not statistically significant between the IDG and the non-IDG colleges. Overall, it was found that 33 per cent or one-third of the respondents agreed that improvement of syllabus and course curriculum can be done by respective teachers, 70 per cent agreed that there is still scope for innovation in exam evaluation methods, and 41 per cent agreed that there is a prevalence of good communication with other institutions for academic purposes (Table 5.10).

**Table 5.10: Scope for Innovation in Course Curriculums and Examination**

Evaluation and innovation	Government college			Private college			All			All college
	IDG-awarded college	Non-IDG college	p-value	IDG-awarded college	Non-IDG college	p-value	IDG college	Non-IDG college	p-value	
	%	%		%	%		%	%		
Course teachers can improve or update syllabus and course curriculums	24.59	40.00	0.00	44.94	28.99	0.001	31.46	36.12	0.09	33.31
Scope for innovation in evaluation methods in examination	65.01	65.63	0.85	78.74	77.71	0.80	69.74	69.90	0.95	69.81
Good communication with other institutions for academic purposes	33.13	36.25	0.36	60.24	44.51	0.001	42.35	39.15	0.26	41.06

Source: Mid-term Satisfaction Survey, BIDS, 2022.



### 5.4.5 Use of Multimedia during Class Lectures

Around 15 per cent of the college teachers in both IDG-awarded and IDG non-recipient colleges never used multimedia during lectures. However, the difference between IDG and non-IDG colleges was not statistically significant. Around 60 per cent of the teachers use multimedia sometimes, and around 6 per cent of the teachers use multimedia very frequently.

**Table 5.11: Use of Multimedia During Lectures**

Frequency of Use	Government college			Private college			All			All college
	IDG college	Non- IDG college	p-value	IDG college	Non- IDG college	p-value	IDG college	Non- IDG college	p-value	
	%	%		%	%		%	%		
Not at all	11.00	10.56	0.319	21.74	23.56	0.015	14.65	15.12	0.009	14.84
Very little	10.79	13.66		8.70	17.24		10.08	14.92		12.02
Sometimes	61.91	64.29		55.73	52.87		59.81	60.28		60.00
Very frequently	6.92	4.66		7.11	4.02		6.99	4.44		5.97
Always	9.37	6.83		6.72	2.30		8.47	5.24		7.18

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

## 5.5 Learning Environment

The learning environment includes the evaluation of teachers by the students and senior teachers, teachers' average time spent on students' academic discussion, the extra time provided by the teachers after the academic hours, etc.

### 5.5.1 Learning Environment at the NU-Affiliated Colleges

The proportion of teachers' evaluation by students is higher in IDG non-recipient colleges compared to that in IDG-awarded colleges (43 per cent and 37 per cent, respectively). In the IDG non-recipient colleges, senior teachers tend to monitor classes of junior teachers more than that in IDG-awarded colleges (63 per cent versus 58 per cent). IDG non-awarded colleges also provide extra time to students for academic discussion/counselling after class compared to IDG-awarded colleges.

**Table 5.12: Learning Environment**

Variables	Government college			Private college			All			All college
	IDG-awarded college	Non-IDG recipient college	Difference (p-value)	IDG-awarded college	Non-IDG recipient college	Difference (p-value)	IDG-awarded college	Non-IDG recipient college	Difference (p-value)	
	Number (%)	Number (%)		Number (%)	Number (%)		Number (%)	Number (%)		
Teachers are evaluated by the students	23.47	34.38	0.001	65.35	60.00	0.259	37.77	43.43	0.046	40.03
Senior teachers monitor the class of junior teachers	48.77	53.11	0.227	74.60	79.89	0.205	57.57	62.50	0.083	59.55
Extra time provided to the students for academic discussion/ counselling after class	95.92	98.14	0.078	98.03	99.43	0.226	96.64	98.59	0.033	97.42
Average number of students coming for academic discussion/counselling after class in a week										
Less than one hour	13.14	20.00	0.025	7.66	9.20	0.150	11.25	16.16	0.003	13.23
1-2 hours	53.18	52.70		53.23	61.49		53.19	55.83		54.26
3-5 hours	24.36	22.54		26.61	23.56		25.14	22.90		24.23
5-7 hours	6.14	3.17		9.27	4.02		7.22	3.48		5.71
More than 7 hours	3.18	1.59		3.23	1.72		3.19	1.64		2.56

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

### 5.6 Overall Satisfaction of the Teachers

To obtain a comprehensive idea about the prevailing teaching-learning environment of the colleges, we asked the teachers to rate their satisfaction level, on a scale of 1 to 5, concerning five types of facilities: (1) Overall satisfaction with teaching-learning facilities, (2) Overall satisfaction about academic infrastructure, (3) Overall satisfaction about connectivity through internet, (4) Overall satisfaction about development of students’ soft skills, and (5) Overall satisfaction about college’s linkage with industry for the students job placement.

Table 5.13 shows that concerning overall satisfaction with teaching-learning facilities of colleges, the highest mean level of satisfaction for teaching-learning facilities (2.95), followed by academic infrastructure (2.85), computer lab (2.73), and connectivity through the internet (2.42). The lowest mean value of satisfaction is found for the college’s linkage with industry for students’ job placement (1.76). The overall satisfaction level of the teachers stays between 1 and 3 (on a scale of 1 to 5) for these indicators.

Among the government and the non-government college teachers, IDG-awarded colleges are more satisfied than the IDG non-recipient colleges. Overall, the satisfaction score for the IDG-awarded colleges is much higher compared to the IDG non-recipient colleges. The mean differences are statistically significant for all the indicators.

**Table 5.13: Overall Satisfaction of the Teachers by College Type**

Variables	Government college			Private college			All			All college
	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	Mean (SD)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Teaching-learning facilities	3.08 (0.94)	2.60 (1.05)	0.48*** (0.00)	3.27 (1.05)	2.79 (1.01)	0.48*** (0.00)	3.14 (0.98)	2.66 (1.04)	0.48*** (0.00)	2.95 (1.03)
Academic infrastructure	2.89 (1.07)	2.60 (1.05)	0.58*** (0.00)	3.43 (1.02)	2.84 (1.01)	0.59*** (0.00)	3.08 (1.08)	2.49 (1.06)	0.58*** (0.00)	2.84 (1.11)
Connectivity through internet	2.67 (1.07)	2.21 (1.09)	0.46*** (0.00)	2.47 (1.17)	2.00 (1.09)	0.47*** (0.00)	2.60 (1.11)	2.14 (1.09)	0.47*** (0.00)	2.42 (1.12)
Development of students' soft skills	2.07 (1.05)	1.77 (0.95)	0.29*** (0.00)	2.23 (1.06)	1.80 (0.99)	0.42*** (0.00)	2.12 (1.06)	1.78 (0.96)	0.34*** (0.00)	1.98 (1.03)
College's linkage with industry for the students' job placement	1.74 (0.98)	1.54 (0.89)	0.20** (0.03)	1.98 (1.06)	1.90 (1.16)	0.07 (0.47)	1.82 (1.02)	1.67 (1.00)	0.16** (0.01)	1.76 (1.01)
Average of all indicators	2.49 (0.764)	2.08 (0.706)		2.68 (0.766)	2.27 (0.732)		2.55 (0.769)	2.15 (0.720)	0.40*** (0.000)	

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

## CHAPTER 6

# OPINION AND SATISFACTION ON QUALITY OF TEACHING AND LEARNING ENVIRONMENT: FINDING FROM THE STUDENT SURVEY

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When we talk about the direct beneficiaries of the facilities provided through Institutional Development Grants, students are usually among the primary ones whose opinions and satisfaction really matter. In this chapter, we enlist their socio-familial and economic characteristics, views, and satisfaction levels on various teaching-learning experiences, infrastructure, investment, and other facilities provided to them, as well as their overall satisfaction level attached to those.

### 6.1 Distribution of Student Sample

A total of 3,017 students from 73 sampled colleges were interviewed. Of these 3,017 students, 2019 (66.92 per cent) were from government colleges, and the remaining 998 (33.08 per cent) were from non-government colleges. The IDG status-wise disaggregation shows that 63.61 per cent of students were surveyed from IDG-awarded colleges and 36.39 per cent from IDG-non-awarded colleges. The distribution of students is shown in table 6.1.

**Table 6.1: Distribution of Students by Type of College Management**

Sample Students from	Government College	Non-government College	Total
IDG Colleges	1,283 (63.55)	636 (63.73)	1,919 (63.61)
Non-IDG Colleges	736 (36.45)	362 (36.27)	1,098 (36.39)

**Source:** Mid-term satisfaction survey, BIDS, 2022.

Students surveyed in this study are from diverse academic disciplines. We include students from science, humanities, commerce, and social science backgrounds to include students from all academic backgrounds. The numbers of students from IDG-awarded colleges and IDG non-recipient colleges are 1,918 and 1,096, respectively. Among these 3,030 students, 16.90 per cent is from a science background, 30.76 per cent from a humanities background, 27.59 per cent from commerce, and 24.75 per cent from social science background. About 20 per cent of IDG college students study science, 30.24 per cent study humanities, 26.75 per cent study commerce, and 23.46 per cent study social science. In the case of non-IDG students, 12.41 per cent belong to the science group, 30.93 per cent belong to the humanities group, 29.29 per cent

to the commerce group, and 27.27 per cent to the social science group. These percentages are also shown for government and private IDG college students. The distribution of students into four academic backgrounds is similarly diverse for these two types of colleges (Table 6.2).

**Table 6.2: Distribution of Students by Type of Academic Discipline**

Type of Department	Government college			Private college			All			All college
	IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> (p-value)	
	N (%)	N (%)		N (%)	N (%)		N (%)	N (%)		
Science	281 (21.90)	105 (14.31)	30.87*** (0.00)	94 (14.80)	31 (8.56)	19.65*** (0.00)	375 (19.55)	136 (12.41)	27.01*** (0.00)	510 (16.90)
Humanities	472 (36.79)	240 (32.70)		108 (17.01)	99 (27.35)		580 (30.24)	339 (30.93)		922 (30.76)
Commerce	272 (21.20)	190 (25.89)		241 (37.95)	131 (36.19)		513 (26.75)	321 (29.29)		835 (27.59)
Social science	258 (20.11)	199 (27.11)		192 (30.24)	101 (27.90)		450 (23.46)	300 (27.37)		750 (24.75)
Total	1283 (100.00)	734 (100.00)		635 (100.00)	362 (100.00)		1918 (100.00)	1096 (100.00)		3017 (100.00)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

## 6.2 General Information of the Student Sample

Students in the mid-line satisfaction survey are either students in the last two years of the honours or master's. We have tried to incorporate all types of students so that we can get an understanding of the requirements and satisfaction level of all. Following the baseline survey, our survey students are mostly from the 5<sup>th</sup>/6<sup>th</sup> semester category (58.03 per cent students), followed by the 7<sup>th</sup>/8<sup>th</sup> semester category (28.78 per cent students) and masters' category (13.19 per cent students). This distribution pattern is similar when we consider sub-divisions under government, non-government, and IDG funding categories, where we see that most students surveyed were in the 5<sup>th</sup>/6<sup>th</sup> semesters, followed by the 7<sup>th</sup>/8<sup>th</sup> semester and masters. Among all the students, 54.59 per cent finished their honours from the same colleges where they are continuing their masters. This percentage is 57.24 for the students of the IDG-awarded colleges and 45.55 for the students of the IDG non-recipient colleges. In government colleges, this percentage is 62.58 per cent and 42.15 per cent for the IDG and non-IDG-funded colleges, respectively. For non-government colleges, 41.28 per cent of students of the IDG-awarded colleges and 51.43 per cent of the students from IDG non-recipient colleges finished their honours from the same college and reported continuing their masters there.

When asked about their last available results in GPA/CGPA, on average, it seems that in government IDG-funded colleges, students have slightly higher grade point averages than their non-IDG counterparts. On the other hand, for non-government colleges, IDG non-recipient college students have somewhat greater GPAs. However, the results are not statistically significant (Table 6.3).

**Table 6.3: Distribution of Students by Academic Year**

Proportion of students interviewed from	Government college			Private college			All college		
	IDG college	Non-IDG college	Chi <sup>2</sup> / Mean Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Mean Difference (p-value)	IDG college	Non-IDG college	Chi <sup>2</sup> / Mean Difference (p-value)
	N/ Mean	N/ Mean		N/ Mean	N/ Mean		N/ Mean	N/ Mean	
	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	(%)/ (SD)	
5th /6th Semester	683 (53.28)	467 (63.45)		372 (58.49)	238 (65.75)		1055 (55.01)	705 (64.21)	1760 (58.03)
7th /8th Semester	351 (27.38)	228 (30.98)	72.55*** (0.00)	204 (32.08)	88 (24.31)	6.80** (0.03)	555 (28.94)	316 (28.78)	873 (28.78)
Masters	248 (19.34)	41 (5.57)		60 (9.43)	36 (9.94)		308 (16.06)	77 (7.01)	400 (13.19)
Finished Honours from the same College	204 (62.58)	51 (42.15)	15.03*** (0.00)	45 (41.28)	36 (51.43)	1.77 (0.18)	249 (57.24)	87 (45.55)	351 (54.59)
Average GPA/ CGPA from last session	2.94 (0.31)	2.93 (0.33)	0.01 (0.48)	2.94 (0.31)	2.97 (0.32)	-0.03 (0.21)	2.94 (0.31)	2.94 (0.33)	0.00 (0.88)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% level, respectively.

The surveyed college students have mostly completed their higher secondary education through the HSC examination. More than 90 per cent of all surveyed students are in different categories, i.e., Government IDG Vs. non-IDG; private IDG vs. non-IDG and IDG vs. non-IDG have passed through the HSC general examination, followed by the HSC (vocational) examination, Madrasa (Alim) examination, and HSC (open) examination. None of the surveyed students passed higher secondary through diploma level examination. We got information from students of all three types of academic backgrounds and see the distribution to be more or less similar for science, humanities, and commerce backgrounds. The students passing this level have almost similar results. We see that, on average, they have a CGPA of above 3.50. For all the IDG colleges, students seem to have better results than the non-IDG college students in different categories of our analysis (Table 6.4).

**Table 6.4: Students' Higher Secondary Level Academic Background**

Educational background (Higher secondary level)		Government college		Non-government college		Overall		All college N (%)
		N (%)		N (%)		N (%)		
		IDG	Non-IDG	IDG	Non-IDG	IDG	Non-IDG	
Type of higher secondary degree	HSC	1180 (92.04)	679 (92.26)	591 (92.92)	343 (94.75)	1771 (92.34)	1022 (93.08)	2811 (92.65)
	HSC (vocational)	40 (3.12)	19 (2.58)	26 (4.09)	9 (2.49)	66 (3.44)	28 (2.55)	94 (3.10)
	HSC (Open)	1 (0.08)	2 (0.27)	0 (0.00)	1 (0.28)	1 (0.05)	3 (0.27)	4 (0.13)
	Alim	61 (4.76)	36 (4.89)	18 (2.83)	9 (2.49)	79 (4.12)	45 (4.10)	124 (4.09)
	Diploma	-	-	-	-	-	-	-
	Stream of education at higher secondary	Science	422 (32.99)	178 (24.18)	169 (26.57)	80 (22.10)	591 (30.86)	258 (23.50)
Humanities		542 (42.38)	328 (44.57)	195 (30.66)	146 (40.33)	737 (38.49)	474 (43.17)	1226 (40.45)
Commerce		307 (24.00)	221 (30.03)	272 (42.77)	136 (37.57)	579 (30.23)	357 (32.51)	938 (30.95)
GPA (average)	3.70	3.69	3.59	3.53	3.73	3.64	3.60	

Source: Mid-term Satisfaction Survey, BIDS, 2022.

Our surveyed students mostly completed their secondary education through the general SSC examination, followed by the madrasa (Dakhil) examination, SSC (vocational) examination, and SSC (open) examination. There were no diploma graduates in secondary examination from our surveyed students. As we have seen in the higher secondary education of the students, all the students completed secondary education in science, humanities, and commerce disciplines in different ratios. The CGPA of these students during the secondary examination was above 4.00 out of 5 on average (Table 6.5).

**Table 6.5: Students Secondary School Level Academic Background**

Educational background (Higher secondary level)		Government college		Non-government college		Overall		All college N (%)
		N (%)		N (%)		N (%)		
		IDG	Non-IDG	IDG	Non-IDG	IDG	Non-IDG	
Type of Secondary degree	SSC	1153 (90.08)	664 (90.22)	586 (92.43)	336 (92.82)	1739 (90.86)	1000 (91.07)	2754 (90.89)
	SSC (vocational)	20 (1.56)	13 (1.77)	8 (1.26)	1 (0.28)	28 (1.46)	14 (1.28)	42 (1.39)
	SSC (Open)	1 (0.08)	2 (0.27)	1 (0.16)	0 (0.00)	2 (0.10)	2 (0.18)	4 (0.13)
	Dakhil	104 (8.13)	57 (7.74)	38 (5.99)	25 (6.91)	142 (7.42)	82 (7.47)	227 (7.49)
	Diploma	-	-	-	-	-	-	-
Stream of education at secondary	Science	564 (44.06)	251 (34.15)	236 (37.17)	108 (29.83)	800 (41.78)	359 (32.73)	1162 (38.35)
	Humanities	435 (33.98)	253 (34.42)	160 (25.20)	122 (33.70)	595 (31.07)	375 (34.18)	981 (32.38)
	Commerce	275 (21.48)	225 (30.61)	237 (37.32)	132 (36.46)	512 (26.74)	357 (32.54)	873 (28.81)
GPA (average)		4.26	4.19	4.07	4.10	4.20	4.16	4.18

Source: Mid-term Satisfaction Survey, BIDS, 2022.

When asked about the parents of the students, we observed that all students' parents have similar occupations, meaning that they come from almost similar backgrounds. Most fathers of the surveyed students are self-employed (31.80 per cent), followed by skilled agricultural, forestry, and fishery workers (23.37 per cent), and others are professionals, retired, service and sales workers, plant and machine operators/assemblers, craft and related trade workers, etc. Mothers of the surveyed students are mostly housewives, with more than 93 per cent of them being in this category for students from different college categories in our survey (Table 6.6).

**Table 6.6: Occupation Status of Parents**

Father's occupation	Government colleges		Private colleges		Overall		All Colleges N (%)
	N (%)		N (%)		N (%)		
	IDG	Non-IDG	IDG	Non-IDG	IDG	Non-IDG	
Manager	21 (1.65)	8 (1.09)	13 (2.04)	4 (1.10)	34 (1.78)	12 (1.10)	46 (1.52)
Professional	111 (8.70)	33 (4.50)	44 (6.92)	20 (5.52)	155 (8.11)	53 (4.84)	214 (7.07)
Technicians and associate professional	20 (1.57)	8 (1.09)	13 (2.04)	4 (1.10)	33 (1.73)	12 (1.10)	45 (1.49)
Clerical support worker	20 (1.57)	12 (1.64)	4 (0.63)	7 (1.93)	24 (1.26)	19 (1.74)	43 (1.42)
Service and sales worker	41 (3.21)	18 (2.46)	28 (4.40)	8 (2.21)	69 (3.61)	26 (2.37)	95 (3.14)
Skilled agricultural, forestry and fishery worker	323 (25.31)	146 (19.92)	148 (23.27)	89 (24.59)	471 (24.63)	235 (21.46)	707 (23.37)
Craft and related trade worker	35 (2.74)	22 (3.00)	20 (3.14)	6 (1.66)	55 (2.88)	28 (2.56)	83 (2.74)
Plant and machine operators/assemblers	29 (2.27)	34 (4.64)	15 (2.36)	13 (3.59)	44 (2.30)	47 (4.29)	92 (3.04)
Retired	105 (8.23)	60 (8.19)	51 (8.02)	32 (8.84)	156 (8.16)	92 (8.40)	249 (8.23)
Self-employed	363 (28.45)	260 (35.47)	207 (32.55)	125 (34.53)	570 (29.81)	385 (35.16)	962 (31.80)
Others	132 (10.34)	82 (11.19)	69 (10.85)	43 (11.88)	201 (10.51)	125 (11.42)	328 (10.84)
<b>Mother's occupation</b>							
Housewife	1201 (93.68)	701 (95.24)	606 (95.43)	347 (95.86)	1807 (94.26)	1048 (95.45)	2872 (94.69)
Manager	3 (0.23)	1 (0.14)	-	-	3 (0.16)	1 (0.09)	4 (0.13)
Professional	42 (3.28)	16 (2.17)	12 (1.89)	2 (0.55)	54 (2.82)	18 (1.64)	72 (2.37)
Technicians and associate professional	6 (0.47)	0 (0.00)	0.00	1 (0.28)	6 (0.31)	1 (0.09)	7 (0.23)
Clerical support worker	1 (0.08)	0 (0.00)	3 (0.47)	0 (0.00)	4 (0.21)	0 (0.00)	4 (0.13)
Service and sales workers	4 (0.31)	3.00 (0.41)	2 (0.31)	3 (0.83)	6 (0.31)	6 (0.55)	12 (0.40)
Skilled agricultural, forestry and fishery worker	-	-	1 (0.16)	1 (0.28)	1 (0.05)	1 (0.09)	2 (0.07)
Craft and related trade worker	-	-	0 (0.00)	1 (0.28)	0 (0.00)	1 (0.09)	1 (0.03)
Plant and machine operator, assembler	5 (0.39)	1 (0.14)	-	-	5 (0.26)	1 (0.09)	7 (0.23)
Retired	5 (0.39)	1 (0.14)	4 (0.63)	0 (0.00)	9 (0.47)	1 (0.09)	10 (0.33)
Self-employed	2 (0.16)	2 (0.27)	1 (0.16)	0 (0.00)	3 (0.16)	2 (0.18)	5 (0.16)
Others	13 (1.01)	9 (1.22)	6 (0.94)	6 (1.66)	19 (0.99)	15 (1.37)	34 (1.12)

Source: Mid-term Satisfaction Survey, BIDS, 2022.



Data in Table 6.7 presents the parents' educational backgrounds of the surveyed students. Most of the fathers of the students have completed secondary or equivalent education, according to survey data (28.01 per cent). The number and percentages of fathers of IDG non-recipient college students are more than that of IDG recipient colleges (29.95 per cent vs. 26.96 per cent). Overall, 23.48 per cent of the fathers seem to have completed their primary education, whereas 24.91 per cent of fathers of the students from IDG non-recipient colleges and 22.73 per cent of fathers students of IDG recipient colleges seem to have completed their primary education. The percentage of fathers who have completed their honours and master's degrees is less than that of the percentage of fathers who have had no institutional education. Most mothers of the surveyed students have completed their secondary education (34.33 per cent of all students, 34.73 per cent of the students of the IDG recipient colleges, and 33.64 per cent of the students of the IDG non-recipient colleges), followed by having completed their primary education, having no institutional education and so on.

**Table 6.7: Parents' Education Level**

Father's education level	IDG college N (%)	Non-IGD college N (%)	Overall N (%)
No institutional education	260 (13.58)	160 (14.65)	422 (13.96)
Primary education	435 (22.73)	272 (24.91)	710 (23.48)
Secondary or equivalent	516 (26.96)	327 (29.95)	847 (28.01)
Higher secondary or equivalent	288 (15.05)	158 (14.47)	447 (14.78)
Honours or equivalent	222 (11.60)	93 (8.52)	319 (10.55)
Masters or equivalent	172 (8.99)	72 (6.59)	248 (8.20)
MPhil/ PhD	3 (0.16)	1 (0.09)	4 (0.13)
<b>Mother's education level</b>			
No institutional education	308 (16.11)	185 (16.96)	493 (16.20)
Primary education	615 (32.17)	378 (34.65)	993 (33.07)
Secondary or equivalent	664 (34.73)	367 (33.64)	1031 (34.33)
Higher secondary or equivalent	188 (9.83)	96 (8.80)	284 (9.46)
Honours or equivalent	98 (5.13)	34 (3.12)	132 (4.40)
Masters or equivalent	33 (1.73)	16 (1.47)	49 (1.63)
Masters/MPhil/ PhD	1 (0.05)	0 0.00	1 (0.03)

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

### 6.3 Students Economic Background

Most of the students in this study have family earnings of Tk. 10,000-20,000 (Table 6.8). The percentage of IDG-recipient and non-DG-recipient college students is evidently similar for different income categories. It is seen that 36.78 per cent of the students have family earnings of Tk. 10,000-20,000; 29.73 per cent have family earnings of less than Tk. 10,000; 16.86 per cent have family earnings of Tk. 20,000-30,000; 8.31 per cent have family earnings of Tk. 30,000-40,000, 3.96 per cent have family earnings of Tk. 40,000-50,000, 2.56 per cent have family earnings of Tk. 50,000-60,000, and only 1.80 per cent have family earnings of more than Tk. 60,000.

**Table 6.8: Average Monthly Family Income**

Monthly income (BDT)	IDG recipient college N (%)	IDG non-recipient college N (%)	Overall N (%)
Less than Tk. 10,000	568 (29.74)	326 (29.72)	894 (29.73)
10,000 - 20,000	705 (36.91)	401 (36.55)	1,106 (36.78)
20,000 - 30,000	317 (16.60)	190 (17.32)	507 (16.86)
30,000 - 40,000	153 (8.01)	97 (8.84)	250 (8.31)
40,000 - 50,000	77 (4.03)	42 (3.83)	119 (3.96)
50,000 - 60,000	48 (2.51)	29 (2.64)	77 (2.56)
More than Tk. 60,000	42 (2.20)	12 (1.09)	54 (1.80)

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

Data in Table 6.9 depict different familial and economic information of the students. Students were asked about their family earnings in this section, followed by their individual working experience and earnings. It was observed that the students in different categories showed similar traits in the case of the numbers of their family members, earning family members, dependent family members, and students in the family. On average, the student's family size was 5, the earning member was 1, the dependent family member was 4, and students in the family number was 2; 31.21 per cent of the surveyed students were involved in earning activities. Overall, 31.07 per cent of the IDG students and 31.88 per cent of the non-IDG students had earning occupations. Most students (88.32 per cent) who were involved in these kinds of activities have an earning of less than Tk. 10,000. The percentages of students of the IDG-awarded colleges in government and non-government colleges were higher than that of the IDG non-awarded colleges.

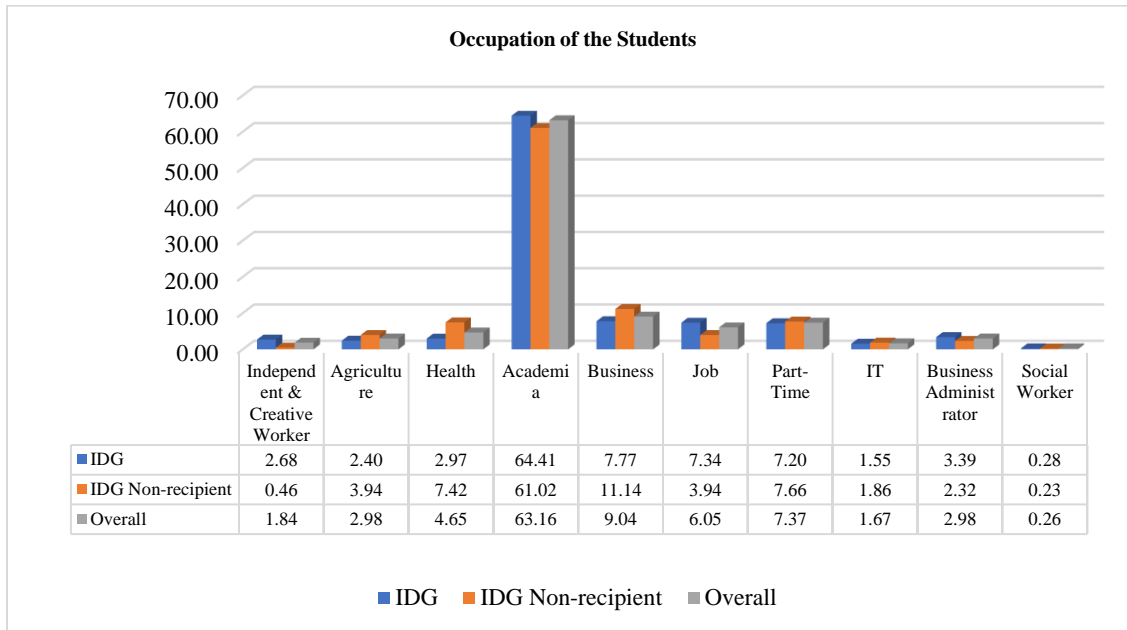
**Table 6.9: Other Familial and Economic Information**

Information	Government college		Private college		Overall		All college Mean (SD)/ N (%)
	Mean (SD)/ N (%)		Mean (SD)/ N (%)		Mean (SD)/ N (%)		
	IDG	Non-IDG	IDG	Non-IDG	IDG	Non-IDG	
<b>Other Familial Information</b>							
Number of Family Members	5.36 (2.29)	5.64 (4.58)	5.29 (1.86)	5.29 (2.07)	5.34 (2.16)	5.53 (3.94)	5.40 (2.93)
Number of Earning Family Members	1.42 (0.81)	1.43 (0.75)	1.44 (0.80)	1.40 (0.77)	1.42 (0.81)	1.42 (0.75)	1.42 (0.79)
Number of Dependent Family Members	3.73 (1.77)	3.80 (4.01)	3.66 (2.09)	3.86 (3.23)	3.71 (1.88)	3.82 (3.77)	3.74 (2.72)
Number of Students in Family	2.15 (1.29)	2.20 (1.11)	2.16 (1.16)	2.33 (1.77)	2.15 (1.25)	2.24 (1.36)	2.19 (1.29)
<b>Occupation Status of the Students</b>							
Has a paying occupation	399 (31.12)	241 (32.74)	197 (30.97)	109 (30.11)	596 (31.07)	350 (31.88)	947 (31.21)
<b>Monthly income of Students (BDT)</b>							
Less than Tk. 10,000	366 (90.37)	217 (88.57)	170 (85.43)	93 (85.32)	536 (88.74)	310 (87.57)	847 (88.32)
10,000 - 20,000	32 (7.90)	21 (8.57)	23 (11.56)	14 (12.84)	55 (9.11)	35 (9.89)	90 (9.38)
20,000 - 30,000	2 (0.49)	2 (0.82)	3 (1.51)	1 (0.92)	5 (0.83)	3 (0.85)	8 (0.83)
30,000 - 40,000	3 (0.74)	3 (1.22)	2 (1.01)	1 (0.92)	5 (0.83)	4 (1.13)	9 (0.94)
40,000 - 50,000	1,00 (0.25)	0 (0.00)	1 (0.50)	0 (0.00)	2 (0.33)	0 (0.00)	2 (0.21)
50,000 - 60,000	1 (0.25)	2 (0.82)	-	-	1 (0.17)	2 (0.56)	3 (0.31)
More than Tk. 60,000	-	-	-	-	-	-	-

**Source:** Mid-term Satisfaction Survey, BIDS-2022.

Students surveyed from different colleges who are involved in different occupations were asked about the type of their occupation. Their answers were divided into ten major categories of occupation, and it is seen that most of them were involved in academia-related occupations, including tuition, teaching in madrasa, coaching, etc. The percentages for students in IDG colleges and IDG non-recipient colleges were 64.41 per cent and 61.02 per cent, respectively. Others were involved in different works like being independent and creative workers, i.e., dancers, painters, designers and artisans, etc., agricultural workers, health workers, business personnel involved in online and small businesses, different paying jobs, part-time workers, IT-related workers, business administrative workers, i.e., salespersons, accountants, etc., and social workers (Figure 6.1).

**Figure 6.1: Occupation of the Surveyed Students**



**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

Table 6.10 shows that 85.58 per cent of the students were involved in part-time work, and the percentage of students in the IDG-awarded colleges was higher than that of the IDG non-recipient college students (86.76 per cent vs. 83.62 per cent). 6.68 per cent of all the surveyed students work full-time, and this percentage was 6.96 per cent for the students of IDG-awarded colleges and 6.21 per cent for the IDG non-recipient colleges. Self-reliance or business ownership was seen in 7.74 per cent of the surveyed students. Among the IDG-awarded college students, 6.28 per cent had their own businesses, whereas 10.17 per cent of the IDG non-recipient students had business ownership (Table 6.10).

**Table 6.10: Occupation Type of the Students**

Occupation Type	IDG recipient college N (%)	IDG non-recipient college N (%)	Overall N (%)
Full-Time	41 (6.96)	22 (6.21)	63 (6.68)
Part-Time	511 (86.76)	296 (83.62)	85.59 (85.58)
Business (Self-Reliant)	37 (6.28)	36 (10.17)	7.73 (7.74)
Total	589 (100.00)	354 (100.00)	943 (100.00)

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

## 6.4 General Information about the Academic Engagement of the Students

In Table 6.11, we showcase the general information about the coursework and class loads of the students. All students, on average, took 10 courses in their last academic year. For IDG colleges, the average course number was 11, and for non-IDG colleges, this number was 9. In the case of government IDG colleges, the average number of courses taken per student is 7, and in government IDG non-recipient colleges, this number is 10. Other than that, private and overall IDG colleges offer more courses to students, as evidenced by our survey. Students reported that they have, on average, 11 classes per week. Again, in government IDG colleges, students get to attend a smaller number of classes than the IDG non-recipient colleges. Students in all the college categories reportedly have classes with the same duration.

**Table 6.11: Information About Course Work and Class Loads of Students**

Course works/ classes	Government college			Private college			All			All college
	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	Mean (S.D.)
	Mean (S.D.)	Mean (S.D.)		Mean (S.D.)	Mean (S.D.)		Mean (S.D.)	Mean (S.D.)		
Average number of courses taken last year	7 (1.55)	10 (51.86)	-2.64 (0.06)	17 (96.45)	7 (0.88)	10.34* (0.04)	11 (55.76)	9 (42.48)	1.66 (0.39)	10 (51.18)
Number of classes per week	9 (7.28)	11 (7.46)	-2.27*** (0.80)	16 (11.60)	13 (7.62)	2.59*** (0.00)	11 (9.54)	12 (7.58)	-0.66* (0.049)	11 (8.89)
Number of classes attended last week	9 (58.67)	10 (59.59)	1.33 (0.009)	16 (70.62)	11 (6.57)	5.71 (0.14)	11 (63.05)	12 (86.27)	-4.71 (0.107)	11 (71.81)
Duration of each class (minute)	45.23 (7.08)	46.65 (50.27)	-1.41 (0.32)	45.82 (19.73)	43.80 (20.09)	2.02 (0.12)	45.43 (12.76)	45.71 (42.75)	-0.28 (0.79)	45.53 (27.65)

**Source:** Mid-term satisfaction survey, BIDS, 2022.

**Note:** \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

Evaluation of students' academic performance is not only related to their classes and examinations but also determined and modified through their out-of-class activities. Generally, students pass their time in the library, laboratories, and computer labs and work on the Internet rather than in their classes. They also spend time surfing other kinds of internet than studying. Students have to devote some time to completing assignments and attending seminars and symposiums, which all contribute to their accumulation of knowledge. All this information is listed in Table 6.12.

We see that students reportedly spend more than 3 hours in the library on average every week. Evidence shows that students from IDG-awarded colleges spend more time in college than students from IDG non-recipient colleges. Students, in general, spend 1.4 hours per week in the laboratory, 1.3 hours per week in computer labs, almost three days per semester in fieldwork, almost 3 hours per day using the internet, and more than 1 hour per day using the internet for studying according to survey data.

Noticeably, for being involved in constructive works like library work, computer lab work, fieldwork, and studying through internet use, students from IDG-awarded colleges seem to be way ahead of students in IDG non-recipient colleges. Students' time spent in the library, laboratory, and computer lab is less in this survey than in the baseline survey. It may be so as we conduct this survey after the COVID-19 risks have been much diminished. In this post-COVID era, when students have just started to join classes, they tend to spend less time close to each other or in gatherings. Also, the time spent on internet use seems to have increased in this survey more than the previous one, which can also be attributed to the COVID-19 impact when people, in general, have become more inclined to use the internet for various purposes.

**Table 6.12: Time Spent by Students for Academic Purposes**

Out of class time allocation of students	Government college			Private college			All			All college
	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	
	Mean	Mean		Mean	Mean		Mean	Mean		
	(S.D.)	(S.D.)	(S.D.)	(S.D.)	(S.D.)	(S.D.)	(S.D.)	(S.D.)		
Hours per week spent in library	3.70 (26.84)	2.72 (8.72)	0.983 (0.335)	4.15 (8.90)	2.56 (8.26)	1.595** (0.005)	3.85 (22.53)	2.67 (8.57)	1.19 (0.094)	3.40 (18.652)
Hours per week spent in laboratory	1.58 (15.22)	0.75 (6.58)	0.825 (0.162)	0.75 (4.51)	3.51 (51.44)	-2.764 (0.178)	1.30 (12.72)	1.66 (30.03)	-0.359 (0.647)	1.42 (20.694)
Hours per week spent in computer lab	1.38 (14.24)	0.78 (6.12)	0.606 (0.273)	1.84 (6.01)	1.30 (9.97)	0.549 (0.279)	1.54 (12.15)	0.95 (7.61)	0.59 (0.147)	1.31 (10.70)
Number of days spent in field work per semester	3.49 (22.067)	1.24 (10.154)	2.245** (0.09)	3.95 (14.07)	3.43 (14.71)	0.52 (0.584)	3.64 (19.78)	1.97 (11.89)	1.676* (0.011)	3.30 (17.72)
Number of minutes spent over internet daily	185.89 (264.31)	187.08 (384.84)	-1.203 (0.934)	167.90 (160.60)	134.22 (104.93)	33.669*** (0.000)	179.92 (235.17)	169.66 (321.67)	10.263 (0.315)	175.33 (269.32)
Number of minutes spent over internet daily for study purpose	87.35 (89.95)	79.52 (69.22)	7.831* (0.041)	81.62 (83.27)	73.50 (65.91)	8.13 (0.111)	85.45 (87.81)	77.53 (68.18)	7.92* (0.010)	82.19 (81.22)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

To get a view of the overall academic environment in the colleges, we collect information on the regularity of classes held, class timing, class materials, problem-solving in classes, teacher's adequacy for after-class consultation, and prevalence of online classes, online assignment submission and student politics inside college campuses. These data are presented

in Table 6.13. As a whole, all colleges give a good review of the academic environment in the colleges. We see that classes were held regularly (89.07 per cent), there were full-time classes (96.10 per cent), problems were solved regularly in the class lessons (91.54 per cent), and teachers provided the students with extra consultation time (80.38 per cent). These indicators point towards the prevalence of a good academic environment in the colleges are more prominent in the IDG-awarded colleges may it be all IDG colleges, government IDG colleges, or private IDG colleges than in the IDG non-recipient colleges in different categories of our analysis. Other issues, including getting handouts, online class availability and attendance, and online assignment submissions, were also more positive than not for the surveyed students. The availability of online provisions in the colleges has been a good indicator of a positive academic environment during the pandemic period. However, these are quite irrelevant in the regular day-to-day class scenario, as we can surely say that physical attendance is much more preferable and appreciated than being online. Another good indication of a good academic environment was the non-hampering student politics on college campuses.

**Table 6.13: Academic Environment in Colleges by IDG Status**

Academic Environment	Government college			Private college			All			All college N (%)
	IDG college N (%)	IDG Non-recipient college	Chi <sup>2</sup> (p-value)	IDG college N (%)	IDG Non-recipient college	Chi <sup>2</sup> (p-value)	IDG college N (%)	IDG Non-recipient college	Chi <sup>2</sup> (p-value)	
		N (%)			N (%)			N (%)		
Classes held regularly in departments	1,143 (89.09)	605 (82.65)	16.80*** (0.00)	614 (96.85)	319 (88.12)	29.60*** (0.00)	1,757 (91.65)	924 (84.46)	36.92*** (0.00)	2,698 (89.07)
Teachers teach full time during the class time	1,242 (97.11)	675 (91.96)	27.19*** (0.00)	628 (98.74)	347 (96.12)	7.33** (0.007)	1,870 (97.65)	1,022 (93.33)	34.47*** (0.00)	2,910 (96.10)
Handouts are provided	584 (45.95)	321 (44.21)	0.56 (0.45)	393 (62.38)	240 (67.04)	2.15 (0.14)	977 (51.39)	561 (51.75)	0.04 (0.85)	1,552 (51.7)
Problem-solving exercises regularly practiced in the class	1,177 (92.53)	620 (84.70)	30.76*** (0.00)	612 (96.68)	334 (92.78)	7.75** (0.005)	1,789 (93.91)	954 (87.36)	38.36*** (0.00)	2,760 (91.54)
Teachers provide consultation time after classes	1,047 (81.92)	500 (68.40)	48.04*** (0.00)	565 (89.12)	302 (83.66)	6.12** (0.013)	1,612 (84.31)	802 (73.44)	52.00*** (0.00)	2,429 (80.38)
Students are aware of the online courses	803 (62.88)	483 (65.89)	1.83 (0.17)	421 (66.40)	209 (57.89)	7.17** (0.007)	1,224 (64.05)	692 (63.25)	0.19 (0.66)	1,930 (63.84)
Ever taken/registered completed any open online courses	507 (55.05)	284 (53.69)	0.25 (0.62)	274 (59.57)	124 (52.54)	3.14 (0.076)	781 (56.55)	408 (53.33)	2.07 (0.15)	1,917 (55.39)
Ever submitted any assignments online	253 (19.81)	182 (24.86)	7.00** (0.008)	72 (11.36)	59 (16.34)	5.00** (0.025)	325 (17.01)	241 (22.05)	11.56*** (0.001)	568 (18.8)
Progress of study is hampered by student politics	242 (18.89)	192 (26.16)	14.58*** (0.00)	205 (32.28)	97 (27.02)	3.00 (0.083)	447 (23.33)	289 (26.44)	3.65 (0.06)	737 (24.35)

Source: Mid-term Satisfaction Survey, BIDS, 2022.

## **6.5 Overall Satisfaction of Students on Different Facilities of Colleges**

Students' overall satisfaction with the teaching and learning environment depends on several factors. In the previous section, students were asked to rank their perception of importance and corresponding satisfaction on a scale of one to five for various indicators. They were also asked to assign their current level of satisfaction for five broad categories: (1) Teaching-Learning facilities, (2) Access to ICT facilities, (3) Teaching skills of the teachers, (4) Development of soft skills of the students, and (5) University-Industry collaboration and (6) Teaching/curriculum.

From Table 6.14, students of overall colleges were found to be satisfied with the teaching skills of the teachers, with a mean level of satisfaction of 3.92 (SD 0.99). This is followed by teaching and learning facilities provided by the colleges (2.57) and the development of students' soft skills (2.42).

The students of the IDG-awarded colleges were more satisfied with the proclamation of their own perceptions. However, for the teaching-learning facility-related indicators like available classrooms, library, laboratory, seminar laboratory, and other related facilities, students as a whole bunch fall under neither the satisfied nor dissatisfied category, as shown in Table 6.14. Similarly, when considering other features of the colleges, students from IDG-awarded colleges were more inclined towards the satisfaction scale than the IDG non-recipient ones.

Students were found to be least satisfied with the current state of University-Industry collaboration, with the lowest satisfaction level of 2.10 on a scale of 5. These findings are similar to the level of satisfaction of teachers, as discussed in the previous section.



**Table 6.14: Overall Satisfaction of Students about Different Facilities of the Colleges**

Infrastructural facility	Government college			Non-government college			Overall			All college
	IDG	Non-IDG	Difference (p-value)	IDG	Non-IDG	Difference (p-value)	IDG	Non-IDG	Difference (p-value)	
	Mean (S.D.)	Mean (S.D.)		Mean (S.D.)	Mean (S.D.)		Mean (S.D.)	Mean (S.D.)		Mean (S.D.)
Teaching-Learning facilities	2.61 (0.90)	2.22 (0.91)	0.38*** (0.00)	2.98 (0.90)	2.20 (0.94)	0.78*** (0.00)	2.73 (0.92)	2.22 (0.92)	0.51*** (0.00)	2.57 (0.95)
Access to ICT facilities	2.10 (1.10)	1.78 (1.01)	0.33*** (0.00)	2.46 (1.12)	1.79 (1.09)	0.68*** (0.00)	2.22 (1.12)	1.78 (1.04)	0.44*** (0.00)	2.21 (1.25)
Teaching skills of teacher	4.01 (0.90)	3.86 (1.02)	0.16*** (0.00)	3.97 (1.01)	3.70 (1.15)	0.28*** (0.00)	4.00 (0.94)	3.80 (1.07)	0.20*** (0.00)	3.92 (0.99)
Development of students' soft skills	2.40 (1.27)	2.29 (1.28)	0.11 (0.07)	2.66 (1.31)	2.42 (1.30)	0.24** (0.00)	2.49 (1.29)	2.33 (1.29)	0.15** (0.00)	2.42 (1.29)
College's linkage with industry	2.10 (1.26)	2.05 (1.24)	0.06 (0.33)	2.17 (1.31)	2.14 (1.29)	0.03 (0.72)	2.12 (1.28)	2.08 (1.26)	0.05 (0.31)	2.10 (1.27)
Average of all overall satisfaction indicators	2.64 (0.77)	2.44 (0.79)	0.21*** (0.00)	2.85 (0.83)	2.45 (0.84)	0.40*** (0.00)	2.71 (0.79)	2.44 (0.81)	0.27*** (0.00)	2.61 (0.81)

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

**Note:** \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels, respectively.

The overall satisfaction level of all indicators shows that other than the overall teachers' teaching capabilities and teaching curriculum, all students are neither satisfied nor dissatisfied. For these two features, at least the students seem satisfied from their own perspectives (with an overall 4-point satisfaction level on average). However, the student's overall satisfaction can depend on various factors. If we interpret the importance as the expectation of the students and satisfaction as reality, then the difference between expectation and reality could affect the overall satisfaction level of the students, which might be reflected through the satisfaction scores.

## CHAPTER 7

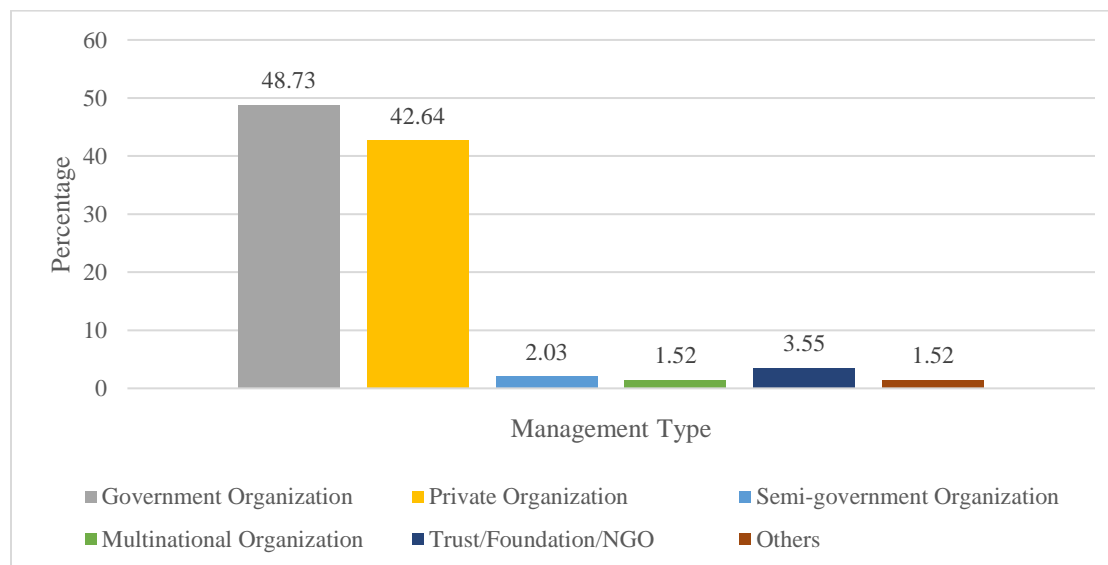
# KNOWLEDGE AND SKILLS OF NU GRADUATES IN TERMS OF EFFICIENCY AND RELEVANCE: OPINIONS OF EMPLOYERS

This chapter is based on the responses of employers who have hired graduates from National University (NU)-affiliated colleges. In total, 198 employers were surveyed with an equal ratio of 50:50 from the government and non-government organisations. The main focus was to identify the satisfaction level of employers when hiring employees who have graduated from NU-affiliated colleges. Additionally, the amount of information on employer characteristics, employment situations of NU-affiliated college students, employees' skills, soft skills that an employee should possess, key characteristics at work, skills that an employee should improve, and satisfaction level of employers were also summarised in this section.

### 7.1 Characteristics of Employers

With the help of authorities of respective NU-affiliated colleges, the employers of NU graduates were traced and interviewed. Among the respondents, 49 per cent belong to government organisations, and the rest 8 per cent belong to non-government organisations including private organisations (42.64 per cent), trust/foundations/NGOs (3.55 per cent), semi-government organisations (2.03 per cent) and multinational organisations (1.52 per cent).

**Figure 7.1: Distribution of the Employers by Management Type**



**Source:** Mid-term Satisfaction Survey on Principals, BIDS, 2022.

Table 7.1 shows that the total number of employees in employers' organisations was 68 on average, among which 50 per cent (30 employees) were graduated from NU-affiliated colleges. Gender disaggregation shows that 21 employees were male and 9 were female, and all of them graduated from National University. In the last 12 months, our respective employer's organisations had recruited 14 employees on average, and 2 are from NU-affiliated colleges.

**Table 7.1: Number of Employees from NU-Affiliated Colleges**

Questions	Number of males	Number of females	Total
Total number of employees in current office	45.01	22.91	67.92
Total number of NU college graduates in current office	21.24	8.93	30.18
Total number of employees recruited in last 12 months	7.42	6.05	13.46
Total number of NU college graduates' employees recruited in last 12 months	1.25	0.53	1.78

**Source:** Mid-term Satisfaction Survey, BIDS-2022.

## 7.2 Employment Situations of NU Graduates

The average number of employees hired in the last 12 months is shown in Table 7.2, with data disaggregated by the type of employers. It is seen that all organisations employed at least one graduate from NU-affiliated colleges. However, the private and multinational organisations hired the maximum number of employees in the last 12 months with a good proportion of NU graduates (7.5 per cent and 70.4 per cent, respectively). Over the last 12 months, trust/ foundation/NGOs hired employees only from NU graduates (100 per cent). Government organisations also hired 46.8 per cent of employees who are NU graduates during the last 12 months.

**Table 7.2: Employment in Last 12 Months**

Type of Employer	N	Average number of Employees hired in last 12 months	Average number of NU Colleges graduates hired in last 12 months	Share of NU Graduates hired in last 12 months (%)
Government	96	1.58	0.74	46.8
Private	84	27.73	2.07	7.5
Semi-government	4	3.5	1.25	35.7
Multinational Company	3	36	25.33	70.4
Trust/Foundation/NGO	7	3.29	3.29	100
Others	3	8.67	0.67	7.7

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

Table 7.3 provides information regarding the total number of employees, number of NU graduates employed, and share of NU graduates in the surveyed organisation by type of employer. Almost 41 per cent of government organisations hired NU graduates in their organisation. Among other institutions, the share of NU graduates was highest in multinational organisations and lowest in semi-government organisations (18 per cent). On the other hand, private-sector employers reported that the share of NU graduates is one-fifth of their total employees.

**Table 7.3: Employment by Employer Type**

Type of employer	Number of total employees	Number of NU graduates employed	Share of NU graduates (%)
Government	2111	856	40.5
Private	6336	1311	20.7
Semi-government	189	34	18
Multinational Company	4568	3660	80.1
Trust/Foundation/NGO	129	80	62
Others	48	4	8.3

**Source:** Mid-term Satisfaction Survey, BIDS-2022.

### 7.3 Skills in Demand During Recruitment

This section summarises two sets of information: (a) criteria that are important to employers during recruitment and (b) skills that are important to perform at the workplace effectively. Table 6.4 shows the mean importance level of 10 different recruitment criteria rated by the employers. On the other hand, Table 6.4 describes the rating of employers on different skills based on their impotence to perform organisational activities fluently. The level of importance/ranking is taken on a 10-point scale, with 1 equals “Not important” and 10 equals “Very important.”

Table 7.4 shows that, on average, more than 75 per cent of employers gave higher importance to an institutional degree (77.66 per cent), personal attributes (84.26 per cent), and communication skills (83.85 per cent) while recruiting employees in their organisation.

This table also shows the mean level of importance that the employer rated as necessary criteria for recruitment. The top four important criteria for recruitment, in descending order, are (a) communication skill (8.71), (b) institutional degree (8.70), (c) personal attributes (8.54), and (d) computer literacy (8.27). All these have been rated more than 8 on 10-point Likert scale of importance.

The last three columns indicate the difference in importance between mean values reported by government and non-government employers and whether responses between government employers on average are significantly different from those of non-government organisation employers. Among ten criteria, non-government employers rated four criteria significantly higher than that of government employers. These are (a) previous work experience, (b) personal networking, (c) professional reference, and (d) institutional reference.

**Table 7.4: Employers' Preference of Qualification/skill during Recruitment**

Qualification/Skill type	All Employer		Govt. Employers	Non-govt. Employers	Difference Of importance (p-value)
	Mean level of importance (SD)	Response of importance (>=8) (%)	Mean (SD)	Mean (SD)	
Institutional Degree	8.7 (1.88)	77.66	8.802 (1.92)	8.594 (1.84)	0.208 (0.44)
Additional Vocational or Technical Training, Technical Degree/Certificate, Professional Certificate	7.53 (2.58)	62.44	7.417 (2.82)	7.644 (2.35)	-0.227 (0.54)
Academic CGPA	7.37 (2.30)	55.33	7.375 (2.45)	7.356 (2.16)	0.019 (0.96)
Previous Work Experience	6.97 (2.84)	52.79	6.191 (3.07)	7.693 (2.40)	-1.502*** (0.00)
Personal Attributes	8.54 (2.03)	84.26	8.323 (2.32)	8.743 (1.70)	-0.42 (0.15)
Communication Skill	8.71 (1.64)	83.25	8.854 (1.66)	8.564 (1.62)	0.29 (0.22)
Computer Literacy	8.27 (2.08)	75.13	8.333 (2.22)	8.218 (1.96)	0.116 (0.70)
Personal Networking	6.54 (2.79)	43.65	6.011 (2.98)	7.04 (2.51)	-1.029** (0.01)
Professional Reference	4.99 (2.95)	24.37	4.326 (2.77)	5.624 (3.00)	-1.297** (0.00)
Reference from the Academic Institution	4.6 (2.91)	17.77	4.042 (2.90)	5.13 (2.83)	-1.088** (0.01)

Source: Mid-term Satisfaction Survey, BIDS-2022.

Note: \*, \*\*, \*\*\* refer to 10%, 5% & 1%, level of satisfaction, respectively.

Government employers think that an institutional degree is more important for recruitment than a non-government counterpart. Private employers give priority to employees' previous work experience more than a government employer does, and the difference is statistically significant at a 1 per cent level. During recruitment in private organisations, employees' networking, professional references, and academic references are prioritised more in government organisations, and the difference is also statistically significant at 5 per cent level.

Employers were asked about the level of importance of some necessary general and soft skills that an employee should possess to perform organisational activities fluently. The responses were scored on a scale of 1 to 10, with 1 being the least important and 10 being the most important.

Table 7.5 shows the mean level of importance for 19 qualities. It was found that the top thirteen important qualities at the workplace, which were scored more than 9, in descending order, were: time management (9.63), behaviour (9.43), reliability (9.38), understanding and properly providing directions for work assignments (9.38), ability to working under pressure (9.35), teamwork (9.34), verbal communication in Bangla (9.32), basic computer skill (9.30), adaptability (9.28), willingness to learn (9.15), English language proficiency (9.13), written communication in Bangla (9.09), and work-related practical knowledge (9.01).

**Table 7.5: Scale of Importance for Different Skills on the Basis of their Importance to Perform Organisational Activities Fluently**

Criteria	All employers		Govt. Employers	Non-govt. Employers	Difference (p-value)
	Mean (SD)	Highly Important (%)	Mean (SD)	Mean (SD)	
Adaptability	9.28 (1.321)	92.9	9.531 (0.894)	9.05 (1.596)	0.482* (0.01)
Creativity	8.93 (1.594)	88.3	9.156 (1.387)	8.723 (1.75)	0.433 (0.056)
Reliability	9.38 (1.422)	94.4	9.542 (0.917)	9.228 (1.766)	0.314 (0.122)
General Professional/ Academic Knowledge	8.70 (1.870)	82.2	9.135 (1.574)	8.287 (2.036)	0.848** (0.001)
Behavior at WorkPlace	9.43 (1.157)	95.4	9.677 (0.775)	9.198 (1.393)	0.479** (0.003)
Knowledge of Contemporary Issues in Relevant Sector and Shows Eagerness to Apply in Works	8.70 (1.707)	80.7	9.01 (1.586)	8.406 (1.773)	0.604* (0.013)
Team Work	9.34 (1.294)	92.9	9.302 (1.266)	9.366 (1.325)	-0.064 (0.728)
Willingness to Learn	9.15 (1.295)	91.9	9.156 (1.439)	9.139 (1.149)	0.018 (0.924)
Understanding and Properly Providing Directions for Work Assignments	9.38 (1.055)	93.9	9.385 (1.137)	9.366 (0.977)	0.019 (0.899)
Strong Critical Thinking & Analytical Skills	8.81 (1.580)	84.8	8.979 (1.602)	8.653 (1.558)	0.326 (0.15)
Work-Related Practical Knowledge	9.01 (1.640)	89.3	9.031 (1.821)	8.98 (1.456)	0.051 (0.828)
Working Under Pressure	9.35 (1.085)	93.4	9.333 (1.121)	9.366 (1.056)	-0.033 (0.832)
Skills in Decision Making	8.95 (1.431)	85.3	9.105 (1.44)	8.802 (1.414)	0.303 (0.139)
Written Communication (in Bengali)	9.09 (1.419)	87.8	9.25 (1.465)	8.941 (1.363)	0.309 (0.126)
Verbal Communication (in Bengali)	9.32 (1.227)	91.9	9.375 (1.242)	9.267 (1.216)	0.108 (0.539)
English Language Proficiency	9.13 (1.360)	88.8	9.167 (1.327)	9.099 (1.396)	0.068 (0.728)
Basic Computer Skill	9.30 (1.427)	90.9	9.438 (1.263)	9.168 (1.562)	0.269 (0.187)
Advanced Computer Skill	7.33 (2.753)	57.9	7.385 (2.921)	7.277 (2.597)	0.108 (0.784)
Time Management	9.63 (1.055)	95.9	9.604 (1.285)	9.653 (0.78)	-0.049 (0.744)

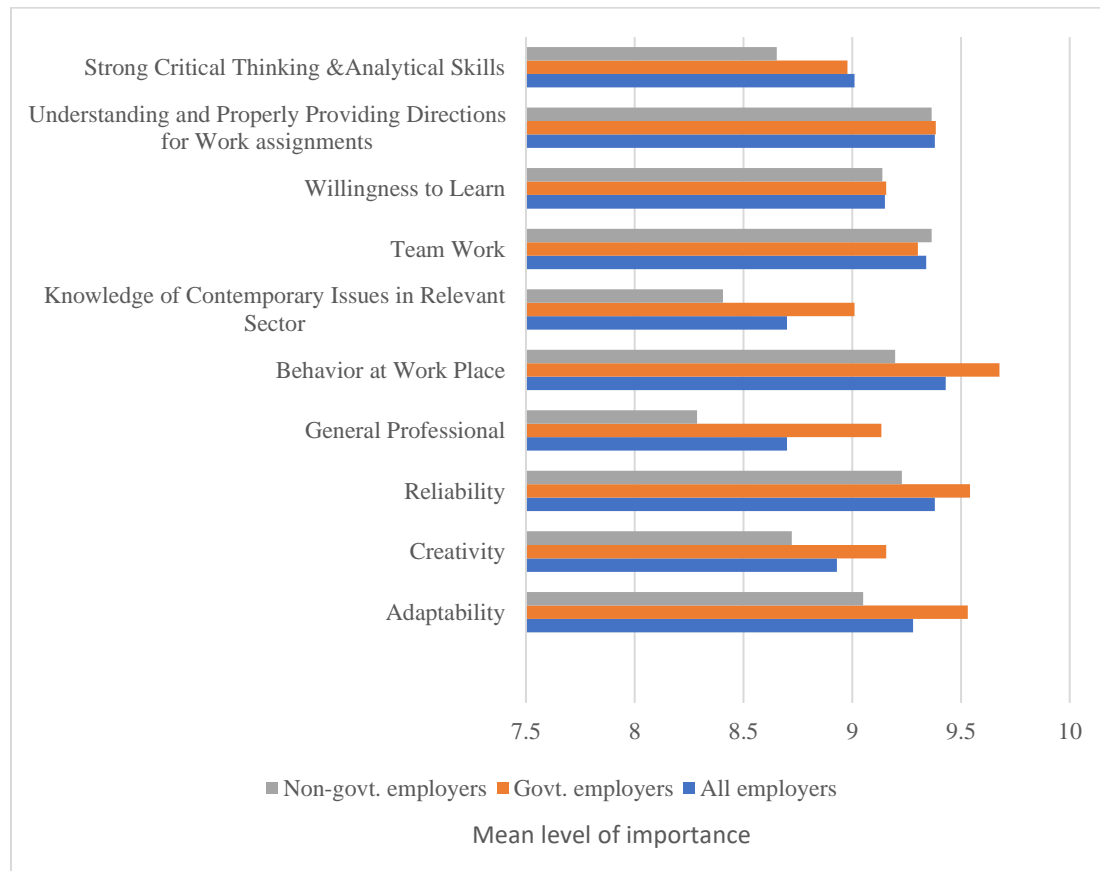
Source: Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, &\*\*\* refer to 10%, 5 %, and 1% level of satisfaction, respectively.

More than 90 per cent of the respondents think that adaptability, professional or academic knowledge, behaviour at the workplace, teamwork, willingness to learn, understanding of work and assignments, ability to work under pressure, communication level, computer skills, and time management are highly important for an employee. The last column of the following table shows that there is a statistically significant difference between the government and non-government employers on the rating of employees' skills of adaptability, professional and academic knowledge, behaviour at the workplace, and knowing contemporary issues in the relevant sectors. It means that government employers give more priority to the mentioned skills than non-government employers.

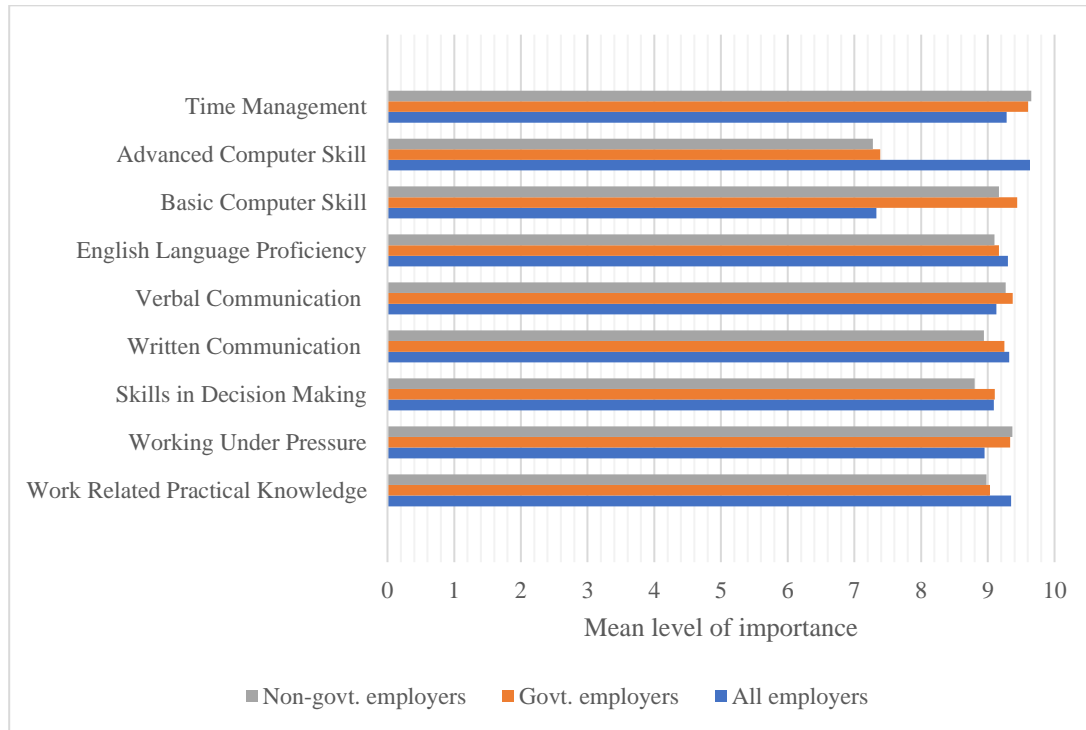
Figures 7.2 and 7.3 present the mean value of responses of employers about the importance of selected key skills in the workplace.

**Figure 7.2: Importance of Key Qualities at Workplace**



**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

**Figure 7.3: Importance of Key Qualities at Work Place**



**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

#### 7.4 Satisfaction Level of the Employers with the Existing Skills of Employees

Table 7.6 lists the satisfaction level of employers with the same 19 attributes of employees that the employers ranked in order of importance in the previous section. The level of satisfaction was also measured on the same 10-point scale, with ten as highly satisfied and one as least satisfied. The table shows the mean level of satisfaction with skills of employees who graduated from NU and the percentage of highly satisfied respondents with their skills. The level of satisfaction is disaggregated by government and non-government employers’ responses.

The top six skills with which employers are highly satisfied are reliability, behaviour at the workplace, verbal communication, teamwork, adaptability, and written communication. The employers are least satisfied with the following four qualities of the graduates: (a) advanced computer skills, (b) English language proficiency, (c) critical thinking & analytical skills, and (d) basic computer skills. There is no significant difference between the rating of government employers and non-government employers except for the case of behaviour at the workplace. The government employers rated their satisfaction level significantly higher than that of non-government employers in the case of the behaviour qualities of the NU graduates.



**Table 7.6: Satisfaction with Key Employee Skills**

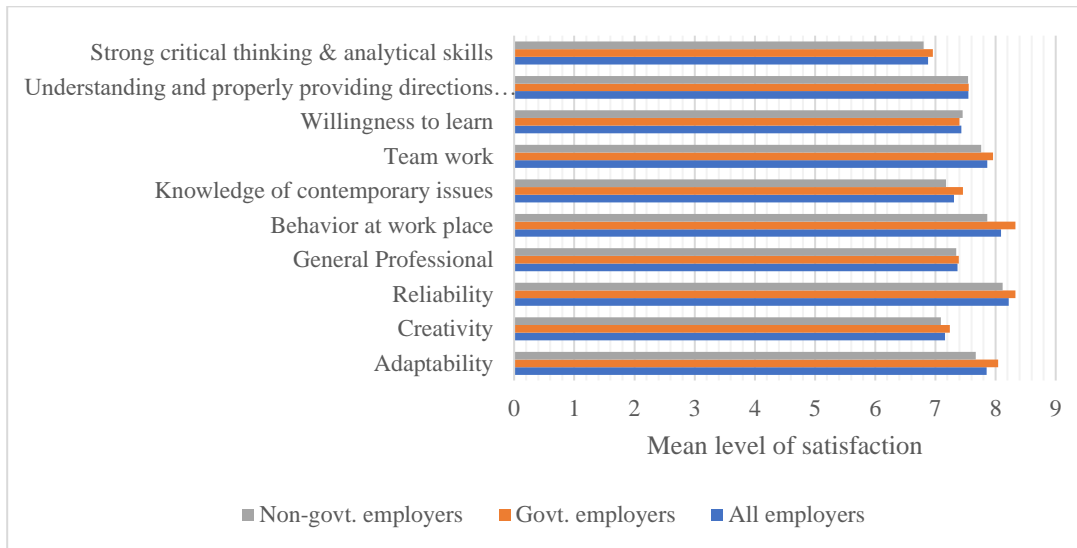
Criteria	All employers		Govt. employers	Non- gov. employers	Difference (p-value)
	Mean (SD)	Very Satisfied (%)	Mean (SD)	Mean (SD)	
Adaptability	7.85 (1.53)	66	8.042 (1.41)	7.673 (1.62)	0.368 (0.09)
Creativity	7.16 (1.82)	49.8	7.24 (1.83)	7.089 (1.82)	0.15 (0.56)
Reliability	8.22 (1.64)	75.1	8.333 (1.73)	8.119 (1.55)	0.215 (0.36)
General Professional/Academic Knowledge	7.37 (1.90)	52.3	7.389 (1.99)	7.347 (1.82)	0.043 (0.88)
Behavior at the Workplace	8.09 (1.61)	70.6	8.333 (1.55)	7.861 (1.63)	0.472* (0.04)
Knowledge of contemporary Issues in Relevant Sectors and Shows Eagerness to Apply in Works	7.31 (1.77)	51.8	7.458 (1.67)	7.178 (1.85)	0.28 (0.27)
Teamwork	7.86 (1.71)	64.5	7.958 (1.55)	7.762 (1.85)	0.196 (0.42)
Willingness to learn	7.43 (1.89)	50.8	7.4 (1.85)	7.455 (1.93)	-0.055 (0.84)
Understanding and properly providing directions for work assignments	7.55 (1.70)	52.3	7.552 (1.67)	7.545 (1.75)	0.008 (0.98)
Strong critical thinking & analytical skills	6.88 (1.88)	43.2	6.958 (1.97)	6.802 (1.79)	0.156 (0.56)
Work-Related Practical Knowledge	7.09 (1.97)	47.7	7.125 (1.97)	7.059 (1.97)	0.066 (0.82)
Working Under Pressure	7.57 (1.70)	56.4	7.708 (1.71)	7.436 (1.69)	0.273 (0.26)
Skills in Decision Making	7.21 (1.73)	47.7	7.421 (1.71)	7.01 (1.74)	0.411 (0.10)
Written Communication (in Bengali)	7.77 (1.80)	61.9	7.875 (1.89)	7.673 (1.72)	0.202 (0.43)
Verbal Communication (in Bengali)	7.92 (1.69)	59.9	8.021 (1.68)	7.832 (1.71)	0.189 (0.44)
English Language Proficiency	6.38 (1.97)	30.5	6.615 (1.80)	6.158 (2.10)	0.456 (0.10)
Basic Computer Skill	6.57 (2.07)	38.6	6.76 (2.07)	6.396 (2.06)	0.364 (0.22)
Advanced Computer Skill	4.97 (2.57)	22.3	5.021 (2.56)	4.93 (2.60)	0.091 (0.81)
Time Management	7.68 (1.94)	63.5	7.947 (1.53)	7.426 (2.24)	0.521 (0.06)

**Source:** Mid-term Satisfaction Survey, BIDS-2022.

**Note:** \*, \*\*, &\*\*\* refer to 10%, 5 %, & 1% level of satisfaction, respectively.

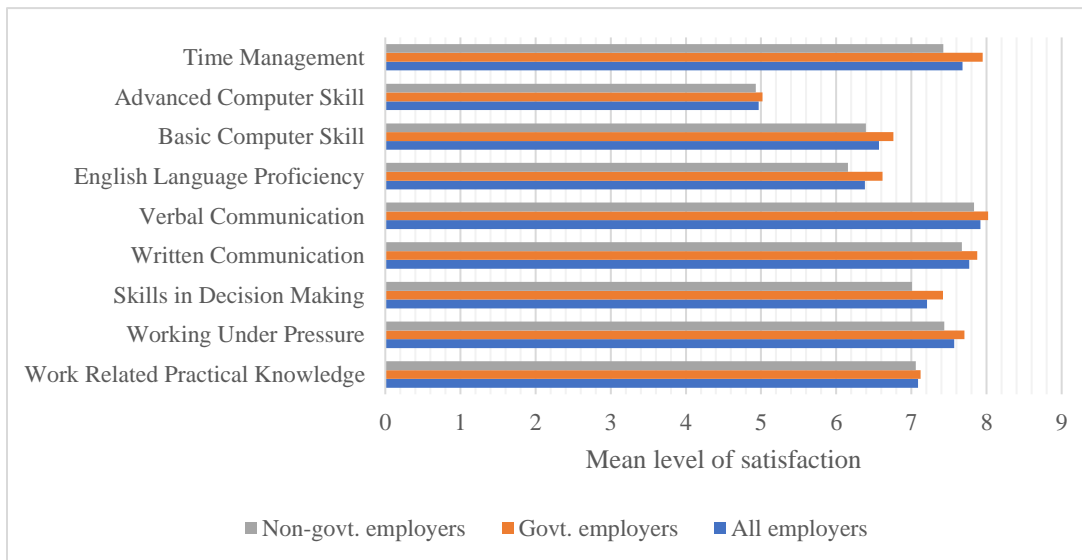
Figures 7.4 and 7.5 present the graphical representation of the mean value of the satisfaction level of selected key skills of the employers.

**Figure 7.4: Satisfaction with Different Key Skills**



Source: Mid-term Satisfaction Survey, BIDS, 2022.

**Figure 7.5: Satisfaction with Different Key Skills**



Source: Mid-term Satisfaction Survey, BIDS, 2022.

Employers were asked about the skills and abilities of NU graduates that make them more employable. Table 7.7 shows the findings relevant to that. Employers were asked to choose multiple answers. The table shows that 77.7 per cent of employers believe that NU graduates do not change jobs frequently, and about 72 per cent of employers said that it is easy to train them.

71.1 per cent of employers found NU graduates are interested in working with lower pay, and they are very much hardworking and willing to learn new things at work. Almost 65 per cent of employers agree that NU graduates are good at teamwork. Moreover, 50.3 per cent of employers said that NU college graduates are skillful and knowledgeable and possess recommendable soft skills. According to our results, the non-government employers responded more positively (percentage of response is above 50) in favour of NU graduates than the government employers (below 50 per cent response).

**Table 7.7: Skills and Abilities of the NU College Graduates (multiple answers)**

Skills and abilities	Tick Mark (poly response, %)	Govt. employers	Non-govt. employers
NU college graduates are skillful and knowledgeable	50.3	49.5	50.5
They possess recommendable soft skills	50.3	45.5	54.6
Hardworking and willing to learn new things	69.5	46.7	53.3
Easy to train up	71.6	46.8	53.2
Innovative	40.6	47.5	52.5
Good at teamwork	64.5	48.0	52.0
They do not switch jobs frequently	77.7	45.8	54.3
Interested in working with lower pay	71.1	46.4	53.6
Others	3.1	33.3	66.7

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

## 7.5 Overall Satisfaction of Employers

Overall satisfaction with the skills and qualities of NU graduates is reported in Table 7.8 if the employers employed at least one NU graduate in the last 12 months. The mean overall satisfaction is 3.73 out of a 5-point scale. That means, on average, the employers are close to satisfied with the NU graduates as this value is closer to 4 (=satisfied) on the Likert scale. The difference in mean overall satisfaction is not statistically significantly different between the government and non-government employers. We find that only 12.04 percent of the employers who hired NU graduates in the last 12 months were highly satisfied with the overall skills and qualities of the NU graduates.

**Table 7.8: Overall Employer Satisfaction with NU Graduates**

Overall Satisfaction with Skills and Qualities	All		Govt.	Non-govt.	Difference (p-value)
	Mean (SD)	Highly Satisfied (%)	Mean (SD)	Mean (SD)	
	3.73 (0.849)	12.04	3.89 (0.649)	3.64 (0.933)	

**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

**Note:** \*, \*\*, and \*\*\* represent significant at 10%, 5%, and 1% levels.

## 7.6 Qualities of NU Graduates that Need Improvements

A list of competencies that NU graduates should develop was sent to the employers, who were asked to check the boxes given to each talent if they agreed. Over 80 per cent of the employers believe that NU students should develop their talents in five following areas out of the total seven: (a) computer/ICT skills, (b) English language proficiency, (c) presentation skills, (d) technical knowledge, and (e) communication skill (Table 7.9). A higher percentage of private-sector employers consider that NU graduates should improve all their skills than their government counterparts. However, a higher percentage of government employers suggest that graduates of NU-affiliated colleges should improve their computer/ICT skills and English language proficiency.

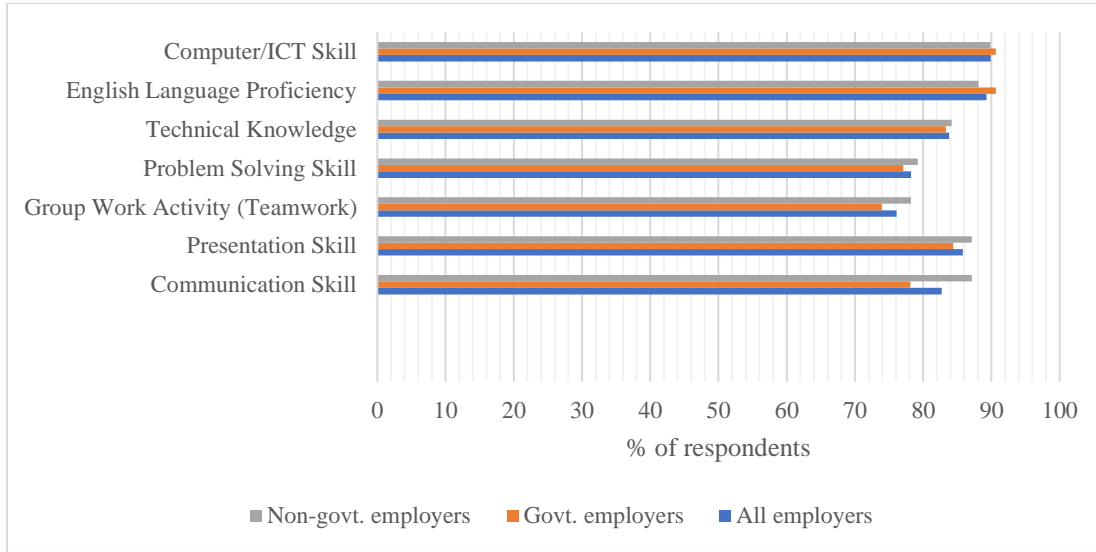
Employers in the private sector believe that NU students should develop all of their skills more than their counterparts in the public sector. Nevertheless, a higher percentage of employers who work in government organisations advise NU graduates to sharpen their computer or ICT skills as well as their English language ability. Figure 13 shows that over 90 per cent of government employers said that NU graduates need to improve their computer or ICT skills; the biggest proportion of private companies also highlighted improvement of computer or ICT skills.

**Table 7.9: Aspects of NU College Graduates Need Improvement**

Skills	All employers (Tick Mark Percentage)	Govt. employers (% of respondents)	Non-govt. employers (% of respondents)
Communication Skill	82.7	78.13	87.13
Presentation Skill	85.8	84.38	87.13
Group Work Activity (Teamwork)	76.1	73.96	78.22
Problem-Solving Skill	78.2	77.08	79.21
Technical Knowledge	83.8	83.33	84.16
English Language Proficiency	89.3	90.63	88.12
Computer/ICT Skill	89.9	90.63	89.85

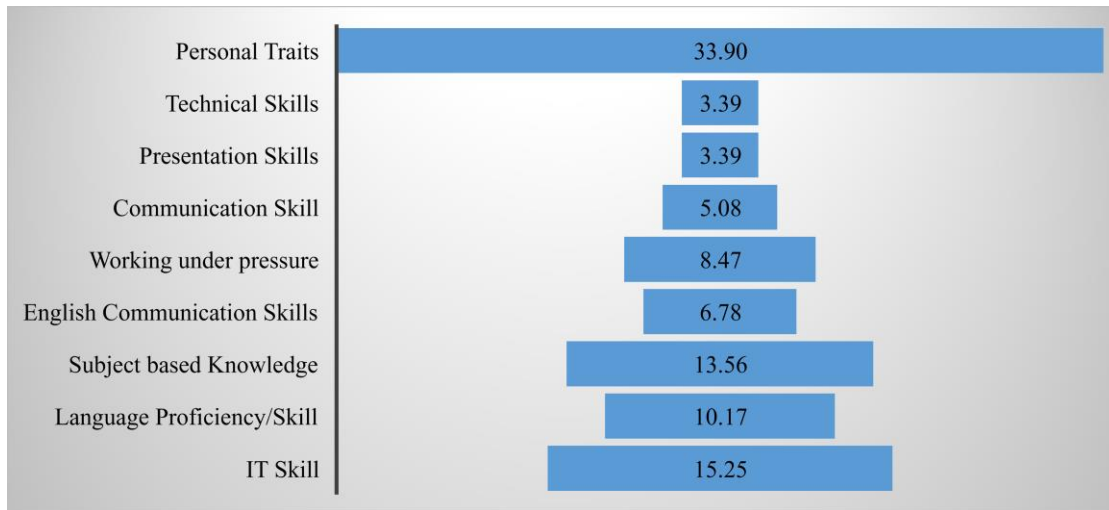
**Source:** Mid-term Satisfaction Survey, BIDS, 2022.

**Figure 7.6: Per cent of Employers Saying the Following Skills Needed to be Improved among NU Graduates**



Source: Mid-term Satisfaction Survey, BIDS, 2022.

**Figure 7.7: Skills Needed for Employment Prospect**



Source: Mid-term satisfaction survey, BIDS, 2022.

In conclusion, Employers were highly satisfied with the overall skills and qualities of the NU graduates. However, the employers believe that NU students should develop their talents in the following areas: (a) computer/ICT skills, (b) English language proficiency, (c) presentation skills, (d) technical knowledge, and (e) communication skills. However, a higher percentage of government employers suggest that graduates of NU-affiliated colleges should improve their computer/ ICT skills and English language proficiency.

## CHAPTER 8

# IMPACT OF IDG GRANT ON SATISFACTION OF BENEFICIARIES: A COMPARISON BETWEEN BASELINE AND MID-TERM DATA

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The College Education Development Program (CEDP) promotes institution-led activities that focus on creating quality teaching-learning environments in government and non-government colleges through the availability of Institutional Development Grants (IDGs). In this particular section, we compare data from the baseline satisfaction survey with the mid-term satisfaction survey to measure the impact of these competitive grants on the overall teaching and learning environment of NU-affiliated colleges. It is to be noted that the DiD has been calculated at the college level to identify the impact of the IDGs that were given after the baseline satisfaction survey in 2019.

### 8.1 Difference Between Some Selected Outcome Variables Between Baseline and Mid-term

In the baseline data, the mean value of age of the college, the number of multimedia classrooms, the number of labs, the number of teachers, the number of trained teachers (within Bangladesh), the number of trained teachers (abroad), the satisfaction scores (in a scale of 1 to 5) on the teaching and learning environment, the satisfaction scores on the quality of academic infrastructure, and the satisfaction scores on the degree of industry linkage are not significantly different between IDG-awarded colleges (treatment group) and IDG non-recipient colleges (control group) (see Table 7.1). However, the mean values of the number of students in honours level, the number of classrooms, the number of computer labs, the satisfaction score on the quality of internet connection and other related facilities, and the satisfaction score on the quality of facilities for students' soft skill improvement are significantly different between IDG-awarded colleges and IDG non-recipient colleges.

On the other hand, in the mid-term data, the mean values of age of the college, the number of students in honours level, the number of labs, the number of teachers trained abroad, the satisfaction score on the quality of internet connection, and other related facilities, and the satisfaction score on the degree of industry linkage are not significantly different between IDG-awarded colleges and IDG non-recipient colleges. However, all the other variables, namely the number of classrooms, the number of multimedia classrooms, the number of computer labs, the number of teachers, the number of teachers trained within Bangladesh, the satisfaction score on the quality of academic infrastructure, and the satisfaction score on the

quality of facilities for students' soft skill improvement are significantly different between IDG-awarded colleges and IDG non-recipient colleges (see Table 8.1).

These results show that at the college level, the Institutional Development Grant (IDG) has made significant improvement in the IDG-awarded colleges compared to IDG non-recipient colleges.

**Table 8.1: T-test for Mean Differences Between the Selected Outcome Variables**

Selected variables	Baseline (n=75, control=31, treatment=44)				Mid-term (n=73, control=32, treatment=41)			
	IDG colleges (T)	IDG non-colleges (C)	Mean difference (T-C)	P value	IDG colleges (T)	IDG non-colleges (C)	Mean difference (T-C)	P value
Age of college	54.63	51.4	3.23	0.51	56	51.18	4.81	0.32
Number of students in honours level	4473.86	2858.56	1615.29	0.03**	4967.04	3741.56	1225.47	0.26
Number of classrooms	41.32	26.96	14.35	0.00***	44.65	26.87	17.77	0.00***
Number of multimedia classrooms	7.83	5.96	1.87	0.21	14.78	6.58	8.19	0.00***
Number of labs	5.19	5.33	-0.13	0.92	5.52	4.83	.69	0.41
Number of computer labs	1.59	1.19	0.39	0.06*	2.24	1.32	.92	0.00***
Number of teachers	76.84	62.29	14.55	0.15	81.17	52.21	28.95	0.00***
Number of teachers trained (within Bangladesh)	17.51	14.95	2.55	0.50	49.26	26.10	23.15	0.00***
Number of teachers trained (abroad)	2.85	1.4	1.45	0.35	9.1	3.62	5.47	0.25
Teaching and learning environment	3.54	3.64	0.1	0.62	3.90	3.67	0.22	0.21
Quality of academic infrastructure	3	2.86	0.14	0.58	3.31	2.48	0.83	0.00***
Quality of internet connection and other related facilities	2.25	2.9	0.65	0.00***	2.95	2.64	0.30	0.21
Quality of facilities for students' soft skill improvement	2.2	2.66	0.46	0.05**	2.85	2.16	0.69	0.00***
Degree of industry linkage	1.68	1.8	-0.11	0.62	1.70	1.5	0.20	0.32

**Source:** Baseline Satisfaction Survey, BIDS-2019 and Mid-term Satisfaction Survey, BIDS-2022.

**Note:** \*, \*\*, and \*\*\* indicate significance at 10 per cent, 5 per cent, and 1 per cent levels, respectively.

## 8.2 Impact of Institutional Development Grant: A Regression-Based Analysis

We ran DiD regressions on the five satisfaction scores (measured on a scale of 1 to 5). In the regression, we controlled for some explanatory variables at the college level, namely the age of the college, the number of students in honours level, the number of classrooms, the number of multimedia classrooms, the number of labs, the number of computer labs, number of teachers, the number of teachers trained (within Bangladesh), and the number of teachers trained (in abroad). We ran the DiD regressions for the full sample first and then separately for the government and non-government colleges to see the impact at a disaggregated level.

### 8.2.1 Difference in Difference (DiD) Estimators for the Full Sample

For the full sample, the DiD of the satisfaction score on the quality of academic infrastructure, the satisfaction score on the quality of internet connection and other related facilities, and the satisfaction score on the quality of facilities for students' soft skill improvement are statistically significant. The DiD for the other two satisfaction scores, namely, the teaching and learning environment and the degree of industry linkage, are not statistically significantly different from zero (see Table 8.2).

These results show that the colleges that received Institutional Development Grants (IDG) have made a positive and statistically significant impact on the improvement of the quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skills compared to those who did not receive this grant. However, the grant has made some changes in the teaching and learning environment and the degree of industry linkage between IDG-awarded colleges and IDG non-recipient colleges. These changes are not statistically significant.

**Table 8.2: DiD for the Full Sample**

Variables	Full sample							Diff-in-Diff	P value
	Before			After					
	Treated	Control	Difference (T-C)	Treated	Control	Difference (T-C)			
Teaching and learning environment	3.175	3.364	-0.189	3.475	3.271	0.204	0.394	0.16	
Quality of academic infrastructure	2.101	2.209	-0.108	2.476	1.936	0.540	0.649	0.061*	
Quality of internet connection and other related facilities	1.990	2.721	-0.731	2.622	2.252	0.371	1.102	0.002***	
Quality of facilities for students' soft skill improvement	1.411	1.996	-0.585	2.009	1.455	0.554	1.139	0.001***	
Degree of industry linkage	1.232	1.500	-0.267	1.292	1.240	0.052	0.319	0.333	

**Source:** Baseline Satisfaction Survey, BIDS, 2019 and Mid-term Satisfaction Survey, BIDS, 2022.

**Note:** \*, \*\*, and \*\*\* indicate statistical significance at 10 per cent, 5 per cent, and 1 per cent levels, respectively.



### 8.2.2 Difference in Difference (DiD) Estimators by College Category

The subsample of government colleges provides statistically significant DiD estimates for the satisfaction scores on teaching and learning environment, quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skill improvement. For the other satisfaction score, namely the degree of industry linkage, the DiD is not statistically significantly different from zero (see Table 8.3).

**Table 8.3: DiD for Government Colleges**

Variable	Government Colleges						Diff-in-Diff	P value
	Before			After				
	Treated	Control	Diff (T-C)	Treated	Control	Diff (T-C)		
Teaching and learning environment	3.222	3.420	-0.198	3.729	3.258	0.471	0.669	0.077*
Quality of academic infrastructure	2.119	2.301	-0.182	2.175	1.720	0.454	0.637	0.133*
Quality of internet connection and other related facilities	2.123	3.106	-0.984	2.862	2.271	0.591	1.575	0.000***
Quality of facilities for students' soft skill improvement	1.744	2.377	-0.633	2.529	1.693	0.836	1.469	0.002***
Degree of industry linkage	1.395	1.569	-0.173	1.502	1.232	0.270	0.443	0.294

Source: Baseline Satisfaction Survey, BIDS-2019, and Mid-term Satisfaction Survey, BIDS, 2022.

Note: \*, \*\*, and \*\*\* indicate statistical significance at 10 per cent, 5 per cent, and 1 per cent levels, respectively.

For the non-government colleges, the DiD estimates are statistically insignificant for all five satisfaction scores (see Table 8.4). These results imply that the IDGs have a positive and significant impact on increasing the satisfaction level of teaching and learning environment of students in government colleges compared to non-government colleges.

**Table 8.4: DiD for Non-government Colleges**

Variable	Non-government Colleges						Diff-in-Diff	P value
	Before			After				
	Treated	Control	Diff (T-C)	Treated	Control	Diff (T-C)		
Teaching and learning environment	3.326	3.340	-0.014	3.184	3.222	-0.037	-0.023	0.961
Quality of academic infrastructure	2.297	1.972	0.325	2.886	2.073	2.886	0.488	0.460
Quality of internet connection and other related facilities	1.484	1.490	-0.006	1.942	1.429	0.512	0.518	0.483
Quality of facilities for students' soft skill improvement	0.874	0.968	-0.094	1.045	0.599	0.446	0.540	0.339
Degree of industry linkage	0.539	0.969	-0.430	0.667	0.765	-0.098	0.332	0.608

Source: Baseline Satisfaction Survey, BIDS-2019, and Mid-term Satisfaction Survey, BIDS, 2022.

The overall results show that the IDG is important for the colleges to improve their teaching and learning environments. It has a positive and statistically significant impact on increasing the quality of teaching and learning environment of NU-affiliated colleges, especially in government colleges. In the case of non-government colleges, the impact is weaker. This might be the case because non-government colleges already have certain facilities for students that might not be available in government colleges. Therefore, providing grants to improve those facilities will have an impact on government colleges more than non-government colleges.

## CHAPTER 9

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

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BIDS has conducted the Mid-term Satisfaction Survey to measure the mid-term satisfaction level of National University-affiliated colleges' stakeholders, students, teachers, and NU graduates' employers.

The population for the study is around 757 colleges under the NU with Honours and Master's programs. We selected 10 per cent of the population as a sample, resulting in 75 colleges. We prepared four sets of structured questionnaires for the current students, teachers, principals, and potential employers of the National University graduates. We aimed to survey (actually surveyed) 3,060 (3,017) students and 1,275 (1,245) teachers from 255 Honours and Masters departments of the 75 sample colleges; 75 (73) principals from each of the colleges along with 200 (196) employers who either employed or would employ. To complement the quantitative surveys, qualitative approaches were employed, including eight focus group discussions (FGDs) of students, 8 FGDs of teachers, and 15 key informant interviews with the employers.

### 9.1 Summary and Conclusions

The overall satisfaction level regarding selected indicators shows that only in the case of the teaching and learning environment at the college are the principals almost satisfied with the existing facilities. The mean level of satisfaction for IDG-awarded and IDG non-recipient colleges within government and non-government sub-samples shows statistically significant differences in four overall satisfaction variables except for collaboration with industries for students' job placement. IDG-awarded government college principals reported that they are more satisfied with the existing teaching and learning environment, quality of academic infrastructure, internet connection at college, and soft-skill development of the students compared to IDG non-recipient government colleges.

In the subsample, between government and non-government colleges, we do not find any significant differences between the IDG-awarded colleges and IDG non-recipient colleges in any of the five satisfaction indicators.

However, in the case of a difference between IDG and non-IDG colleges, a highly significant difference exists between IDG-awarded colleges and IDG non-recipient colleges in the case of two satisfaction indicators. The IDG-awarded college principals reported to be more satisfied with the academic infrastructure of the college and the quality of soft-skills development of the students compared to IDG non-recipient colleges.

Findings from the College Teachers' Survey show that concerning the overall satisfaction of teachers, the highest level of satisfaction is for teaching-learning facilities (2.95), followed by academic infrastructure (2.85), computer lab (2.73), and connectivity through the internet (2.42). The lowest value of satisfaction is found for the college's linkage with industry for students' job placement (1.76). The overall satisfaction level of the teachers stays between 1 and 3 (on a scale of 1 to 5) for these indicators.

Among the government and the non-government college teachers, IDG-awarded colleges are more satisfied than the IDG non-recipient colleges. Overall, the satisfaction score for the IDG-awarded colleges is much higher compared to the IDG non-recipient colleges. The mean differences are also statistically significant for all the indicators.

Findings from the Current Students Survey show that students are satisfied with the teaching skills of the teachers, with a mean level of satisfaction of 3.92 (SD 0.99). This is followed by teaching/curriculum (3.54) and teaching and learning facilities provided by the colleges (2.57). The students of the IDG-awarded colleges are more satisfied with the proclamation of their own perceptions. For the teaching-learning facility-related indicators like available classrooms, library, laboratory, seminar laboratory, and other related facilities, students as a whole bunch fall under neither the satisfied nor dissatisfied category, as shown in Table 5.27. Similarly, when considering other features of the colleges, students from IDG-awarded colleges are more inclined towards the satisfaction scale than the IDG non-recipient ones.

Students are found to be least satisfied with the current state of University-Industry collaboration, with the lowest satisfaction level of 2.10 on a scale of 5. These findings are similar to the level of satisfaction of teachers.

Findings from the Employers' Survey show that 12.04 per cent of the employers who hired NU graduates in the last 12 months were highly satisfied with the overall skills and qualities of the NU graduates. Over 80 per cent of the employers believe that NU students should develop their talents in the following areas: (a) computer/ICT skills, (b) English language proficiency, (c) presentation skills, (d) technical knowledge, and (e) communication skills. However, a higher percentage of government employers suggest that graduates of NU-affiliated colleges should improve their computer/ICT skills and English language proficiency.

We compare the overall satisfaction level regarding all the relevant indicators discussed above by stakeholder types, i.e., principals, teachers, and students, and we observe differences among the average satisfaction levels. The overall satisfaction level with the teaching and learning environment is 3.81 among college principals, 2.95 among teachers, and 2.57 among

students. A similar pattern is also found for other indicators except the collaboration of colleges with industries. The satisfaction level regarding the collaboration of colleges with industries is noted as the lowest for principals (1.62) and teachers (1.76) and for students it is slightly higher (2.10 on a scale of 5). The lowest satisfaction level among students is recorded for connectivity through the internet (1.89), and the highest for teaching skills of teachers (3.92).

In the regression, we controlled for some explanatory variables at the college level, namely the age of the college, the number of students in honours level, the number of classrooms, the number of multimedia classrooms, the number of labs, the number of computer labs, number of teachers, the number of teachers trained (within Bangladesh), and the number of teachers trained (in abroad). The results from the DiD regressions are presented for the five satisfaction scores (measured on a scale of 1 to 5).

For the full sample, the DiD of the satisfaction scores on the quality of academic infrastructure, the quality of internet connection, and the quality of facilities for students' soft skill improvement are statistically significant. The DiD for the other two satisfaction scores, namely, the teaching and learning environment and the degree of industry linkage, are not statistically significantly different from zero.

These results show that the colleges that received Institutional Development Grants (IDG) have made positive and statistically significant impacts on the improvement of the quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skills compared to those who did not receive this grant. However, the grant has made some changes in the teaching and learning environment and the degree of industry linkage between IDG-awarded colleges and IDG non-recipient colleges. These changes are not statistically significant. The overall findings from the mid-term satisfaction survey highlighted that: (1) Institutional Development Grant (IDG) has made positive and statistically significant impact on the improvement of quality of academic infrastructure, quality of internet connection and other related facilities, and quality of facilities for students' soft skill compared to those who did not receive this grant, (2) The grant has made some changes in the teaching and learning environment, and the degree of industry linkage between IDG-awarded colleges and IDG non-recipient colleges. These changes are not significant enough to increase the satisfaction level of the students, teachers, and principals.

## 9.2 Major Findings

The major findings from our analysis are as follows:

- The student-teacher ratio is high in all types of colleges irrespective of their IDG status and management status (i.e., government vs. non-government).
- The Mother's Corner, which allows new mothers to continue breastfeeding while back at work or college, is a new addition to NU-affiliated colleges.
- IDG-awarded colleges have more facilities such as classrooms, exam halls, seminar rooms, libraries, common rooms, and washroom facilities on campus compared to IDG non-recipient colleges.
- The majority of principals reported that they have regular meetings of the academic council, and on average, ten meetings are held per academic year, which seems relatively high.
- On average, 17 teachers received training in Bangladesh from each college, and 2 received training abroad in the last 12 months.
- About half of the principals reported that newly recruited teachers received pedagogical training, almost 38 per cent of teachers received on-the-job/foundation training, and only 8 per cent received NU subject-based training in the last 12 months.
- Only 36 and 8.89 per cent of the non-government and government colleges maintain an alumni association, respectively.
- Non-government colleges collaborate more with industries for job placement of students than government colleges, as reported by the college principals.
- The proportion of teachers' evaluation by students is higher in IDG non-recipient colleges compared to that in IDG-awarded colleges.
- In the IDG non-recipient colleges, senior teachers tend to monitor classes of junior teachers more than in IDG-awarded colleges.
- In NU-affiliated colleges, classes are held regularly, problems are solved regularly in the class lessons, and teachers provide the students with extra consultation time.
- The employers are least satisfied with the following four qualities of the NU graduates: (a) advanced computer skills, (b) English language proficiency, (c) critical thinking & analytical skills, and (d) basic computer skills.

- The skills and abilities of NU graduates that make them more employable are as follows: NU graduates do not change jobs frequently, and they are easy to train. Moreover, NU graduates are interested in working with lower pay, are hardworking, and are willing to learn new things at work.
- During the Covid pandemic, teachers faced problems while conducting online classes, and students agreed to face difficulties in attending online classes.
- The problems mentioned by the students are unavailability of electronic devices, low internet speed, high internet cost, difficulties in using the online interface, lack of concentration, and lack of peaceful space compared to the university campus.
- The majority of the principals informed us that students were more attentive in online classes than in regular classes. They also agreed that learning time and the quality of education had declined due to COVID-19.
- All colleges have taken the required precautions after opening the regular classes. Wearing a face mask and using hand sanitiser are widely accepted precautionary measures on the college campus.
- The overall satisfaction level regarding selected indicators shows that only, in the case of the teaching and learning environment at the college, the principals are satisfied with the existing facilities.
- Concerning the overall satisfaction of teachers, the highest level of satisfaction is for teaching-learning facilities, followed by academic infrastructure and connectivity through the Internet.
- Students are satisfied with the teaching skills of the teachers.
- DiD of the satisfaction scores on the quality of academic infrastructure, the quality of internet connection, and the quality of facilities for students' soft-skill improvement are found to be statistically significant.

### **9.3 Recommendations**

Therefore, this study proposes the following recommendations for improving the teaching and learning experience at NU-affiliated tertiary colleges by increasing the overall satisfaction level of all stakeholders:

- (1) All types of beneficiaries have highlighted the poor level of industry collaboration. To facilitate industry collaboration, job fairs should be organised every year, preferably at the district level;

- (2) Introducing short course facilities can increase the job market opportunities of the NU-affiliated colleges.
- (3) Training for the NU teachers is highly recommended.
  - Teachers need to be well trained alongside training abroad.
  - Arrangement of professional training before the process of teacher recruitment.
  - Long-term subject-based training and pedagogical training should be arranged for the teachers to provide quality teaching.
- (4) The interrelation and collaboration between NU-affiliated colleges and universities should be increased. The colleges that are not well equipped with enough facilities can collaborate with the universities to share their equipment, such as computer labs, libraries, scientific labs, etc. This will help the less privileged colleges to provide quality teaching and learning facilities to the students.
- (5) Forming and activating the activities of Alumni Associations in the NU-affiliated colleges;
- (6) There should be funds available for the renovation of old academic buildings, addition to existing buildings, upgrading labs, research facilities for teachers wherever appropriate,
- (7) There should be some provision of need-based funds/emergency grants that might be used or made available to the college authorities in case of sudden emergency or need (e.g., a sudden flash flood in the Sylhet division).

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