

Revised Final Report

The Study on Project Effectiveness Including Endline Satisfaction: The College Education Development Project (CEDP)

Submitted to:

Project Director

College Education Development Project (CEDP)
Level#11, Probashi Kallayan Bhaban,
71-72, Eskaton Garden, Ramna, Dhaka

Prepared by:

Bangladesh Institute of Development Studies (BIDS)

E-17 Agargaon, Sher-e-Bangla Nagar
Dhaka-1207, Bangladesh

Contact Person:

Dr. S M Zulfiqar Ali

Research Director, BIDS
Phone: 58160404 (work), 01711-605252 (cell)
E-mail: zulfiqar@bids.org.bd

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Table of Contents

List of Acronyms.....	3
Executive Summary	5
PART-I: BACKGROUND CHAPTERS	14
1.1 Introduction.....	14
1.2: About CEDP and Its Activities.....	16
1.3 The Approach and the Methodology.....	24
PART II: ENDLINE SATISFACTION SURVEY (ESS)	33
2.1. BACKGROUND	33
2.2. METHODOLOGY AND SAMPLING.....	35
2.3. ACADEMIC ENVIRONMENT, FACILITIES, AND HUMAN RESOURCES OF NU AFFILIATED HONORS AND MASTER'S COLLEGES: RESPONSES FROM COLLEGE PRINCIPALS	42
2.4. QUALITY OF TEACHING, TEACHING SKILL, LEVEL OF SATISFACTION AND LEARNING ENVIRONMENT IN COLLEGES: RESPONSES FROM COLLEGE TEACHERS.....	72
2.5. QUALITY OF TEACHING AND LEARNING ENVIRONMENT: FINDING FROM THE STUDENT SURVEY	95
2.6: EMPLOYERS OPINIONS ON KNOWLEDGE AND SKILLS OF NU GRADUATES	110
PART III: PROJECT EFFECTIVENESS	118
3.1 Teaching-Learning Environment	118
3.2 Students Enrollment, Attendance and Graduation Rates	123
3.3 Teachers' and Staff Posting, Training and Development in the Colleges	134
3.4 Students' Attendance and Utilization of College Facilities: A Reality Check	141
3.5 Achievement and Progress Based on Activity Milestones,.....	151
Performance Indicators, and Environmental Safeguard	151
3.6 Improvements in Employment Outcome:	156
Evidence from Tracer Studies	156
3.7 Efficiency and Sustainability.....	167
PART-IV: SUMMARY, CONCLUSION AND RECOMMENDATION.....	175

Annex-1.1.....	187
List of the Documents	187
Annex-1.2.....	188
Detailed Schedule for Field Visit	188
Annex Tables from Chapter 3.3	191
Annex Tables from Chapter 3.4	200
Annex 5.1:.....	209
Effectiveness of the Project:.....	209
Evidence from the DLI-4 Verification Results of the Project (CEDP)	209
Annex 5.2:	215
Effectiveness of the Project:.....	215
Evidence from the Project (CEDP) Monitoring Reports	215
Annex 5.3:.....	220
Effectiveness of the Project: Extract from the National Strategic Plan for Higher Education Colleges in Bangladesh: 2023-2031	220
Annex-6.1.....	226
Questionnaires and Checklists	226

List of Acronyms

BIDS	Bangladesh Institute of Development Studies
BLSS	Baseline Satisfaction Survey
CEDP	College Education Development Project
CGPA	Cumulative Grade Point Average
DLI	Disbursement Linked Indicators
DPP	Development Project Proposal
EEP	Eligible Expenditure Program
ESS	Endline Satisfaction Survey
FGD	Focused Group Discussion
FM	Financial Management
GDP	Gross Domestic Product
GOB	Government of Bangladesh
GPA	Grade Point Average
HSC	Higher Secondary Certificate
ICT	Information & Communication Technology
IDA	International Development Association
IDG	Institutional Development Grants
IDP	Institutional Development Plans
IE	Impact Evaluation
IPF	Investment Project Financing
IT	Information Technology
KII	Key Informant Interview
KPI	Key performance indicators
MOE	Ministry of Education
MPO	Monthly Pay Order
MTSS	Mid-Term Satisfaction Survey
NGO	Non-government Organization
NTRCA	Non-Government Teachers Registration and Certification Authority
NTSC	Nonmovement Teachers Selection Commission
NU	National University
PMIS	Project Information Management System
PMU	Project Management Unit
PPT	PowerPoint

RBF	Results-Based Financing
RCT	Randomized Controlled Trial
SPC	Strategic Planning Committee
SSC	Secondary School Certificate
SWOT	Strengths, Weaknesses, Opportunities & Threats

The Study on Project Effectiveness Including Endline Satisfaction The College Education Development Project (CEDP)

Executive Summary

Main objective of the present study is to conduct an assessment of the effectiveness of the overall project activities, including measuring the end line satisfaction level of project beneficiaries (students, teachers and employers), in terms of the quality and relevance of teaching. The assessment of effectiveness part of the study looks at the effectiveness of the project considering project activities, and results and lessons. The study also targets to generate knowledge and document on the key project successes, lessons learned and remaining issues to address for future operations.

Findings from Principals' Survey

- The overall scenario regarding the project is encouraging; the number of students admitted into NU have increased over time. The number of students studying in honors and master's level and students completing their honors and master's program from NU affiliated colleges have increased from baseline satisfaction survey to endline satisfaction survey. This implies that the colleges that have received IDG grants are successful in increasing their student enrollment and graduation number over time from baseline to endline satisfaction survey.
- At the same time, it is also encouraging that the available facilities in the IDG colleges have been increasing over time. Number of classrooms, multimedia, laboratories, computer lab have shown a positive increase from baseline satisfaction survey to endline satisfaction survey. This implies that the colleges that have received IDG grants are successful in increasing the available facilities in the colleges overtime.
- The overall satisfaction for IDG colleges shows that in case of teaching and learning environment, quality of academic infrastructure and internet connection and speed we find positive impact of IDG grant on IDG awarded colleges. However, the impact of IDG grant is not yet that significant in generating soft-skill development and establishing collaboration of the colleges with industries.

Findings from Teachers' Survey

- The results show that with respect to overall satisfaction about teaching-learning facilities of colleges, the highest mean level of satisfaction is found for teaching-learning facilities (3.01), followed by soft-skill development (2.99), academic infrastructure (2.95), industry collaboration (2.80), and connectivity through internet (2.48). The lowest mean value of satisfaction is found for connectivity through internet. The overall satisfaction level of the teachers stays between 1 and 3 (in a scale of 1 to 5) for these indicators.

- The changes from base line to end line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers in case of 4 indicators, namely: academic infrastructure, computer lab, quality of internet connectivity and collaboration with industry. However, for teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much, it remains stagnant during the time between mid-line to end line satisfaction survey.

Findings from Students' Survey

- The survey results show that students of colleges were found satisfied about the teaching skills of the teachers, with a mean level of satisfaction of 3.86. This is followed by teaching and learning facilities provided by the colleges (2.72) and development of students' soft skills (2.52).
- The students of the IDG awarded colleges were more satisfied in expressing their own perceptions. Students from IDG awarded colleges are more inclined towards satisfaction scale than the IDG non-recipient ones.
- Students were found least satisfied about the current state of College-Industry collaboration with the lowest satisfaction level of 2.28 in a scale of 5. These findings are similar to the level of satisfaction of teachers in this respect also.
- The changes in satisfaction level of the students from baseline to endline satisfaction survey show that in case of all the 5 indicators of infrastructural facility at the college, students' satisfaction have increased from baseline to endline satisfaction survey. Overall, there is a graduation of 1 Likert scale above from baseline to endline satisfaction survey (average 0.98).

Findings from Employers' Survey

- Overall satisfaction results show that the mean overall satisfaction is 3.66 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 overall satisfaction level of the employers remained same over the time during the three-satisfaction survey starting from 2021 to 2023, However, a good proportion of employers are satisfied with quality and skills of NU graduates they employed. Majority of them believe that the NU graduates are hardworking and willing to learn new things, it is easy to train them up and they do not switch jobs frequently. However, they need to improve their English language proficiency, computer/ICT skill, communication skills, and presentation skills to make them more competent with the current employment situation.

Overall Summary Satisfaction in Three Satisfaction Survey

As mentioned earlier, the satisfaction of the principals regarding institutional characteristics of NU affiliated colleges does not change much during the three-satisfaction survey period. This is basically the general characteristics of the affiliated colleges such as number of departments and teacher, designation of teachers etc. which usually does not vary much overtime.

Table 1: Overall Satisfaction of Principals Overtime

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	3.52 (0.85)	3.63 (1.01)	-0.113 (0.683)	3.59 (0.86)	3.90 (0.77)	3.68 (0.75)	0.23 (0.22)	3.81 (0.76)	3.667 (0.884)	3.276 (0.922)	0.442 ** (0.029)	3.546 (0.858)
Quality of academic infrastructure	2.89 (1.09)	2.89 (0.81)	-0.006 (0.984)	2.95 (1.02)	3.32 (1.04)	2.48 (1.00)	0.83*** (0.00)	2.96 (1.09)	2.867 (1.008)	2.552 (0.948)	0.622 ** (0.012)	2.933 (1.056)
Connectivity through internet	2.26 (0.98)	3.16 (0.83)	-0.9*** (0.003)	2.51 (1.06)	2.95 (1.00)	2.65 (1.08)	0.31 (0.22)	2.82 (1.04)	2.800 (1.126)	2.379 (1.083)	0.360 (0.185)	2.60 (1.138)
Quality of soft-skills development of the students	2.11 (0.93)	2.74 (1.19)	-0.626* (0.052)	2.39 (1.02)	2.85 (1.01)	2.16 (0.93)	0.69** (0.00)	2.56 (1.03)	2.200 (1.095)	2.069 (1.067)	0.148 (0.541)	2.16 (1.013)
Collaboration of the colleges with industries	1.59 (1.01)	1.74 (1.05)	-0.144 (0.64)	1.73 (1.02)	1.71 (0.90)	1.50 (0.82)	0.21 (0.32)	1.62 (0.87)	1.600 (0.932)	1.724 (1.131)	-0.050 (0.834)	1.69 (0.999)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

For overall satisfaction of teacher, changes from base line to end line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers. For teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much over time.

Table 2: Overall Satisfaction of Teachers Over time

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	3.14 (0.99)	3.23 (1.00)	-0.084 (0.256)	3.28 (0.98)	3.14 (0.98)	2.66 (1.04)	0.48*** (0.00)	2.95 (1.03)	3.14 (1.09)	2.73 (1.13)	0.417*** (0.000)	3.01 (1.12)
Quality of academic infrastructure	2.52 (1.05)	2.70 (1.07)	-0.179 (0.021)	2.80 (1.12)	3.08 (1.08)	2.49 (1.06)	0.58*** (0.00)	2.84 (1.11)	3.15 (1.12)	2.55 (1.11)	0.606*** (0.000)	2.95 (1.15)
Access to ICT facility	2.00 (0.99)	2.20 (1.10)	-0.195 (0.012)	2.18 (1.11)	3.00 (1.20)	2.09 (1.04)	0.90*** (0.00)	2.63 (1.22)	3.19 (1.14)	2.21 (1.18)	0.980** (0.000)	2.86 (1.24)
Connectivity through internet	2.17 (1.00)	2.37 (1.15)	-0.197 (0.012)	2.23 (1.07)	2.60 (1.11)	2.14 (1.09)	0.47*** (0.00)	2.42 (1.12)	2.68 (1.15)	2.09 (1.14)	0.596*** (0.000)	2.48 (1.18)
Quality of soft-skills development of the students	2.05 (0.97)	2.04 (1.05)	0.010 (0.893)	2.14 (1.06)	2.12 (1.06)	1.78 (0.96)	0.34*** (0.00)	1.98 (1.03)	2.09 (1.07)	1.79 (0.98)	0.305*** (0.000)	2.99 (1.05)
Collaboration of the colleges with industries	1.38 (0.78)	1.66 (1.08)	-0.280 (0.000)	1.67 (1.02)	1.82 (1.02)	1.67 (1.00)	0.16** (0.01)	1.76 (1.01)	1.84 (1.08)	1.73 (1.03)	0.103 (0.094)	2.80 (1.06)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

The overall satisfaction of the students from baseline to endline satisfaction survey show that in case of all the 5 indicators of infrastructural facility at the college students' satisfaction have increase from baseline to endline satisfaction survey.

Table 3: Overall Satisfaction of Students Overtime

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	2.60 (1.27)	2.87 (1.29)	-0.27 (0.000)	2.82 (1.26)	2.73 (0.92)	2.22 (0.92)	0.51*** (0.00)	2.57 (0.95)	2.89 (0.91)	2.32 (0.95)	0.569*** (0.000)	2.71 (0.96)
Quality of academic infrastructure					3.42 (1.31)	3.01 (1.36)	0.42*** (0.00)	3.27 (1.35)	2.48 (1.18)	2.01 (1.09)	0.469*** (0.000)	2.33 (1.17)
Access to ICT facility	1.78 (1.16)	2.16 (1.35)	-0.38 (0.000)	2.13 (1.31)	2.22 (1.12)	1.78 (1.04)	0.44*** (0.00)	2.21 (1.25)	2.58 (1.30)	2.40 (1.29)	0.174*** (0.000)	2.52 (1.30)
Connectivity through internet	4.61 (0.62)	4.53 (0.79)	0.08 (0.022)	4.60 (0.69)	1.79 (1.13)	1.63 (1.02)	0.17*** (0.00)	1.73 (1.09)	2.01 (1.24)	1.89 (1.23)	0.116* (0.013)	1.97 (1.23)
Quality of soft-skills development of the students	1.74 (1.15)	2.04 (1.32)	-0.30 (0.000)	1.94 (1.25)	2.49 (1.29)	2.33 (1.29)	0.15** (0.00)	2.42 (1.29)	2.58 (1.30)	2.40 (1.29)	0.174*** (0.000)	2.52 (1.30)
Collaboration of the colleges with industries	1.94 (1.16)	2.21 (1.27)	-0.27 (0.000)	2.16 (1.23)	2.12 (1.28)	2.08 (1.26)	0.05 (0.31)	2.10 (1.27)	2.32 (1.33)	2.20 (1.30)	0.118* (0.019)	2.28 (1.32)
Teaching skills of the teachers	3.82 (0.95)	3.97 (0.94)	-0.15 (0.001)	3.86 (0.94)	4.00 (0.94)	3.80 (1.07)	0.20*** (0.00)	3.92 (0.99)	3.93 (0.95)	3.71 (1.05)	0.217*** (0.000)	3.86 (0.99)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

It is to be noted that the difference between mid-term to end-line satisfaction survey is only one year and base-line to mid-line satisfaction survey is also only one year. Therefore, there may not be significant changes in terms of the outcome variables. Usually observing the investment effect like IDGs there should be substantial time lag/gap to observe the actual effect of that investment. Usually, the impact will start after 3 to 5 years of the development grants.

Moreover, although selection of teacher and students are random within the department, they are not the same in three survey period. The principals are the same entity in majority of the cases. The Likert scale is a psychological scale used to identify individual preferences and order the responses, which is more individualistic. Therefore, individual preferences may affect the satisfaction variable but applying the law of large numbers this may be balanced. However, the time lag is still in effect.

The low scoring of industry linkage is basically for: (i) the colleges were not fully prepared for this kind of collaboration at current stage, (ii) there is no official preparation for linking industry with the NU curriculum for industry collaboration. The collaboration so far done is ad hoc from

personal reference/ initiatives of some teachers. (iii) Soft skill development some initiatives have been taken from the NU, such as: introduction of short courses. However, according to the teachers it is not up to the level of employers' satisfaction. Therefore, following initiatives can be considered. Such as:

- Enhance the use of ICT in teaching, provide ICT skills training, and upgrade ICT facilities for teachers.
- For soft-skill development digital skill development courses or ICT training courses can be introduced.
- Set up job placement support services and carrier counselling within colleges.
- It is recommended to organize job fairs every year, preferably at the district level, to facilitate industry collaboration.

Findings on Project Effectiveness

- In the surveyed colleges, a total of 2,746 actual classrooms were found, with 70.21% (1,928 classrooms) belonging to IDG-recipient colleges and 29.79% (818 classrooms) to non-IDG colleges. Notably, out of the 843 multimedia classrooms in these colleges, 86.01% (725 classrooms) were in IDG-recipient colleges, highlighting a significant emphasis on modernizing facilities through IDG funding. This stark contrast with non-IDG colleges underscores the impact of funding on multimedia infrastructure.
- The higher number of Bangabandhu corner, Muktijuddho corner, Childcare/daycare corner, Mothers' corner, establishment of employment cell, workshop for skill development, and job fair in IDG-recipient colleges further exemplify the positive outcomes of IDG funding. This suggests that IDG initiatives have successfully contributed to enhancing various aspects of college facilities and opportunities for ensuring better teaching-learning environment, setting them apart from non-IDG colleges in these regards.
- Compliance of Social and Environmental Safety Measures, Library Renovation, Purchasing of Books for Library, Renovation/Establishment of Computer Lab, Establishment of Multifunctional ICT Lab, Renovation/Establishment of Science Lab, Provisions for arranging Pure Drinking Water Facilities in the colleges and Modernization of Auditoriums have been in the plans for most of these colleges and the works have been completed successfully. Provisions including Internet/Wi-Fi Network/ICT Corner facilities, Establishment of Networking, and Management Information System are still mostly works in progress for the colleges that had plans for those.
- Overall, apart from significant positive changes in the number of enrollments, average attendance rate, average number of participation and average number of passing rate at some years for the students in the IDG recipient colleges in comparison to the non-IDG colleges, there do not seem to have significant differences in case of the students' participation rates, completion rates or pass rates over the years between the two types

of colleges. As the changes like increase in attendance rates are easy to locate and is reflected well in the short run, changes like improvement in the completion rate and pass rates may come eventually, and after certain level of participation and engagement on part of the students, and improvement in teaching-learning environment.

- There has been significant increase in the sanctioned teaching posts in the IDG recipient colleges than the non-IDG colleges. Teachers' employment rate over the last 6 years have also significantly increased in the IDG recipient colleges than the non-IDG colleges. The employment rates for other employees at the colleges have also increased though the differences for IDG recipient and non-IDG colleges are not statistically significant. Many training programs have been arranged and 96.23% of the targeted teachers and 91.40% of the targeted employees (Other than teachers) have gained some kind of training through CEDP or other organization. The project has been extended to ensure the proper training of the teachers. About 71.74% of the IDG managers seem to be very satisfied with the outcome of the project, 26.09% seem to be somewhat satisfied and 2.17% are neither satisfied nor dissatisfied with the project activities carried out through the years. According to the IDG managers at the colleges, allocating adequate budget to the colleges, recruiting manpower with proper technical knowledge, providing maintenance supports to the colleges after the ending of the project and regular monitoring are the keys to make the benefits of the project more sustainable and positive.
- During the direct verification of students' attendance and utilization of the colleges' facilities, it was seen that all the modernized classrooms, labs, laboratories, libraries and other facilities including the Bangabandhu corners, muktijuddho corners and study zone with ICT facilities in the IDG recipient colleges had significantly positive usage ratio than the non-IDG colleges. The attendance results from the colleges and the direct verification on the day of the survey visits coincides and show significantly positive outcome for the IDG recipient colleges than the non-IDG colleges.
- The milestones achieved include procuring goods, renovating infrastructure, and conducting various activities such as training, self-assessment reviews, library automation, and networking. Directly achievable tasks, like recruiting IDG staff at colleges (100%) and purchasing goods with renovations (90%), have been largely completed. The teaching-learning environment at colleges has improved, and training for employees has been organized. Some developmental targets were initiated but proved challenging in this phase. Challenges related to self-assessment reviews, automation, industry partnerships, and connectivity have been considered and partially addressed, with expected success in the future.
- Colleges have made significant strides in modernizing teaching-learning equipment and facilities, achieving up to 100% of their targets. Approximately 57.98% of teachers are using smart boards, showing promising progress despite the need for familiarity. Efforts to enhance students' employability and soft skills are positively impacting teaching-learning outcomes. Colleges are actively addressing measures like MIS usage, internet connectivity, Wi-Fi networks, and organizing training for both students and teachers.

Initiatives such as MoU with organizations, internships, and job fairs aim to boost the employment possibilities for NU graduates. Moreover, there were no negative repercussions on the environment from the carrying out of the development activities done through IDG funding.

Conclusion

- The overall scenario regarding the project is encouraging; over time the number of students admitted into NU is increasing.
- At the same time, it is also encouraging that over time the available facilities in the IDG colleges have increased. Number of classrooms, multimedia, laboratories, computer lab have shown a positive increase from baseline satisfaction survey to endline satisfaction survey.
- The overall satisfaction for IDG colleges over time shows that in case of teaching and learning environment and quality of academic infrastructure we find positive impact of IDG grant on IDG awarded colleges.
- However, the impact of IDG grant is insignificant for increasing the quality of soft-skill development and establishing collaboration with industries.
- The survey results show that students are found satisfied about the teaching skills of the teachers, and teaching-learning facilities provided by the colleges.
- However, students are found least satisfied about the current state of College-Industry collaboration. These findings are similar to the level of satisfaction of teachers in this respect also.
- The overall satisfaction level of the employers remains same over the time during the three-satisfaction survey starting from 2021 to 2023, However, a good proportion of employers are now satisfied with quality and skills of employed NU graduates.
- Majority of them believe that the NU graduates are hardworking and willing to learn new things, it is easy to train them up and they do not switch jobs frequently.
- However, they need to improve their English language proficiency, computer/ICT skill, communication skills, and presentation skills to make them more competent with the current employment situation.
- During the direct verification of students' attendance and utilization of the colleges' facilities, it was seen that all the modernized classrooms, labs, laboratories, libraries and other facilities including the Bangabandhu corners, Muktijuddho corners and study zone with ICT facilities in the IDG recipient colleges had significantly positive usage ratio than the non-IDG colleges.
- The attendance results from the colleges and the direct verification on the day of the survey visits show significantly more positive outcome for the IDG recipient colleges than the non-IDG colleges.

- Colleges have made significant improvements in modernizing teaching-learning equipment and facilities, achieving up to 100% of their targets. Approximately 57.98% of teachers are using smart boards, showing promising progress despite the need for familiarity.
- Employment outcome of NU graduates clearly shows that the rates of unemployment have reduced from 66% in 2021 to 48% in 2023. In fact, what we have found from the follow-up tracer study is that the unemployment rate is indeed 28% if the ILO-BBS definition is used.
- This clearly indicates that though unemployment rate is still high among the NU graduates, we observe a significant improvement in employment rate among the NU graduates over the past couple of years which clearly signifies positive contribution of CEDP in preparing the NU graduates for employable in the job market.

PART-I: BACKGROUND CHAPTERS

1.1 Introduction

Background

Education is a powerful tool for social development as it can improve the socio-economic condition of people by removing inequalities and improving health and living conditions. It is very crucial for a nation's development and subsequent growth. Education, may it be primary, secondary or tertiary, plays an important role in addressing the scaling up of skills and potential among the existing human capital of the country. In fact, it is becoming increasingly clear that higher or tertiary education is a critical input for boosting the development of a country's economy. In recent years, countries have adopted different sets of initiatives to address the financial challenges involving tertiary education and have been formulating strategies to address the issue. Bangladesh is no exception to that scenario.

In Bangladesh there are several institutions that are in charge of management of tertiary education and those include public universities, private universities, National University, and Bangladesh Open University. The National University (NU) affiliated college sub-sector caters to the largest segment (about two-thirds) of higher education students in the country, and thus has a critical role to play in fostering skilled workforce and promoting job creation in Bangladesh. Since 2016, the World Bank has been supporting the Government of Bangladesh (GOB) to develop the tertiary college education system through the College Education Development Project (CEDP). The CEDP works to improve the quality and relevance of education in colleges and to enhance the management and planning of the tertiary college system. The project is jointly implemented by the University Grants Commission and the National University.

The main objectives of the CEDP are to: a) strengthen the strategic planning and management capacity of college education sub-sector; and b) to improve the teaching and learning environment of participating colleges. CEDP has some very important responsibilities which are executed under the project. University Grants Commission and National University (NU) are also the parts of the implementing agency of the project. A Project Management unit (PMU) has been established to support the implementation of the CEDP.

The Project supports the preparation of Institutional Development Plans (IDP) by eligible government and non-government colleges and provides fund for implementation of the IDP through the Institutional Development Grants (IDG). The IDP, with a three-year horizon, sets out institutional goals, actions necessary to achieve the goals, and milestones and performance indicators to measure the achievements.

Objectives of the Present Study

Main objective of the present study is to assess the effectiveness of the overall project activities, including measuring the end line satisfaction level of project beneficiaries (students, teachers and employers), in terms of the quality and relevance of teaching. The assessment of

effectiveness part of the study looks at the effectiveness of the project considering project activities, and results and lessons. The study also targets to generate knowledge and document on the key project successes, lessons learned and remaining issues to address for future operations.

The evaluation is intended to be forward-looking, which captures effectively the lessons learnt and provide information on the nature and the effect of the project to the Government of Bangladesh (GoB). The emphasis on learning lessons speaks to the issue of understanding what has and has not worked as a guide for future planning. The study covers the full time of the project supported activities and the overall project implementation period.

1.2: About CEDP and Its Activities

In order to comprehend the result on project effectiveness of CEDP, it is important, in the first place, to understand the project, its components and sub-components, activities, and the indicators through which the project intends to track its progress. This chapter briefly presents the components, activities and associated broad indicators of CEDP.

Background of the Project

Bangladesh has made significant progress in economic growth and poverty reduction, with an average GDP growth rate of 6.1% over the last decade. Human development outcomes have improved, with gender parity being achieved at both primary and secondary education levels. The tertiary education system consists of two main sub-sectors: public and private universities and government and non-government colleges affiliated with the National University (NU). NU is responsible for affiliation, approval of academic programs, curriculum, student enrollment, question paper setting, examinations, conferring degrees, and strengthening teaching capacity. Government and non-government colleges produce the largest proportion of tertiary enrolments in Bangladesh.

However, the college sub-sector suffers from weak planning, governance, and management practices, non-satisfactory quality and relevance of teaching and learning, inadequate resources and inefficient financial management. The financing of tertiary education in Bangladesh is low, but access is increasing due to increased investment in secondary education and the rapid growth of private tertiary education institutions.

Rationale of the Project

The Project is expected to contribute positively to the whole sub-sector (i.e., the tertiary level education under the National University), with indirect beneficiaries such as public and private sector employers, GoB, secondary, and higher secondary schools and tertiary education colleges, and future generations of college graduates and teaching staff. The IDA is undertaking the College Education Development Project (CEDP) to improve the quality and relevance of college education and strengthen the governance and management of the college education sub-sector. It is expected to generate economic benefits at both individual and societal levels, such as increased employability of graduates and increased likelihood of completing college study. At the societal level, it is expected to create a more productive and adaptable labor force, more capable teachers, and more favorable investment environments.

Project Components and Subcomponents

The Project consists of three components and six sub-components: 1) Strengthening the Strategic Planning and Management Capacity, 2) Improving the Teaching and Learning Environment in Participating Colleges, and 3) Project Management, Communication, and Monitoring and Evaluation. These activities work to build the college system's capacity to plan, manage, implement, and monitor their institutional programs and strengthen the foundation for the next phase of development activities.

Under sub-component 1.1, the MoE shall establish a national Strategic Planning Committee (SPC) to oversee the process and six expert groups are expected to prepare analytical

background documents on significant sectoral issues. The MoE has drafted a 15-year Plan of Action for the education sector, including enrollment projections, quality assurance mechanisms, access and equity strategies, policies for teacher deployment and professional development, reform options for curriculum and assessment, institutional autonomy and capacity development, college sub-sector financing strategy, and future recommended action plans.

The objective of Sub-component 1.2 is to improve the teacher management system. This subcomponent supports the MoE's efforts to fill teacher vacancies in government colleges and reform the teacher recruitment procedures for non-government colleges.

The Project supports the development and disbursement of grants and training programs to improve the teaching and learning environment in participating colleges. Sub-component 2.1 addresses challenges such as inadequate teaching-learning facilities, lack of linkage with industry, lack of quality assurance, and weak planning and management capacity. This component more specifically focuses on the overall structures and teaching-learning facilities of the institutes.

Strengthening teaching and management capacity in colleges is designed to bring about qualitative improvements in teaching and management in the college sub-sector under subcomponent 2.2. This sub-component emphasizes improving the quality and skills of teachers, trainers and management in the colleges. The gathered accomplishments of the respective personnel are able to contribute to the existing knowledge building capacity of the students. It involves 7,000 teachers from 700 Master's and Honor's colleges, 300 trainers, 700 college principals, 500 academic staff with leadership potential, and 75 leaders, managers, and policymakers. Key outcomes expected on completion include improvement in knowledge, skills, and methodologies related to teaching and learning, improvement in English language proficiency, improvement in the use of technologies in education, development of local trainers, alignment of teaching-learning provisions, and development of a pool of local trainers.

Project Management, Communication, and Monitoring and Evaluation are included in the Third Component. The objective of subcomponent 3.1 is to guarantee capacity for Project intervention implementation and information dissemination. The objective of Subcomponent 3.2 is to monitor Project activities and assess the efficacy of key interventions in order to guarantee the quality of Project implementation and to draw lessons learned. The main methods of M&E for the CEDP include DLI verification, annual verification on the IDG, verification on teacher training, compilation of DLI achievement reports, beneficiary feedback surveys, tracer studies, effectiveness, and situation assessment studies, semiannual monitoring reports, the establishment of a web-based PMIS, and field-level data collection and supervision visits.

The Project uses an Investment Project Financing (IPF) loan instrument with a Results-Based Financing (RBF) structure to facilitate the growth of the college subsector over the project period. Components 1 and 2 are performance-based, and project funds are disbursed against an Eligible Expenditure Program (EEP) and against the attainment of agreed Disbursement-Linked Indicators (DLI).

Timeline of CEDP

The Project is being implemented now over more than a five-year period in specified government and non-government colleges under NU that offer higher education. The Project is anticipated to generate both individual and societal economic advantages. The Project is also anticipated to have significant positive societal effects by creating a more productive and adaptable labor force for various economic sectors and public agencies.

Components and sub-components of the Project are presented in the matrix below as it was outlined at the beginning of the project.

Components	Sub-Components	Activities
1: Strengthening the Strategic Planning and Management Capacity	1.1: Development of a Strategic Plan for the college subsector	1.1.1: The MOE will establish a national Strategic Planning Committee (SPC) to oversee the process. 1.1.2: A draft plan will be produced for wide stakeholder consultation, followed by a final plan that will have a 15-year Plan of Action set out in the immediate short term, medium term, and long term.
	1.2: Improvement of the teacher management system	1.2.1: Fill teacher vacancies in government colleges. 1.2.2: Reform the teacher recruitment procedures for non-government colleges.
2: Improving the Teaching and Learning Environment in Participating Colleges	2.1: Improving the Teaching-Learning Environment in Colleges	2.1.1: Upgrading basic teaching-learning facilities and Internet connectivity, 2.1.2: Improving market relevance of college education through development of soft skills of students and linkages with the industry. 2.1.3: Introducing quality assurance. 2.1.4: Strengthening management capacity. 2.1.5: Upgrade of the fiduciary system in the colleges
	2.2: Strengthening teaching and management capacity in colleges	2.2.1: The training of trainers. 2.2.2: Teacher training 2.2.3: Capacity building of college principals. 2.2.4: Capacity building of policymakers, leaders and managers for sub development.
3: Project Management, Communication, and Monitoring and Evaluation.	3.1: Project Management and Communication	3.1.1: Establishment of a Project Management Unit (PMU), 3.3.2: Specific capacity building, and technical assistance necessary for Project implementation, governance, and accountability activities. 3.3.3: Communication and information dissemination

	<p>3.2: Monitoring and Evaluation</p>	<p>3.2.1: Background studies to assess a set of critical sector issues (for example, reviews of affiliation system, autonomy, and so on.)</p> <p>3.2.2: Capacity building of colleges on the preparation of the IDP and implementation of the IDG.</p> <p>3.3.3: A study on market responsiveness of college subjects</p> <p>3.3.4: FM and procurement oversight</p>
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Component-wise inputs, outputs and indicators are also presented in the following matrix which is important to know for the effectiveness study of the project.

Component 1: Strengthening the Strategic Planning and Management Capacity			
Output	Indicator	Input	Indicator
Output 1-1: Development of a Strategic Plan for the college subsector	- A National Strategic Planning Committee was established.	Input 1-1: Expert services to develop a Strategic Plan and action plan for college education sub-sector; Expert services to develop DPP	- No. of expert consultants hired.
Output 1-2: Improvement of the teacher management system	- No. of vacant posts filled in the government colleges.	Input 1-2: Teachers deployed; Expert support for establishment of a new teacher selection commission for non-govt. colleges	- No. of teachers deployed. - Teacher selection commission for non-government commission updated
Component 2: Improving the Teaching and Learning Environment in Participating Colleges			
Output	Indicator	Input	Indicator
Output 2-1: Improving the teaching-learning Environment in Colleges	- No. of colleges submitted report timely - Satisfaction level of teachers and students - No. of college completed self-assessment - No. of equipment procured - No. of classrooms,	Input 2-1: Institutional Development Grant funding for improvement of facilities, supply of equipment, establishing campus network, establishing an office management system, conducting self-assessment	- No. of proposals approved for funding - Amount of grants disbursed to colleges

	libraries, laboratories etc. established and improved		
Output 2-2: Strengthening teaching and management capacity in colleges	- No. of teachers and managers trained	Input 2-2: Training of trainers; Training of teachers and managers; Developing training contents and materials, and on-line learning management system	- No. of trainers trained - No. of training courses developed and updated - On-line learning management system developed
Component 3: Project Management, Communication, and Monitoring and Evaluation			
Output	Indicator	Input	Indicator
Output 3-1: Project Management and Communication	- Project management unit (PMU) established and is functioning with adequate stuff - No. of awareness raising activities conducted	Input 3-1: Manpower and logistic support to the PMU; Specialists on procurement, finance, M&E, and other posts; Mass awareness and communications activities; Training to PMU staff	- No. of staff assigned - No. of consultants hired - No. of awareness program contents developed - No. of training provided to PMU staff/ consultants
Output 3-2: Monitoring and Evaluation	- Tracer studies conducted - Web based PMIS	Input 3-2: Monitoring and evaluation specialist;	- No. of consultants hired for M&E - No. of studies undertaken

	<p>developed and updated</p>	<p>Consultants for three beneficiary feedback survey and two tracer studies;</p> <p>Consultants for developing a web-based Project Information Management System (PMIS)</p>	<p>and completed (including the BLSS, MTSS, Tracer study phase-I, DLI study phase-I and the ongoing ones i.e., DLI study phase-II and Tracer study phase-II)</p> <p>- Number of college personnel trained on PMIS use</p>
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1.3 The Approach and the Methodology

This section provides a brief description of the approach and methodology for performing the assignment. The study has two interrelated but separate components: endline satisfaction survey, and the project effectiveness study. For both components, the same set of sample colleges and respondents have been taken into consideration. However, for the effectiveness study, additional investigation was carried out through reviewing the project related documents and interviewing all relevant institutional respondents. The effectiveness study also uses and analyzes the data and results obtained from the present as well as previous satisfaction surveys, tracer studies, and DLI-4 results verifications. Satisfaction survey largely uses the same set of instruments used earlier for baseline and midline satisfaction surveys. For effectiveness study, the standard project evaluation methods are used. In this report, technical approach and methodology is presented first for the effectiveness study, and then for the satisfaction survey.

The Project Effectiveness Study

Step-by-Step process of carrying out the study on project effectiveness

Carrying out a study on project effectiveness typically involves conducting a thorough assessment of various project aspects to evaluate its success and impact. Here's a step-by-step guide on how to conduct such a study:

- 1) **Define the Study Objectives:** Clearly establish the purpose and goals of the study. Determine what specific aspects of project effectiveness one wants to assess. For example, we might focus on measuring the achievement of project goals, stakeholder satisfaction, and the overall impact on its beneficiaries.
- 2) **Identify Key Metrics:** Determine the metrics and indicators that help evaluate project effectiveness. These metrics should align with study objectives.
- 3) **Develop a Study Design:** Design the methodology for the study. Consider whether one uses quantitative, qualitative, or mixed methods approaches. Determine data collection techniques such as surveys, interviews, document analysis, or observation. Decide on the sample size and the selection criteria for participants or projects to be included in the study.
- 4) **Collect Data:** Implement the study design by collecting the necessary data. This involves administering surveys, conducting interviews, reviewing project documents and reports, or observing project activities. Ensure that the data collection methods are reliable and valid to ensure the accuracy of your findings.
- 5) **Analyze Data:** Once the data is gathered, analyze it to derive meaningful insights. Use appropriate statistical or qualitative analysis techniques depending on the nature of data. Compare the collected data against the predefined metrics and indicators. Identify patterns, trends, and correlations that shed light on the project's effectiveness.
- 6) **Interpret Findings:** Interpret the results of the data analysis and relate them to study objectives. Identify the strengths and weaknesses of the project, key success areas, and

areas for improvement. Consider the implications of findings in the context of the project's objectives, constraints, and stakeholders.

- 7) **Draw Conclusions:** Based on the interpreted findings, draw conclusions regarding the overall effectiveness of the project. Summarize the main findings and assess whether the project has met its objectives, delivered value, and achieved the desired outcomes. Identify any factors that have influenced project effectiveness positively or negatively.
- 8) **Provide Recommendations:** Based on conclusions, provide recommendations for improving project effectiveness. These recommendations should be actionable and focused on addressing the identified weaknesses or leveraging the project's strengths.
- 9) **Communicate Results:** Prepare a comprehensive report summarizing study methodology, findings, conclusions, and recommendations. Present report to relevant stakeholders, such as project managers, executives, or sponsors. Ensure that the report is accessible and understandable for the target audience.

By following these steps, one can conduct a comprehensive study on project effectiveness, providing valuable insights and recommendations for enhancing future projects.

Standard broad indicators to study project effectiveness in college education

When studying project effectiveness in college education, several standard broad indicators can be considered to assess various dimensions of the project's impact and success. Here are some common indicators:

- 1) **Student Achievement:** Measure the academic performance of students involved in the project. This can include indicators such as graduation rates, retention rates, GPA improvement, exam scores, or the percentage of students meeting learning outcomes and whether pass rate has accelerated.
- 2) **Student Engagement:** Assess the level of student engagement and participation in the project. This can be evaluated through indicators such as attendance rates, active involvement in project activities, student feedback on their level of engagement, or self-reported measures of interest and motivation.
- 3) **Learning Outcomes:** Evaluate the extent to which the project contributes to the achievement of desired learning outcomes. This can involve assessing the acquisition of knowledge, skills, and competencies specified in the curriculum or project objectives. For this purpose, students' and teachers' views on the learning curriculum, medium and materials would be looked at.
- 4) **Stakeholder Satisfaction:** Gather feedback from various stakeholders, including students, faculty, staff, and external partners, to assess their satisfaction with the project. This can be done through surveys, interviews, or focus groups. Consider aspects like perceived value, relevance, and effectiveness of the project in meeting stakeholder needs and expectations.
- 5) **Graduates' Success:** Track the post-graduation success of students involved in the project. This can include indicators such as employment rates, job placements, further education enrollment, or career advancement.

Analytical Framework

Given the above and the objectives of the present study, the analytical framework that the study will follow is presented in the following flow-chart:



Relevance: The extent to which the objective of the project is relevant and consistent with the requirements of the target group. That is to see to what extent the intervention doing the right things.

Effectiveness: The extent to which the objectives were achieved, or are expected to be achieved, taking into account their relative importance. That means, to see whether the intervention achieving its objectives or not.

Efficiency: A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results. That is to see how well are the resources being used.

Impact: Positive and negative primary and secondary long-term effects produced by the project, whether directly or indirectly, intended or unintended. That means, to explore the differences that the project has made.

Sustainability: The continuation of benefits of the project years after the completion of the it. It must be both environmentally and financially sustainable. Sustainability can be defined here as the ability of key stakeholders to sustain intervention benefits. That means, to see whether the benefits generated by the projects will last or not.

Evaluation Design

The best design to do an impact evaluation (IE) will depend on what is being evaluated (a small project, a large project, or a nationwide policy); the purpose of the evaluation; budget, time, and data constraints; and the time horizon. IE designs can also be classified according to whether they are commissioned at the start of the project, during implementation, or when the project is already completed. Impact evaluations measure treatment effects, for which treatment means being exposed to an intervention, such as a new policy or project, and effects are the difference that exposure makes to outcomes, such as learning, skills, income, employment, productivity, poverty, and many other aspects. An impact evaluation is based on counterfactual analysis that compares what would have happened in the absence of an intervention to actual outcomes.

Figure 1: Illustration of an Impact Evolution

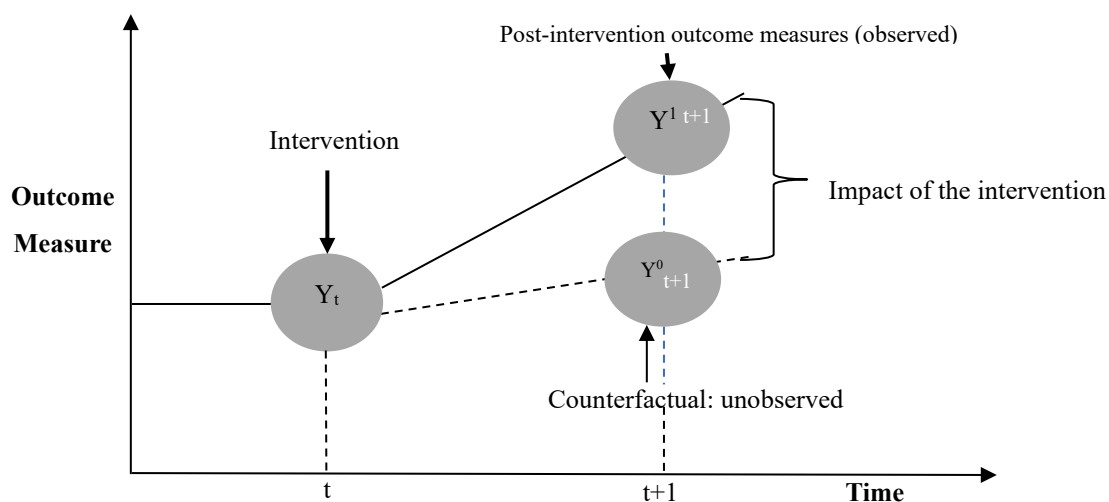


Figure-1 portrays impact evaluation visually. An intervention occurs in time t , when the level of our outcome of interest is Y_t . After the intervention, the outcome of interest becomes $Y_{t+1} + 1$, while it would have been only $Y_{0t} + 1$, without the intervention. The latter is the counterfactual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

Impact evaluation, as illustrated in Figure-1, can be stated algebraically as 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 a 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 and Raitzer 2017).

Methodological Approach

There are several quantitative methods, i.e., Experimental designs through Randomized Controlled Trials (RCTs), Quasi-experimental design with before and after comparisons of project and Comparison Populations, Regression based approach etc. through which the IE can be performed. In this study, we propose to use the quasi-experimental design along with the qualitative approach.

Quasi-experimental Design with Before and After Comparisons of Project and Comparison Populations

The design employs statistical methods to establish a comparison group, which has the similar characteristics as the beneficiary group, apart from the intervention. The main quasi-experimental approaches are double difference or difference-in-differences, propensity score

matching, and regression discontinuity design. All these approaches seek to establish a comparison group that is as similar to the beneficiary groups as possible. Impact is then calculated as either the difference in outcomes after the intervention (ex-post single difference), or the difference in the differences in outcomes between baseline and end line (DiD). To improve control of selection bias, differencing may be combined with some form of matching. These approaches have been the most common in impact evaluation.

Difference-in-Difference (DiD) Method

Under quasi-experimental design, the study proposes to use the difference-in-difference (DiD) method. DiD estimates are based on the difference in the changes in the outcome between beneficiary and comparison groups over time. The method takes the trajectory of the comparison group as the counterfactual trajectory for the beneficiary group. That is, the change in the outcome that takes place in the comparison group is taken as what would have happened to the beneficiary group in the absence of the intervention. Therefore, subtracting the change in the outcome observed in the comparison group from that observed in the beneficiary group gives the measure of impact. The effects of all factors that do not change over time or that do not affect changes over time are thereby eliminated from the impact estimate. Many determinants of program placement or participation can be expected to be rather time invariant, hence the attractiveness of this approach.

Qualitative Methods

Generally qualitative methods help to understand the nature and the processes through which the changes/improvements have occurred. These methods can also be used as complementary to the quantitative methods described above. In fact, the integration of quantitative and qualitative methods, which is now popularly known as the q-squared approach, has gained popularity in research and evaluation in recent years. For the project effectiveness analysis, Focused Group Discussions (FGDs) and Key Informant Interviews (KIIs) are proposed to be the major tools. FGDs with students and teachers and KIIs with employers and major resource persons in the CEDP funded colleges would be the modus operandi.

Evaluation Process

Assessment of the impacts of intervention like IDG on the direct beneficiaries requires both quantitative and qualitative information with emphasis on the former due to the techniques of measurement and other related indicators. The study, therefore, entails both statistical and econometric exercises using cross-sectional data. In the former, comparisons of achievements have been made between the treatment and the control groups. The selected indicators mentioned in the discussion of the components are compared across groups of respondents in terms of quality of education, teaching, skills, facilities and satisfaction level. In addition to the quantitative approach, qualitative methods as mentioned before are also used to understand the processes.

The evaluation has been carried out keeping the initial goals and objectives in perspective. It has been carried out in several steps. First, the inputs given into the process of implementation of the project have been taken into consideration. Second, outputs achieved in the midst of IDG

implementation has been investigated. And third, attempts have been made to investigate the overall outcomes of the project at the beneficiary, community and macro level. The diagram below presents the framework of the proposed evaluation.

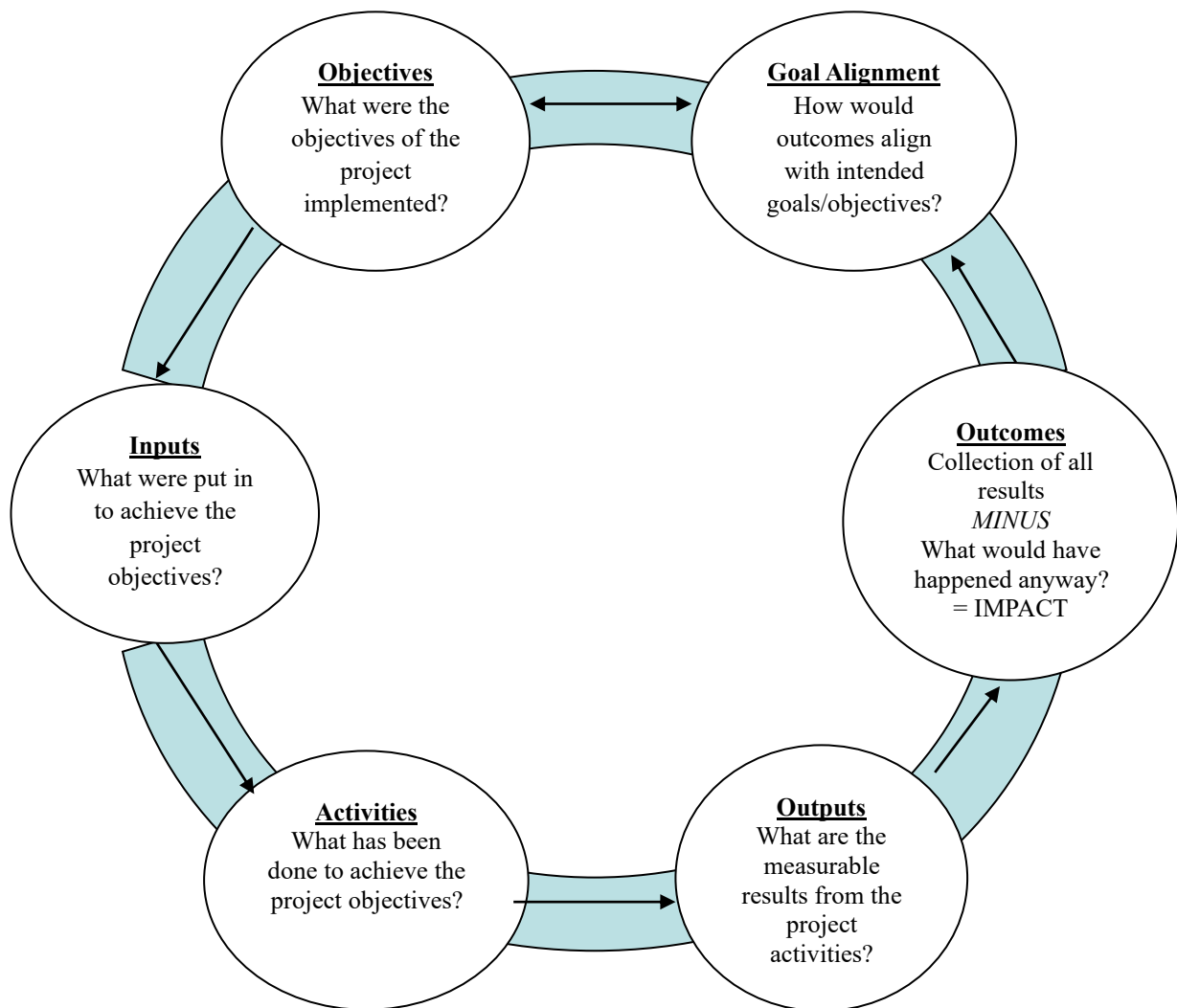


Figure 1: Proposed Evaluation Process

Research Questions/Issues

The following indicates the project effectiveness related questions/issues:

Research Question/Issues
Were the inputs given under the project realistic, appropriate and adequate to achieve the results?
Was the project relevant to the identified needs?
To what extent has the Project achieved its overall objectives?

To what extent were the key indicators of results (outcomes and outputs) achieved and what was the impact on college education?
How effectively has the project responded to the needs of the beneficiaries?
How effective were the management and accountability structures of the project?
What are the future intervention strategies and issues?
Was the process of achieving results efficient? Specifically did the actual or expected results (outputs and outcomes) justify the costs incurred?
Did project activities overlap and/or duplicate or complement other similar interventions (funded nationally and /or by other donors)?
Are there more efficient ways and means of delivering more and better results (outputs and outcomes) with the available inputs?
How did the performance-based funding design of the project through the use of Disbursement Linked Indicators enable or constrain the achievement of project activities?
How well were the project fiduciary (Financial management, procurement), and safeguard (social and environmental) aspects managed at the institution level and at the project level?
What are the strengths, weaknesses, opportunities and threats of the project's implementation process?
How did the Project help colleges deal with the constraints to teaching-learning imposed by COVID-lockdowns?
Will the capacity built by the project within institutions and implementing partners be supportive in dealing with future crises? If yes, to what extent? What are some remaining gaps?
Is there any exit strategy? How effective was it?
What are the strategies and factors that will ensure the sustainability of the project outcomes?
How were capacities strengthened at the individual and organizational level

Methodology for Data Analysis

Data analysis makes use of data to be collected from both the project as well as the control colleges. In order to assess the effectiveness of the project, achievements over time among the project colleges have been compared to that of the control colleges. In addition, a cost-benefit approach has also been used to assess project effectiveness. In short, the following steps are used for data analysis and presentation:

Endline Satisfaction Survey

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 conducted among which the baseline and the mid-term were carried out in 2019 and 2022.

Details of the methodology of endline satisfaction survey and sampling for both components are discussed in PART-II (chapter 2.1).

Pre-Survey Preparation and Data Collection

The project work began with the review of necessary documents (please see Annex-1.1) and drafting of an inception report as per the work plan and timeline. After the report was submitted, it was reviewed by CEDP and the WB, who provided useful feedback which was then reviewed and addressed through a revision process. In the meantime, questionnaires were drafted, reviewed, revised and then finally approved by CEDP. Before final approval, the questionnaires were pilot tested in two colleges – Mohammadpur Mohila College and Narsingdi Government College. During the piloting exercise, the core research team talked with the college principals, IDG management teams, teachers, and students. These visits also included verifying the available documents related to IDG disbursement and utilization, and also the physical verifications of students' attendance. The piloting was very useful, and we received some useful feedback for the respective colleges which then was used in finalizing the questionnaires and checklists. A total of 7 sets of structured questionnaires and 3 checklists for conducting the FGDs and interviews were finalized and approved after the piloting. These questionnaires and checklists included:

- i) Questionnaire for the college principal
- ii) Questionnaire for the IDG Manager/Principal (For College Related Information)
- iii) Questionnaire for the teachers
- iv) Questionnaire for the students
- v) Questionnaire for employers
- vi) Milestone Information Questionnaire
- vii) Attendance Verification Questionnaire (For verification of students' attendance)
- viii) A checklist for teachers' FGD
- ix) A checklist for students' FGD
- x) A checklist for KIIs

All the questionnaires and the checklists are presented in Annex-6.1.

Recruitment, Training, and Organizing the Field Team

Thirty field officers were recruited and trained to collect information and conduct physical verification of attendance in the selected colleges. The field teams were carefully trained by the research team to ensure quality, professionalism, and care in managing the relationships with the respondents (principals, teachers and students). All hired field officers took part in a 5-day long training session. During this period, all ten sets of questionnaires/checklist-

questions were discussed in detail. The predesigned questionnaires were again revised after the discussion with the field officers. The last/fifth day had a wrap-up meeting where the changes made in the questionnaires were shared, and the field plan was distributed.

The recruited field officers were divided into fifteen (15) teams consisting of two members each. They were given a specific field plan which they had to follow strictly. Each team visited 5 colleges. The field teams were centrally supervised and coordinated by a team of supervisors and the project manager. The BIDS office-based coordinating team kept regular contact with the field teams through cell phone/WhatsApp and monitored the progress daily. Each team posted updates of their daily progress in the WhatsApp group and uploaded pictures of their work while visiting different colleges. An official of CEDP also had access to this group for monitoring and supervision to ensure transparency. Detailed schedule of field visit is presented Annex-1.2.

PART II: ENDLINE SATISFACTION SURVEY (ESS)

2.1. BACKGROUND

One of the expected goals of the College Education Development Project (CEDP) was to see that the students, teachers and employers were satisfied in terms of the quality and relevance of teaching and learning. 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) were, of which the baseline and the mid-term surveys were carried out in 2019 and 2022.

The Baseline Satisfaction Survey (BLSS)

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

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

The Mid-term Satisfaction Survey (MTSS)

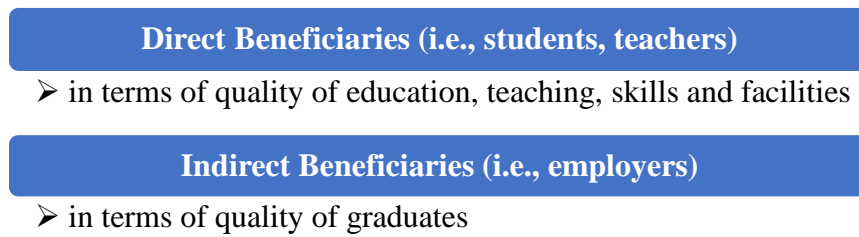
BIDS had conducted the Mid-term Satisfaction Survey on April-May, 2022. The mid-term, survey is the second, of the three planned surveys of the CEDP, measuring mid-term satisfaction level of the stakeholders, students and teachers of National University-affiliated colleges, and employers of NU graduates. Satisfaction level of students and teachers, who are considered direct beneficiaries are assessed in terms of quality of education and teaching, skills, and facilities. Satisfaction level of employers are assessed in terms of quality of graduates.

The Endline Satisfaction Survey (ESS)

This is the end line, which is the third and the final round, of the three planned surveys of the CEDP measuring the increased satisfaction level of the stakeholders - students and teachers of National University-affiliated colleges, and employers of these graduates about teaching and learning environment.

This survey assesses the end line satisfaction level of two types of beneficiaries (Figure 1). Satisfaction level of students and teachers, who are considered direct beneficiaries were assessed in terms of quality of education and teaching, skills, and facilities. Satisfaction level of employers were assessed in terms of quality of graduates.

Figure 1: Assessment structure in term of beneficiaries



Comparison was made between IDG-implemented and non-IDG-implemented colleges in terms of need identification and improvement of overall satisfaction level.

2.1.1. The Objectives of the Study

The main objective of the end line satisfaction survey is to measure the levels of satisfaction of all relevant stakeholders including students, teachers, principals and employers of the sampled colleges in the end of IDG implementation in National University (NU) affiliated Honors and Master's colleges. The survey focuses on the following aspects:

- Understanding the academic environment, facilities, and human resources, of the National University (NU)-affiliated honors and master's colleges;
- Opinions of students and teachers about existing college facilities and investments, and areas need improvement, and opinion and satisfaction on the quality of teaching and learning, including gender aspects; and
- Opinion of the employers about the knowledge and skills of NU graduates in terms of efficiency and relevance.

2.1.2. Research Questions

Based on the above objectives, this study tries to answer the following questions:

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

2.2. METHODOLOGY AND SAMPLING

The survey was designed in a mixed method approach of both quantitative and qualitative to address the objectives. According to the Terms of Reference (ToR) of this study, sample consists of two groups of colleges, i.e., IDG awarded colleges (treatment group) and IDG non-recipient colleges (control group) based on the baseline satisfaction survey. Separate set of questionnaires were designed for students, teachers, and college principals and as well as for current employers of NU graduates.

Qualitative approach such as focus group discussion (FGD) and key informant interviews (KII) were conducted among teachers from these colleges. All the survey instruments were be pilot tested at some selected colleges preferably in Dhaka in order to facilitate understanding prior to finalization. A survey schedule was prepared in consultation with the respective authorities of the selected institutions.

Sample Selection Procedure

Consistent with the baseline and mid-term study conducted in 2019 and 2022, the current study surveyed stakeholders at four levels, namely colleges, students, teachers, and employees. For all four levels, the sampling procedure followed in the baseline survey remained unchanged in the mid-line survey.

(i) Selection of colleges

As mentioned in the ToR, there are around 757 honors and master’s colleges affiliated with NU since May 2017. Among these colleges, 562 are non-government colleges and 195 are government colleges from which 10% of colleges (75 sample college) will be selected for primary data collection. This study will resurvey the same set of colleges surveyed during the baseline survey.

In the baseline, 75 colleges were surveyed among which 30 were government colleges and 45 were non-government colleges (Table 1). However, one of the government colleges in the control population was found to be a specialized college, for which a replacement was sought from Dhaka. Since the sample of government control colleges was exhausted, the replacement was taken from non-government control group (Table 2).

Table 1: Distribution of the Sample Colleges

Type of Colleges	Treatment	Control	Total
Govt.	27	18	45
Non-Govt.	18	12	30
Total	45	30	75

Table 2: Revised Distribution of the Sample Colleges

Type of Colleges	Treatment	Control	Total
Govt.	27	17	44
Non-Govt.	18	13	31
Total	45	30	75

The sampling unit was the college. The division-wise sample distribution is as follows:

Table 3: Division-wise Distribution of College

Division	Government Colleges	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
Total	44	31	75

The sample included at least one college from each district in Bangladesh. The baseline also chose some colleges purposively to maintain a certain ratio (46:14:11) of A, B and C category colleges.¹ The list of the 75 colleges is given below:

Table 4: The list of sampled colleges from baseline survey

Division	District	Name of College	Ownership	Category	Group
Barishal	Barishal	Gournadi Govt. College	Govt.	-	Control
		Govt. Barishal College	Govt.	B	Treatment
	Jhalokathi	Jhalokathi Mohila College, Jhalokathi	Govt.	C	Control
		Jhalakathi Govt. College, Jhalakathi	Govt.	A	Treatment
	Pirojpur	Suhrawardi Govt. College	Govt.	B	Treatment
Chattogram	Bandarban	Bandarban Government College	Govt.	B	Treatment
	Coxs bazar	Cox's Bazar City College	Non-Govt.	A	Treatment
	Rangamati	Rangamati Government College	Govt.	A	Treatment
	Chattogram	Islamia College	Non-Govt.	A	Control
		Government City College	Govt.	A	Treatment
		Patiya Govt. College	Govt.	B	Treatment
		Chittagong College	Govt.	A	Treatment
	Chandpur	Puran Bazar Degree College	Non-Govt.	A	Treatment

¹ Category-A college is defined as the number of students ≥ 5000 for government colleges and number of students ≥ 1000 for non-government colleges; Category-B college is defined as the number of students >1000 and ≤ 4999 for government colleges and number of students >500 and ≤ 999 for non-government colleges; Category-C college is defined as the female colleges with number of students ≥ 120 .

	Feni	Govt. Zia Mohila College	Govt.	C	Treatment	
	Cumilla	Nawab Foyjunnesa Govt. College	Govt.	B	Control	
		Comilla Govt. College	Govt.	B	Control	
		Chandina Redwan Ahmed College	Non-Govt.	A	Treatment	
	Noakhali	Noakhali Govt. Mahila College	Govt.	C	Control	
		Chowmuhani Govt. S. A. College	Govt.	B	Treatment	
Dhaka	Dhaka	Savar College	Non-Govt.	A	Control	
		Dhamrai Govt. College	Govt.	B	Control	
		Govt. Banga Bandhu College	Govt.	B	Control	
		New Model Degree College	Non-Govt.	A	Control	
		Tejgaon College	Non-Govt.	A	Treatment	
		Mohammadpur Mohila College	Non-Govt.	C	Treatment	
		Shaikh Burhanuddin Post Graduate College	Non-Govt.	A	Treatment	
	Faridpur	Kazi Shirajul Islam Mohila College	Non-Govt.	C	Control	
		Kadirdi College	Non-Govt.	B	Treatment	
	Gazipur	Gazipur Govt. Mohila College	Govt.	C	Control	
		Bhawal Badre Alam Govt. College	Govt.	A	Treatment	
	Kishoreganj	Govt. Gurudayal College	Govt.	A	Control	
		Kishoreganj Govt. Mohila College	Govt.	C	Treatment	
	Manikganj	Government Debendra College	Govt.	A	Treatment	
		Govt. Sreenagar College	Govt.	-	Control	
		Bikrampur Adarsha College	Non-Govt.	B	Treatment	
	Narayanganj	Govt. Safar Ali College	Govt.	B	Control	
		Narayanganj Mahila College	Govt.	C	Control	
		Narayanganj College	Non-Govt.	A	Treatment	
	Tangail	Sakhipur Residential Mahila College	Non-Govt.	C	Treatment	
	Khulna	Jenaidha	Government K C College	Govt.	A	Treatment
		Khulna	Daulutpur Day/Night College	Non-Govt.	A	Treatment
		Meherpur	Meherpur Govt. College	Govt.	B	Treatment

	Narail	Narail Govt. Victoria College	Govt.	A	Treatment
	Jessore	M. M. College	Govt.	A	Control
		Jashore Govt. Mohila College	Govt.	C	Treatment
	Kushtia	Kushtia Govt. College	Govt.	A	Control
		Kushtia Govt. Mahila College	Govt.	C	Control
		Daulatpur College	Non-Govt.	B	Treatment
	Satkhira	Satkhira City College	Non-Govt.	A	Control
		Kumira Mahila Degree College	Non-Govt.	C	Treatment
Mymensingh	Jamalpur	Mahmuda Salam Mahila College	Non-Govt.	C	Control
		Jahanara Latif Mohila College	Non-Govt.	C	Treatment
	Mymensingh	Gouripur Mahila College	Non-Govt.	C	Control
		Shahid Smriti Govt. College	Govt.	B	Treatment
	Netrokona	Netrakona Govt. College	Govt.	A	Treatment
	Sherpur	Nazmul Smriti College	Non-Govt.	-	Control
		Sherpur Government Mohila College	Govt.	C	Treatment
Rajshahi	Bogra	Syed Ahmed College	Non-Govt.	A	Treatment
	Naogaon	Naogaon Govt. College	Govt.	A	Treatment
	Natore	Gurudaspur Bilchalan Shahid Shamsuzzoha College	Non-Govt.	A	Control
		Sheikh Fazilatunnesa Muzib Women's (Honours) College	Non-Govt.	C	Treatment
	Nawabgonj	Nawabganj Govt. College	Govt.	A	Treatment
	Pabna	Pabna College (Day/Night)	Non-Govt.	A	Control
		Shahid Bulbul Govt. College	Govt.	B	Treatment
	Rajshahi	Lalit Mohan College	Non-Govt.	B	Control
		Rajshahi Government Mahila College	Govt.	C	Treatment
	Sirajgonj	Belkuchi College	Non-Govt.	A	Control
		Govt. Akbar Ali College	Govt.	A	Treatment
Rangpur	Lalmonirhat	Lalmonirhat Govt. College	Govt.	B	Control
		Uttar Bangla College	Non-Govt.	A	Treatment

	Rangpur	Rangpur Government College	Govt.	A	Treatment
Sylhet	Moulvibazar	Komolganj Gano College	Non-Govt.	-	Control
		Yakub-Tajul Mohila College	Non-Govt.	C	Treatment
	Sylhet	Sylhet Govt. College	Govt.	-	Control
		Dakshin Surma Govt. College	Govt.	A	Treatment

Source: CEDP baseline and mid-term satisfaction survey 2019 and 2022.

(ii) Selection of students

Students were selected based on a certain class preferable 3rd or 4th year undergraduate students and master's students studying in sample colleges. Students were surveyed from each college on an announced day and the survey will be conducted in the classroom.

(iii) Selection of teachers and college heads

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

(iv) Selection of employers

Employers were divided into two broad categories, i.e., government and non-government. Employers will include 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 should be interviewed for collection of relevant information.

Sample Size

In the baseline, three (03) departments at honors levels with additional two (02) departments at Master's levels (if the college had master's program) were randomly selected from each college. This resulted in a total of 255 departments considering properties such as level (Honors/Masters) and subject type (Science/Non-science).

From each department, 12 students and 5 teachers were randomly selected to participate in the survey. Therefore, a total of 3,060 (255 x 12) students and 1,275 (255 x 5) teachers are expected to be surveyed. The study also surveys 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 end line satisfaction survey dividing equally among government and non-government organizations. The sample distribution described above is summarized in the following table.

Table 5: Sample size and techniques

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

Data Collection

The data were collected using structured questionnaires and from FGDs, and KIIs. A group of enumerators and supervisors were trained at BIDS before the data collection begins. Each enumerator was responsible for surveying students, teachers, principals, and employers of the graduates. Each supervisor was overseeing the data collection of their assigned team to ensure the quality of the data. The field coordinator was responsible for the overall field management. The survey team was provided intensive training by the study team considering the task of data collection from remote areas, communication infrastructure, cultural and political barriers, and safety and security concerns prevailing in the study areas. The research team of BIDS made interventions, when necessary, which might include random field visits by researchers etc.

Qualitative Data

The study also conducted Focus Group Discussion (FGD) and Key Informant Interview (KII) to incorporate a qualitative component in the analysis. Any FGD session have a limit of 7-10 personnel and the employers' survey includes at least 15 KIIs.

The minimum or required number of FGDs and KIIs is not specified in the ToR, but these are the numbers that are proposes for the end line survey.

Table 6: Proposed Sample

Focus Group Discussion (FGD) and Key-Informant Interview (KII)		
No.	Groups	Study Technique(s)
1	Students	35 FGDs
2	Teachers	35 FGDs (1 in each division)
3	Employers	15 KII

Teachers' interviews consist of both government and non-government colleges. Participation and representation of teachers from a variety of subjects was ensured. Before drawing students randomly, the numerators made a list of potential participants that gives priority to students with better academic performance.

Quality Check

Once the interviews and the FGDs are conducted, the research team started analyzing the findings. As the process continues, researchers potentially find areas that need further information. There were follow-up visits, phone calls, etc. in specific cases when considered necessary by the research team.

Methodology for Data Analysis

Data analysis makes use of both the baseline data collected in 2019, the midline data and the end line data which was collected under this study. Depending on the specific indicators we want to look at, this setup allows us to find out the program effect at the college level.

We use all the appropriate quantitative and qualitative techniques to analyze the dataset. We incorporate the following in the analysis, which is subject to change depending on the nature and the quality of the actual data coming from the field.

- a) ***Summary statistic:*** in the form of tables, graphs, figures etc. will be provided to understand different characteristics of the distributions of variables at each level of analysis, namely college, student, teacher, principal, and employers.
- b) ***Statistical tests:*** Appropriate tests will be used to see if there is any statistically significant difference in the indicators between different groups (e.g., government versus non-government colleges).
- c) ***Qualitative technique:*** Appropriate techniques will be incorporated to complement the quantitative analysis.

2.3. ACADEMIC ENVIRONMENT, FACILITIES, AND HUMAN RESOURCES OF NU AFFILIATED HONORS AND MASTER'S COLLEGES: RESPONSES FROM COLLEGE PRINCIPALS

The survey was conducted in 75 colleges. Among them, 45 colleges have received Institutional Development Grant (IDG). In this section, we have summarized the findings from interviewing the college principals. The survey takes principals' opinion based on the understanding of the academic environment, facilities available, and human resources of the NU-affiliated honors and master's colleges.

2.3.1. Background Characteristics of the Colleges

Table 7 provides a general background characteristics of NU affiliated Honors and Master's 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). Column 3 to 5 shows that there exists significant difference (at 1 percent level) between IDG awarded and IDG non-recipient colleges in case of existing number of departments. IDG awarded colleges have additional 5 honors departments on average compared to IDG non-recipient colleges where the number of honors departments is only 7. 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 has more master programs than a IDG non-recipient college. At disaggregated level, this difference also prevails between government and non-government colleges. In both government and non-government colleges, the average number of honors and master departments is significantly higher in IDG awarded colleges compared to IDG non-recipient colleges (Table 7).

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

The gender disaggregated picture shows that prevalence of male teacher is higher in all colleges. Average number of male teachers is significantly higher in the IDG awarded colleges compared to IDG non-recipient colleges. IDG awarded colleges has 55 male teachers on an average where it is only 36 in IDG non-recipient colleges. At disaggregated level, the difference also remains same between government and non-government colleges. In both government and non-government colleges, the average number of male teachers is indeed a lot higher in IDG awarded colleges than that of IDG non-recipient colleges.

Table 7: Institutional characteristics of NU affiliated colleges

Details	Categories	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Difference (p value)	All colleges Mean (SD)
Departments in the college	Honors	11.95 (4.64)	7.03 (3.74)	4.92*** (0.000)	10.05 (4.92)
	Master	6.10 (5.92)	2.24 (3.97)	3.867** (0.003)	4.61 (5.56)
Teachers in the college	Male	54.73 (30.29)	35.72 (29.18)	19.01** (0.009)	47.39 (31.10)
	Female	24.30 (18.71)	16.13 (12.80)	8.16* (0.043)	21.15 (17.06)
Full-time teachers in college	Male	51.69 (29.31)	32.13 (24.77)	19.55** (0.004)	44.13 (29.10)
	Female	22.69 (17.45)	14.03 (9.80)	8.66* (0.017)	19.35 (15.48)
Part-time teachers in the college	Male	3.04 (9.30)	3.58 (9.31)	-0.543 (0.806)	3.25 (9.25)
	Female	1.60 (4.60)	2.10 (6.14)	-0.495 (0.692)	1.80 (5.22)
Teachers holding Ph.D	Male	1.73 (2.31)	1.62 (2.47)	0.118 (0.834)	1.69 (2.36)
	Female	0.32 (0.63)	0.34 (0.89)	-0.019 (0.916)	0.33 (0.74)
Professors in the college	Sanctioned posts	4.41 (5.87)	2.20 (4.85)	2.206 (0.095)	3.56 (5.57)
	Currently working	4.60 (6.10)	2.34 (4.85)	2.264 (0.096)	3.73 (5.73)
Associate Professors in the college	Sanctioned posts	10.67 (11.38)	4.06 (6.29)	6.60** (0.006)	8.12 (10.21)
	Currently working	9.67 (10.78)	3.48 (5.45)	6.19** (0.005)	7.28 (9.55)
Assistant Professors	Sanctioned posts	21.37 (17.93)	11.17 (8.81)	10.19** (0.006)	17.43 (15.81)
	Currently working	19.91 (13.13)	10.06 (8.08)	9.84*** (0.001)	16.11 (12.37)
Lecturers in the college	Sanctioned posts	45.39 (38.64)	29.44 (17.84)	15.94* (0.041)	39.23 (33.01)
	Currently working	38.80 (30.45)	26.75 (16.64)	12.046 (0.055)	34.15 (26.53)
MPO listed teachers	Male	7.08 (11.11)	6.86 (12.50)	0.225 (0.935)	7.00 (11.59)
	Female	3.52 (5.89)	4.44 (7.94)	-0.927 (0.565)	3.88 (6.73)
Demonstrators in the college	Sanctioned posts	3.58 (2.00)	2.34 (1.67)	1.24** (0.007)	3.11 (1.97)
	Currently working	1.65 (1.43)	1.24 (1.21)	(0.411) (0.205)	1.49 (1.36)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Column (5-7) also shows that there exists significant difference (at 5 percent level) between IDG awarded colleges and IDG non-recipient colleges in case of number of full-time male teachers. IDG awarded colleges has 52 full-time teachers on average where the number is only 32 for IDG non-recipient colleges. At 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 case of PhD holding by teachers, these two groups are not different.

However, in case of number of associate professor and assistant professor with sanctioned posts and currently working, there exists significant difference (at 5 percent level) between IDG awarded and IDG non-recipient colleges (column 3-5). On average, IDG awarded colleges have 11 associate professors with sanctioned post where this is only 4 for IDG non-recipient colleges. At disaggregated level, the difference also prevails between government and non-government colleges. The average number of lecturers with sanctioned post is significantly higher in IDG awarded government and non-government colleges compared to that of IDG non-recipient colleges.

It is highly encouraging that while the baseline satisfaction survey found that the non-government colleges had no post above the assistance professor level (BIDS, 2019), in the end line satisfaction survey we find that the departments of the non-government colleges are now well equipped with experienced faculty members as per revised NU provision.

Table 8: Institutional characteristics of NU affiliated colleges (Govt. vs. non-Govt.)

Details	Categories	(1)	(2)	(3)	(4)	(5)	(6)	
		Government college			Non-Govt. college			
		IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)	
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Departments in the college	Honors	12.13 (3.97)	6.65 (4.14)	5.483 *** (0.000)	11.62 (5.83)	7.88 (2.66)	3.736* (0.084)	
	Master	6.93 (5.98)	2.10 (4.30)	4.833 ** (0.003)	4.56 (5.66)	2.55 (3.32)	2.007 (0.343)	
Teachers in the college	Male	51.46 (28.13)	34.55 (27.06)	16.917 * (0.040)	60.87 (34.08)	38.33 (35.08)	22.542 (0.130)	
	Female	18.46 (14.13)	13.40 (10.30)	5.067 (0.175)	35.25 (21.64)	22.22 (16.17)	13.028 (0.130)	
Full-time teachers in college	Male	50.33 (28.80)	31.25 (22.60)	19.083 * (0.016)	54.25 (31.03)	34.11 (30.45)	20.139 (0.131)	
	Female	17.86 (14.41)	12.05 (9.04)	5.817 (0.115)	31.75 (19.44)	18.44 (10.48)	13.306* (0.071)	
Part-time teachers in the college	Male	1.13 (2.96)	3.30 (10.45)	-2.167 (0.287)	6.62 (14.88)	4.22 (6.57)	2.403 (0.652)	
	Female	0.60 (1.90)	1.35 (4.15)	-0.750 (0.392)	3.50 (7.12)	3.77 (9.29)	-0.278 (0.934)	
Teachers holding Ph.D	Male	2.13 (2.51)	1.90 (2.86)	0.233 (0.762)	1.00 (1.71)	1.00 (1.11)	0.000 (1.00)	
	Female	0.36 (0.66)	0.35 (0.98)	0.017 (0.943)	0.250 (0.577)	0.33 (0.70)	-0.083 (0.752)	
Professors in the college	Sanctioned posts	4.46 (4.74)	1.75 (1.71)	2.717 * (0.018)	4.31 (7.74)	3.22 (8.59)	1.090 (0.748)	
	Currently working	5.73 (6.31)	1.95 (1.73)	3.783 * (0.012)	2.50 (5.22)	3.22 (8.59)	-0.722 (0.795)	
Associate Professors in the college	Sanctioned posts	12.73 (9.11)	5.30 (6.81)	7.433 ** (0.003)	6.81 (14.28)	1.33 (4.00)	5.479 (0.276)	
	Currently working	11.90 (10.21)	4.45 (5.82)	7.450 ** (0.0050)	5.50 (10.89)	1.33 (4.00)	4.167 (0.284)	
Assistant Professors	Sanctioned posts	19.90 (11.76)	11.00 (8.99)	8.900 ** (0.006)	24.12 (26.16)	11.55 (8.90)	12.569 (0.179)	
	Currently working	20.30 (14.02)	9.65 (8.49)	10.650 ** (0.004)	19.18 (11.69)	11.00 (7.50)	8.188 (0.072)*	
Lecturers in the college	Sanctioned posts	34.60 (22.84)	29.20 (18.39)	5.400 (0.382)	65.62 (52.93)	30.00 (17.62)	35.625 (0.064)*	
	Currently working	28.76 (18.70)	22.95 (13.76)	5.817 (0.240)	57.62 (39.07)	35.22 (20.07)	22.403 (0.124)	
MPO listed teachers	Male	0 (0)	0 (0)	0.00 (.)	20.37 (9.06)	22.11 (12.97)	-1.736 (0.698)	
	Female	0 (0)	0 (0)	0.00 (.)	10.12 (5.74)	14.33 (7.84)	-4.208 (0.137)	
Demonstrators in the college	Sanctioned posts	4.00 (1.76)	2.20 (1.67)	1.800 * (0.001)	2.81 (2.25)	2.66 (1.73)	0.146 (0.868)	
	Currently working	1.40 (1.19)	1.00 (1.12)	0.400 (0.240)	2.12 (1.74)	1.77 (1.30)	0.347 (0.609)	

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

In table 9 we are trying to portrait the long run picture of providing IDG grants in NU affiliated colleges. It can be said that the institutional characteristics of NU affiliated colleges does not change much during the three-satisfaction survey period. This is basically the general characteristics of the affiliated colleges such as number of departments and teacher, designation of teachers etc., which usually does not vary much overtime.

Table 9: Changes in Institutional characteristics of NU affiliated IDG colleges

Details	Categories	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (EL-BL)	Difference (EL-ML)
Departments in the college	Honors	11.69	12.05 (4.62)	11.95 (4.6)	0.25	-0.1
	Master	6.52	6.02 (5.69)	6.10 (5.92)	-0.425	0.08
Teachers in the college	Male	56.14	58.07 (35.68)	54.73 (30.29)	-1.41	-3.34
	Female	25.21	23.10 (18.09)	24.30 (18.71)	-0.91	1.2
Full-time teachers in college	Male	51.2	54.59 (36.15)	51.69 (29.31)	0.49	-2.9
	Female	23.33	21.42 (16.10)	22.69 (17.45)	-0.64	1.27
Part-time teachers in the college	Male	8.26	3.49 (9.46)	3.04 (9.30)	-5.225	-0.45
	Female	4.21	1.68 (4.33)	1.60 (4.60)	-2.615	-0.08
Teachers holding Ph.D	Male	2.53	1.85 (2.28)	1.73 (2.31)	-0.8	-0.12
	Female	0.53	0.27 (0.59)	0.32 (0.63)	-0.215	0.05
Professors in the college	Sanctioned posts	4.42	3.81 (5.11)	4.41 (5.87)	-0.01	0.6
	Currently working	3.88	3.32 (4.33)	4.60 (6.10)	0.72	1.28
Associate Professors in the college	Sanctioned posts	12.28	11.15 (10.82)	10.67 (11.38)	-1.61	-0.48
		12.12	10.17	9.67	-2.45	-0.5

	Currently working		(9.20)	(10.78)		
Assistant Professors	Sanctioned posts	19.81	21.73 (13.89)	21.36 (17.92)	1.55	-0.37
	Currently working	14.85	19.29 (12.13)	19.91 (13.13)	5.06	0.62
Lecturers in the college	Sanctioned posts	49.27	48.95 (37.13)	45.39 (38.64)	-3.885	-3.56
	Currently working	47.19	38.42 (35.42)	38.80 (30.45)	-8.395	0.38
MPO listed teachers	Male	23.56	9.02 (14.32)	7.08 (11.11)	-6.48	-1.94
	Female	29.35	4.27 (6.73)	3.52 (11.11)	-5.83	-0.75
Demonstrators in the college	Sanctioned posts	5.86	3.51 (1.91)	3.58 (2.00)	-2.285	0.07
	Currently working	1.94	1.73 (1.64)	1.65 (1.43)	-0.29	-0.08

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 10 shows the average number of current students in honors and masters' level with the students graduated from the NU affiliated colleges disaggregated by gender of the students. Column 3 to 5 shows that there exists significant difference between IDG awarded colleges and IDG non-recipient colleges in case of number of male students who are currently studying at honors level. The average number of male students at honors level in IDG awarded colleges is greater than the IDG non-recipient college students by 1145 and the difference is statistically significant at 5 percent level.

Table 10: Number of students currently studying and completing education from NU affiliated colleges (IDG vs. non-IDG colleges)

Number of students	Categories	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Difference (p value)	All colleges Mean (SD)
Students studying in Honors	Total	5125.78 (3678.42)	3085.10 (3463.56)	2040.67** (0.01)	4336.72 (3710.56)
	Male	2711.30 (2344.16)	1565.89 (2153.55)	1145.40** (0.03)	2268.41 (2326.33)
	Female	2414.47 (1810.72)	1519.20 (1594.02)	895.27** (0.03)	2068.30 (1774.23)
Students studying in Masters	Total	947.84 (2103.35)	285.03 (670.80)	662.81 (0.10)	691.56 (1722.26)
	Male	504.78 (1084.47)	150.89 (360.84)	353.88 (0.09)	367.94 (891.38)
	Female	443.06 (1042.02)	134.13 (319.61)	308.92 (0.12)	323.61 (849.64)
Students completing honors each year	Total	1157.06 (2039.27)	636.55 (903.61)	520.51 (0.20)	955.8 (1703.81)
	Male	610.84 (1307.80)	312.55 (513.13)	298.29 (0.24)	495.50 (1077.54)
	Female	546.32 (898.78)	324.00 (435.94)	222.32 (0.21)	460.36 (758.30)
Students completing masters each year	Total	570.10 (1000.76)	208.89 (559.01)	361.21* (0.08)	430.44 (870.99)
	Male	307.04 (555.42)	105.79 (281.70)	201.25* (0.07)	229.22 (476.82)
	Female	263.06 (461.45)	103.10 (282.80)	159.96* (0.09)	201.21 (407.30)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

At disaggregated level this results also prevails in case of IDG awarded government colleges. The average number of male students at honors level in IDG awarded government colleges is greater than that of the IDG non-recipient college students by about 1,327 and the difference is statistically significant at 5 percent level.

Table 11 also shows that among all student categories, government colleges have a significantly higher number of students than the non-government colleges, and mean number of honors students exceeds the number of masters students. It is evident that the number of students completing either honors or master's level is lower than the admitted students. Again, the number of male students- currently studying and completing in both honors and master's level- is found higher in government as well as non-government colleges. This result implies that students discontinue their study at some point of their journey at honors or masters level study and this discontinuation is higher for female students than male students.

Table 11: Number of students currently studying and completing education from NU affiliated colleges (Govt. vs. non-Govt. colleges)

Number of students	Categories	(1)	(2)	(3)	(4)	(5)	(6)
		Government college			Non-government college		
		IDG College	Non-IDG College	Difference (p-value)	IDG College	Non-IDG college	Difference (p-value)
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Students studying in Honors	Total	6115.46 (3400.29)	3542.75 (3995.74)	2572.71 ** (0.01)	3270.12 (3550.66)	2068.11 (1542.90)	1202.01 (0.34)
	Male	3114.40 (2301.83)	1787.40 (2413.95)	1327** (0.05)	1955.50 (2303.76)	1073.73 (1413.33)	881.83 (0.31)
	Female	3001.06 (1769.68)	1755.35 (1857.74)	1245.71** (0.021)	1314.62 (1342.72)	994.44 (497.41)	320.18 (0.50)
Students studying in Masters	Total	1289.63 (2510.02)	249.05 (662.55)	1040.58* (0.077)	307.00 (648.27)	365.00 (722.42)	-58.00 (0.83)
	Male	666.40 (1279.24)	123.80 (337.61)	542.60* (0.07)	201.75 (462.86)	211.11 (423.21)	-9.36 (0.96)
	Female	623.23 (1252.65)	125.25 (333.08)	497.98* (0.09)	105.25 (192.71)	153.88 (305.61)	-48.63 (0.62)
Students completing honors each year	Total	1523.16 (2430.16)	635.25 (770.84)	887.91 (0.12)	470.62 (536.22)	639.44 (1202.74)	-168.81 (0.63)
	Male	787.63 (1576.16)	303.10 (437.60)	484.53 (0.18)	279.37 (385.18)	333.55 (682.68)	-54.18 (0.80)
	Female	735.53 (1063.72)	332.15 (403.36)	403.38 (0.11)	191.56 (173.22)	305.88 (527.47)	-114.32 (0.42)
Students completing masters each year	Total	755.90 (1154.99)	234.30 (652.91)	521.60* (0.07)	221.75 (476.46)	152.44 (275.81)	69.306 (0.69)
	Male	396.50 (634.43)	114.35 (324.03)	282.15* (0.07)	139.31 (318.29)	86.77 (166.73)	52.53 (0.65)
	Female	359.40 (537.50)	119.95 (333.98)	239.45* (0.08)	82.43 (163.99)	65.66 (112.72)	16.77 (0.78)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

In table 12 we are trying to portrait the long run picture of providing IDG grants in NU affiliated colleges. It is encouraging that overtime the number of students admitting into NU is increasing. Colum 6 shows that in case of number of students studying in honors and master's level and students completing their honors and master's level from NU affiliated colleges from baseline satisfaction survey to end-line satisfaction survey have been increased. This implies that the colleges that have received IDG grants are successful in increasing their student enrollment and graduation number over time from baseline to end-line satisfaction survey.

Table 12: Number of students currently studying and completing education from NU affiliated colleges (IDG colleges only)

Number of students	Categories	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (EL-BL)	Difference (EL-ML)
Students studying in Honors	Total	4044.71	4777.00 (3932.59)	5125.78 (3678.42)	1081.07	348.78
	Male	2653.81	3551.28 (2217.42)	2711.30 (2344.16)	57.49	-839.98
	Female	1874.755	2005.27 (1886.26)	2414.47 (1810.72)	539.715	409.2
Students studying in Masters	Total	680.52	755.85 (1174.80)	947.84 (2103.35)	267.32	191.99
	Male	447.17	641.72 (712.99)	504.78 (1084.47)	57.61	-136.94
	Female	294.945	482.16 (608.06)	443.06 (1042.02)	148.115	-925.22
Students completing honors each year	Total	1014.555	816.82 (758.96)	1157.06 (2039.27)	142.505	340.24
	Male	669.76	481.41 (438.92)	610.84 (1307.80)	-58.92	129.43
	Female	380.075	342.2 (360.97)	546.32 (898.78)	166.245	204.12
Students completing masters each year	Total	513.625	767.32 (1110.92)	570.10 (1000.76)	56.475	-197.22
	Male	335.255	472.19 (720.91)	307.04 (555.42)	-28.215	-165.15
	Female	220.86	343.28 (556.94)	263.06 (461.45)	42.2	-80.22

2.3.2. 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 13 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, 1.5 and 0.33 respectively. The IDG awarded colleges have higher number of classrooms per 100 students and higher number of classrooms with multi-media equipped per 100 students compared to IDG non-recipient colleges. This is true for both government and non-government colleges (Table 14).

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

The mother’s corner provides opportunity to the new mothers to continue breastfeeding while attending classes at colleges. It is the new addition in the NU affiliated colleges. The result shows that IDG grant is effective in terms of providing the mother’s corner at the colleges. According to the survey result, almost 61 percent principals from IDG awarded colleges informed us that they have mother’s corner in their campus whereas, only 24 percent principals of IDG non-recipient colleges gave the positive response. The difference between the IDG and non-IDG college is positive and statistically significant at 1% level.

For the diverse needs of special child, they need special arrangements and facilities availability in the college campus. From the result, it can be said that IDG grant successfully worked on the availability of facilities for special need students. On an average, 55 percent principals from IDG awarded colleges said their colleges have facilities for special need students. On the other hand, 37 percent of IDG non-recipient college principals responded positively on the availability of this facilities.

Table 13: Available facilities in college (IDG vs. non-IDG colleges)

Variables		IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Number of class rooms per 100 students		1.799 (1.753)	1.381 (1.655)	0.417 (0.302)	1.542 (1.694)
Number of multimedia equipped class rooms per 100 students		0.399 (0.377)	0.219 (0.282)	0.180** (0.030)	0.329 (0.352)
Number of laboratories per 100 students		0.227 (0.375)	0.116 (0.128)	0.112* (0.067)	0.158 (0.257)
Number of computer labs per 100 students		0.076 (0.097)	0.063 (0.076)	0.01 (0.519)	0.068 (0.084)
Is it a single campus college?	Yes	95.65	93.10	0.2288 (0.632)	94.67
Central library	Yes	100	86.21	6.702** (0.010)	94.67
Open space/ playground	Yes	89.13	89.66	0.0051 (0.943)	89.33
Hostel accommodation for the teachers	Yes	28.26	20.69	0.5390 (0.463)	25.33
Transport facilities for teachers	Yes	10.87	3.45	1.3310 (0.249)	8.00
Transport facilities for students	Yes	26.09	6.90	4.314** (0.038)	18.67
Hostel accommodation for the students	Yes	26.09	13.79	1.601 (0.206)	21.33
Partial hostel accommodation for the students	Yes	55.88	52	0.087 (0.767)	54.24
Student association	Yes	26.09	17.24	0.793 (0.373)	22.67
Student wing of a political party	Yes	17.39	13.79	0.1713 (0.679)	16.00
Have a mother's corner	Yes	60.87	24.14	9.642*** (0.002)	46.67
Facilities for special need students	Yes	55.17	36.96	2.395 (0.122)	44.00
Counselling or mental health support system	Yes	19.57	13.79	0.413 (0.520)	17.33
Primary health care facilities	Yes	65.22	51.72	1.349 (0.245)	60.00

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 14: Available facilities in college (IDG vs. non-IDG colleges)

Variables		Government college			Non-government college		
		IDG college	Non-IDG college	Chi2/ Difference (p-value)	IDG college	Non-IDG college	Chi2/ Difference (p-value)
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Number of class rooms per 100 students		1.578 (1.668)	0.644 (0.416)	0.935 ** (0.005)	2.764 (2.180)	2.288 (1.940)	0.476 (0.592)
Number of multimedia equipped class rooms per 100 students		0.275 (0.196)	0.229 (0.290)	0.046 (0.505)	0.632 (0.513)	0.199 (0.279)	0.434 * (0.029)
Number of laboratories per 100 students		0.093 (0.083)	0.245 (0.439)	-0.151 (0.071)	0.157 (0.181)	0.188 (0.179)	-0.031 (0.679)
Number of computer labs per 100 students		0.035 (0.029)	0.071 (0.104)	-0.036 (0.080)	0.115 (0.107)	0.083 (0.028)	0.028 (0.504)
Is it a single campus college?	Yes	100	100	-	87.50	77.78	0.405 (0.524)
Central library	Yes	100	85	4.78 (0.029)	100	88.89	1.851 (0.174)
Open space/ playground	Yes	90	90	0 (1)	87.50	88.89	0.010 (0.918)
Hostel accommodation for the teachers	Yes	30	20	0.62 (0.43)	25	22.22	0.024 (0.876)
Transport facilities for teachers	Yes	13.33	5	0.92 (0.33)	6.25	0	0.585 (0.44)
Transport facilities for students	Yes	30	10	2.79 (0.094)	18.75	0	1.91 (0.166)
Hostel accommodation for the students	Yes	30	10	2.79 (0.094)	18.75	22.22	0.043 (0.835)
Partial hostel accommodation for the students	Yes	61.90	55.56	0.16 (0.688)	46.15	42.86	0.0200 (0.888)
Student association	Yes	20	20	0 (1)	37.50	11.11	1.98 (0.158)
Student wing of a political party	Yes	16.67	10	0.44 (0.50)	18.75	22.22	0.0434 (0.835)
Have a mother's corner	Yes	60	25	5.91 (0.015)	62.55	22.22	3.74 (0.053)
Facilities for special need students	Yes	20	50	4.96 (0.026)	68.75	66.67	0.0115 (0.915)
Counselling or mental health support system	Yes	10	10	0 (1)	37.50	22.22	0.6179 (0.432)
Primary health care facilities	Yes	63.33	50	0.87 (0.349)	68.75	55.56	0.435 (0.509)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

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

In table 15 we are trying to portray the long run picture of providing IDG grants in NU affiliated colleges. It is encouraging that over time the available facilities in the IDG colleges have been increasing. Number of classroom, multimedia, laboratories, computer lab have shown a positive increase from baseline satisfaction survey to end-line satisfaction survey. This implies that the colleges that have received IDG grants are successful in increasing the available facilities in the colleges overtime.

Table 15: Available facilities in college overtime (IDG colleges)

Variables		Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (BL-EL)	Difference (ML-EL)
Number of class rooms per 100 students		2.021	3.37 (6.97)	3.38 (1.65)	1.36	0.01
Number of multimedia equipped class rooms per 100 students		0.302	0.72 (1.23)	0.89 (0.37)	0.588	0.17
Number of laboratories per 100 students		0.249	0.36 (0.64)	0.86 (0.12)	0.611	0.50
Number of computer labs per 100 students		0.074	0.13 (0.19)	0.162 (0.076)	0.088	0.032
Is it a single campus college?	Yes	85.5	92.68	95.65	10.15	2.97
Central library	Yes	98	100.00	100.00	2	0
Open space/ playground	Yes	95	95.12	89.13	-5.87	-5.99
Hostel accommodation for the teachers	Yes	16	21.95	28.26	12.26	6.31
Transport facilities for teachers	Yes	9	7.50	10.87	1.87	3.37
Transport facilities for students	Yes	25	26.83	26.09	1.09	-0.74
Hostel accommodation for the students	Yes	18	38.46	26.09	8.09	-12.37
Partial hostel accommodation for the students	Yes	65	43.48	55.88	-9.12	12.4
Student association	Yes	44	15.38	26.09	-17.91	10.71
Student wing of a political party	Yes	49	23.08	17.39	-31.61	-5.69

Have a mother's corner	Yes	00	48.78	60.87	60.87	12.09
Facilities for special need students	Yes	00	70.00	36.96	36.96	-33.04
Counselling or mental health support system	Yes	00	36.59	19.57	19.57	-17.02
Primary health care facilities	Yes	00	68.29	65.22	65.22	-3.07

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 16 provides principals opinion regarding selected qualitative information regarding their colleges. It can be found that most of the principals (84%) 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 (87.50 percent and 78 percent respectively).

Thesis for students is mandatory only in 16 percent of colleges and research work for teachers is considered as a criterion for promotion in 44 percent colleges. Moreover, 58 percent of college principals informed us about students' involvement in different activities in their college to develop their soft skills. The percentage is higher in non-government colleges compared to government colleges.

Table 16: Selected qualitative information regarding colleges (IDG vs. non-IDG colleges)

		IDG colleges	Non-IDG colleges	Chi2/ Difference (p value)	All colleges
Activities involving the development of students' soft skills	Yes	60	55.17	0.168 (0.681)	58.11
Research work for teachers considered a criteria for promotion	Yes	36.96	55.17	2.395 (0.122)	44
Mandatory thesis for students	Yes	17.39	13.79	0.1713 (0.679)	16
Teachers supervise students' thesis work	Yes	35.56	27.59	0.51 (0.47)	32.43
Necessity to open a new department	Yes	84.78	82.14	0.089 (0.765)	83.78

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

**Table 17 Selected qualitative information regarding colleges
(Govt. vs. non-Govt. colleges)**

Variables		Government colleges			Non-government colleges		
		IDG college	Non- IDG college	Chi2 (p-value)	IDG college	Non- IDG college	Chi2 (p-value)
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Activities involving the development of students' soft skills	Yes	56.67	45	0.654 (0.419)	66.67	77.78	0.33 (0.56)
Research work for teachers considered a criteria for promotion	Yes	20	55	6.55** (0.010)	68.75	55.56	0.43 (0.50)
Mandatory thesis for students	Yes	13.33	10	0.12 (0.72)	25.00	22.22	0.024 (0.876)
Teachers supervise students' thesis work	Yes	31.03	20	0.73 (0.39)	43.75	44.44	0.0011 (0.973)
Necessity to open a new department	Yes	83.33	84.21	0.006 (0.935)	87.50	77.78	0.405 (0.524)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

2.3.3. Adequacy of selected facilities in the college

This section provides principals responses regarding number of different educational facilities available in the colleges together with their adequacy. The level of adequacy is measure in Likert Scale from 1 through 5 (1= not adequate at all, 5= more than adequate). Table 18 & 19 lists the average number of facilities available in the colleges disaggregated by IDG status and management status and Table 20 shows the adequacy of the facilities from college principals' point of view.

Table 16, shows the picture of available facilities in the colleges. It can be seen that IDG awarded colleges have more facilities such as: classroom, exam hall, seminar room, library, common room and wash room facilities available in the campus compared to IDG non-recipient colleges. The mean differences between them are statistically significant. At the disaggregated level, this picture is also similar. This implies colleges those received IDG grants, used it successful for increasing and making necessary facilities available for students in the college campus.

Table 18: Number of facilities available at the colleges

Facilities	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Difference (p value)	All colleges Mean (SD)
Classrooms	41.54 (25.40)	28.37 (21.14)	13.164 ** (0.023)	36.453 (24.560)
Exam halls	17.82 (25.65)	10.40 (11.92)	7.429 (0.179)	15.015 (21.695)
Seminar/meeting rooms for teachers	4.52 (6.23)	1.55 (2.25)	2.968 ** (0.021)	3.362 (5.243)
Washrooms/toilets for teachers	14.81 (12.29)	8.72 (11.63)	6.090** (0.045)	12.361 (12.677)
Washrooms/toilets for female teachers	3.42 (5.97)	2.48 (3.45)	0.947 (0.458)	3.057 (5.127)
Common rooms for students	1.22 (0.83)	1.037 (0.80)	0.190 (0.347)	1.154 (0.821)
Washrooms/toilets for students	16.18 (14.93)	8.92 (10.14)	7.253 ** (0.027)	13.361 (13.668)
Separate Washrooms/toilets for Girls	7.54 (7.69)	4.78 (6.32)	2.760 (0.117)	6.472 (7.273)
Library facilities	3.53 (5.11)	2.3 (4.12)	1.0* (0.087)	2.77 (5.15)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 19: Number of facilities available at the colleges

Facilities	Government college			Non-government college		
	IDG College	Non- IDG College	Difference (p-value)	IDG College	Non- IDG College	Difference (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Classrooms	36.43 (19.28)	27.50 (24.86)	8.93 (0.16)	51.125 (32.656)	30.333 (9.552)	20.792* (0.077)
Exam halls	13.25 (17.09)	10.52 (10.60)	2.73 (0.55)	26.643 (36.244)	10.125 (15.170)	16.518 (0.237)
Seminar/meeting rooms for teachers	3.33 (5.03)	0.72 (0.46)	2.611 ** (0.034)	6.667 (7.678)	3.222 (3.383)	3.444 (0.219)
Washrooms/toilets for teachers	15.07 (11.54)	7.35 (7.10)	7.721 ** (0.011)	14.333 (15.536)	11.778 (18.397)	2.556 (0.719)
Washrooms/toilets for female teachers	2.71 (4.73)	2.00 (3.34)	0.71 (0.58)	4.857 (7.912)	3.444 (3.678)	1.413 (0.623)
Common rooms for students	1.14 (0.93)	1.05 (0.82)	0.09 (0.72)	1.375 (0.619)	1.000 (0.816)	0.375 (0.238)

Washrooms/toilets for students	16.32 (12.61)	9.57 (11.35)	6.74 (0.06)	15.938 (18.774)	7.556 (7.333)	8.382 (0.215)
Separate Washrooms/toilets for Girls	6.96 (7.59)	4.63 (6.27)	2.33 (0.27)	8.563 (8.008)	5.111 (6.809)	3.451 (0.288)
Library facilities	3.50 (4.65)	7.36 (2.54)	4.3 (0.14)	2.28 (5.07)	6.0 (9.88)	4.0 (0.32)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 20 shows the available facilities provided are sufficient for the college or not. As evident that at least 30.14 percent of the principals responded that their colleges do not have at all sufficient seminar/meeting room, library (25.71 percent) and exam halls (44 percent). In terms of training facilities for teachers, almost 50 percent of the principals reported that the facility is not available at all, and 21.33 percent of them replied that training facility is adequate and provided once every 5 years. Perceptions of college principals about the adequacy of college facilities are presented in Figure 3.2.

Table 20: Perception of adequacy of facilities at the colleges (% of responses)

Adequacy of facilities	Not at all	Somewhat adequate	Adequate	More than enough
Classrooms	21.33	37.33	41.33	---
Exam halls	44	32	24	---
Seminar/Meeting rooms for teachers	30.14	32.88	36.99	---
Washrooms/toilets for teachers	8.33	37.50	54.17	---
Washrooms/toilets for female teachers	41.10	32.88	24.66	1.37
Common rooms for students	38.36	35.62	26.03	---
Washrooms/toilets for students	18.06	37.50	41.67	2.78
Separate Washrooms/toilets for Girls	26.03	39.73	32.88	1.37
Library facilities	25.71	31.43	41.43	1.43
IT facilities	17.57	51.35	29.73	1.35
Library facilities (Book, Journal, etc.)	24	33.33	41.33	1.33
Training facilities for teachers	49.33	29.33	21.33	---

Source: End-line satisfaction survey, BIDS-2023.

Table 21 shows that mean level of satisfaction (adequacy) for most of the facilities are below three. This indicates that the facilities are somewhat adequate. We have identified significant differences between the responses of college principals regarding adequacy of facilities in their colleges by college type (Government vs. non-government, or IDG awarded vs. IDG non-recipient colleges). However, on an average, IDG awarded college principals consider the number of meeting rooms, number of exam halls, classrooms, toilet/ washroom facilities for teachers and students, common room for students, and library facilities are adequate in their colleges than the IDG non-recipient colleges. The difference of adequacy level between them is statistically significant. At the disaggregated level, principals from IDG awarded non-government colleges consider number of facilities are more adequate than that the IDG awarded government college.

Table 21: Mean adequacy level of different facilities (IDG vs. non-IDG colleges)

Name of facilities	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Difference (p value)	All colleges Mean (SD)
Classrooms	2.23 (0.76)	2.13 (0.78)	0.101 (0.583)	2.20 (0.77)
Exam halls	1.93 (0.80)	1.58 (0.78)	0.349* (0.068)	1.80 (0.80)
Seminar/Meeting rooms for teachers	2.26 (0.78)	1.75 (0.79)	0.517 ** (0.008)	2.06 (0.82)
Washrooms/toilets for teachers	2.63 (0.53)	2.79 (0.72)	0.458 *** (0.003)	2.45 (0.64)
Washrooms/toilets for female teachers	1.97 (2.94)	1.71 (0.76)	0.263 (0.216)	1.87 (0.88)
Common rooms for students	2.00 (0.79)	1.67 (0.77)	0.321* (0.095)	1.87 (0.79)
Washrooms/toilets for students	2.47 (0.76)	2.07 (0.97)	0.406** (0.053)	2.31 (0.86)
Separate Washrooms/toilets for Girls	2.22 (0.73)	1.92 (0.97)	0.294 (0.149)	2.10 (0.84)
Library facilities	2.39 (0.84)	1.88 (0.84)	0.506 * (0.018)	2.20 (0.87)
Library facilities (Book, Journal, etc.)	2.45 (0.80)	1.82 (0.80)	0.629 *** (0.002)	2.21 (0.85)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 22: Mean adequacy level of different facilities (Govt. Vs. non-Govt. colleges)

Name of facilities	Government college			Non-government college		
	IDG College	Non-IDG College	Difference (p-value)	IDG College	Non-IDG College	Difference (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Classrooms	2.13 (0.81)	1.90 (0.78)	0.233 (0.322)	2.66 (0.50)	2.43 (0.62)	0.229 (0.359)
Exam halls	1.80 (0.80)	1.50 (0.68)	0.300 (0.178)	2.18 (0.75)	1.77 (0.97)	0.410 (0.250)
Seminar/Meeting rooms for teachers	2.20 (0.84)	1.80 (0.83)	0.400 (0.106)	2.40 (0.63)	1.62 (0.74)	0.775 * (0.015)
Washrooms/toilets for teachers	2.66 (0.47)	2.10 (0.78)	0.567 ** (0.003)	2.57 (0.64)	2.37 (0.51)	0.196 (0.472)
Washrooms/toilets for female teachers	1.80 (0.84)	1.60 (0.75)	0.200 (0.397)	2.33 (1.04)	2 (0.75)	0.333 (0.436)
Common rooms for students	1.90 (0.84)	1.70 (0.80)	0.200 (0.407)	2.20 (0.67)	1.62 (0.74)	0.575 (0.074)
Washrooms/toilets for students	2.40 (0.67)	2 (1.026)	0.400 (0.102)	2.64 (0.92)	2.25 (0.88)	0.393 (0.344)
Separate Washrooms/toilets for Girls	2.10 (0.75)	2 (1.076)	0.100 (0.701)	2.46 (0.64)	1.74 (0.70)	0.717 * (0.022)
Library facilities	2.57 (0.83)	2 (0.858)	0.571 * (0.025)	2.06 (0.79)	1.57 (0.78)	0.495 (0.189)
Library facilities (Book, Journal, etc.)	2.50 (0.86)	1.850 (0.875)	0.650 * (0.012)	2.37 (0.71)	1.77 (0.66)	0.597 (0.053)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

2.3.4. Quality of Teaching in the NU College

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

Table 23 shows that about 99 percent of principals reported that they have regular meeting of academic council, and on an average, 9 meeting held per academic year, which seems relatively high. From each college, on an average 14 teachers received training in Bangladesh, and 1 received training in abroad in the last 12 month. This number is 34 and 2 for training in Bangladesh and abroad respectively in the last 5 years. However, the teachers who received training abroad in the last 5 years are very close to the figure of the last 12 months.

About 28 percent of the principals reported that newly recruited teachers received pedagogical training, and 57 percent of the principals said that this training is used as a criterion for promotion of the teachers. On the other hand, almost 25 percent of teachers have received on job/foundation training, and only 10 percent have received NU subject-based training in the last 12 months. There exists significant difference between IDG and non-IDG colleges in case of receiving training during the last 12 month and during the last 5 years.

At disaggregated level, it can be seen that a higher number of teachers in both government and non-government IDG awarded colleges has received trainings in Bangladesh than that of IDG non-recipient colleges, but the difference is not statistically significant.

The table also shows that a higher percent of non-government IDG colleges and government non-IDG recipient college principals reported that their teachers are assessed by the students and senior staffs.

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 the opportunities for pedagogical training to newly recruited teachers. The assessment usually done by (i) assessment sheet provided to students that is submitted online to the authority after each semester, (ii) assessment of senior teachers after attending the class of junior teachers.

On the other hand, a larger proportion of government college principals said that they arrange academic council meeting regularly and the number of times they meet is higher than that of the non-government colleges.

Table 23: Teaching environment in the NU affiliated colleges

Variables	Response categories	IDG colleges	Non-IDG colleges	Chi2/ Difference (p value)	All colleges
Are the teachers assessed by the students? (%)	Yes	28.26	27.59	0.0040 (0.949)	28
Are the new teachers assessed by the senior teachers? (%)	Yes	56.52	48.28	0.4859 (0.486)	53.33
Is there regular meeting of academic council? (%)	Yes	100	96.55	1.6076 (0.554)	98.67
How many times on average a meeting is held per session?	-	9.28 (5.86)	9 (9.94)	0.283 (0.878)	9.17 (7.60)
How many teachers have received trainings during the last 12 months?	In Bangladesh	19.58 (20.80)	6.20 (6.23)	13.380 ** (0.001)	14.41 (17.91)
	Abroad	0.32 (1.38)	1.72 (9.09)	-1.398 (0.307)	0.86 (5.73)
How many teachers have received trainings during the last 5 years?	In Bangladesh	47.04 (48.67)	17.03 (15.29)	30.009 ** (0.002)	35.44 (41.78)
	Abroad	1.37 (2.60)	1.82 (9.08)	-0.458 (0.748)	1.54 (5.94)
Pedagogical trainings for newly recruited teachers (%)	Yes	30.43	24.14	0.35 (0.55)	28
On- the job/foundation trainings to the newly recruited teachers? (%)	Yes	28.26	20.69	0.53 (0.46)	25.33
Pedagogical trainings as a criterion for promotion of the Teachers (%)	Yes	54.35	62.07	0.43 (0.51)	57.33
How many teachers received NU subject-based training in the last 12 months?	Yes	12.04 (14.60)	7.17 (10.39)	4.87 (0.12)	10.16 (13.27)

Table 24: Teaching environment in the NU affiliated colleges

Variables	Response categories	Government colleges			Non-government colleges		
		IDG College	Non- IDG College	Chi2/ Difference (p-value)	IDG College	Non- IDG College	Chi2/ Difference (p-value)
Are the teachers assessed by the students? (%)	Yes	20	25	0.1748 (0.676)	43.75	33.33	0.2604 (0.610)
Are the new teachers assessed by the senior teachers? (%)	Yes	50	40	0.4831 (0.487)	68.75	66.67	0.0115 (0.915)
Is there regular meeting of academic council? (%)	Yes	100	100	---	100	88.89	1.851 (0.174)
How many times on average a meeting is held per session?	-	10.03 (5.63)	9.650 (10.36)	0.383 (0.866)	7.87 (6.21)	7.37 (9.27)	0.500 (0.876)
How many teachers have received trainings during the last 12 months?	In Bangladesh	18.56 (19.17)	5.80 (6.76)	12.767 ** (0.006)	21.50 (24.12)	7.11 (5.11)	14.389 (0.093)
	Abroad	0.13 (0.43)	0.05 (0.22)	0.083 (0.434)	0.68 (2.27)	5.44 (16.33)	-4.757 (0.256)
How many teachers have received trainings during the last 5 years?	In Bangladesh	46.93 (50.60)	16.80 (15.48)	30.133 * (0.013)	47.25 (46.43)	17.55 (15.79)	29.694 (0.078)
	Abroad	1.66 (2.74)	0.20 (0.52)	1.467 * (0.023)	0.81 (2.28)	5.44 (16.33)	-4.632 (0.269)
Pedagogical trainings for newly recruited teachers (%)	Yes	25	20	0.1748 (0.676)	50	22.22	1.851 (0.174)
On- the job/foundation trainings to the newly recruited teachers? (%)	Yes	40	25	1.20 (0.273)	11.11	6.25	0.1849 (0.667)
Pedagogical trainings as a criterion for promotion of the Teachers (%)	Yes	46.67	65	1.6237 (0.203)	68.75	55.56	0.4352 (0.509)
How many teachers received NU subject-based training in the last 12 months?	-	12.83 (13.54)	5.15 (7.23)	7.683* (0.025)	10.56 (16.77)	11.66 (14.85)	-1.104 (0.871)

Source: End-line satisfaction survey, BIDS-2023. Note: *, **, and *** represents significant at 10%, 5% and 1% level.

2.3.5. Employment Opportunities for the Students

Table 25 provides information regarding employment opportunities facilitated by the college authorities. About 18 percent of IDG colleges and 21 percent of the non-IDG colleges have collaboration with industries for job placement of the students and maintain an alumni association respectively.

Although the college principals' have high level of satisfaction about the academic results of their student, their satisfaction level in terms of students' job market outcome is not the same. There exists difference in the level of satisfaction regarding academic results and job market outcome of students according to the responses of the college principals. The results are also true for both IDG awarded colleges and IDG non-recipient colleges.

Table 25: Employment facilities for students in NU affiliated colleges

Variables	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Have collaboration with industry for job placement (%)	17.39	20.69	0.127 (0.721)	18.67
Have alumni association for students (%)	28.26	10.34	3.402* (0.066)	21.33
Mean level of satisfaction with the academic results of students ^a (mean)	3.23 (0.92)	3.41 (0.78)	-0.175 (0.401)	3.30 (0.86)
Mean level of satisfaction with the job-market outcome of students ^b (mean)	2.43 (0.93)	2.48 (0.87)	-0.048 (0.825)	2.45 (0.90)

Source: End-line satisfaction survey, BIDS-2023. Note: a, b: Level of satisfaction is measured on a 5-point scale, where 1= very dissatisfied, and 5= very satisfied; *, **, and *** represents significant at 10%, 5% and 1% level.

Moreover, only 13.33 percent of IDG recipient government colleges have collaboration with industries for job placement of the students, which is 25 percent for non-government IDG college. This implies that non-government colleges have more collaboration with industries for job placement of students compared to government colleges as reported by the college principals.

Table 26: Employment facilities for students in NU affiliated colleges (Govt. vs. non-Govt. colleges)

Variable	Government college			Non-government college		
	IDG College	Non- IDG College	Chi2/ Difference (p-value)	IDG College	Non- IDG College	Chi2/ Difference (p-value)
Have collaboration with industry for job placement (%)	13.33	15	0.027 (0.686)	25	33.33	0.1984 (0.656)
Have alumni association for students (%)	20	15	0.203 (0.652)	43.75	0.00	5.4687 (0.019)
Mean level of satisfaction with the academic results of students ^a (mean)	3.20 (0.92)	3.45 (0.75)	-0.250 (0.321)	3.31 (0.94)	3.33 (0.86)	-0.021 (0.957)
Mean level of satisfaction with the job-market outcome of students ^b	2.30 (0.91)	2.50 (0.88)	-0.200 (0.448)	2.68 (0.94)	2.44 (0.88)	0.243 (0.534)

Source: End-line satisfaction survey, BIDS-2023. Note: a, b: Level of satisfaction is measured on a 5-point scale, where 1= very dissatisfied, and 5= very satisfied; *, **, and *** represents significant at 10%, 5% and 1% level.

2.3.6. Overall Satisfaction of Principals about 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. In this sub-section have been presented the overall satisfaction level of college principals disaggregated by government versus non-government colleges and IDG awarded versus IDG non-recipient colleges. The level of satisfaction is measure in Likert Scale from 1 through 5 (1= highly dissatisfied, 5= very satisfied).

In Table 27 we enlist the percentage of respondents who are 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 can be observed from the table that overall, almost 7 percent of the college principals are very satisfied about the teaching and learning environment facilities available at their colleges. Only 4 percent of the college principals seem to be very satisfied with the quality of academic infrastructure of the college. This 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 1.33 percent of the college principals.

For quality of soft-skills development among students, only 2.67 percent of college principals are found to be highly satisfied where as it is 2.67 percent for provisions for developing soft skills among the students and collaboration initiative for giving them access to the job markets.

Table 27: Overall satisfaction regarding selected indicators

Variables	Mean level of satisfaction	% of respondents 'very satisfied'
Teaching and learning environment at the college	3.746 (0.858)	6.67
Quality of academic infrastructure of the college	2.933 (1.056)	4.00
Internet connection and speed	2.60 (1.138)	1.33
Quality of soft skills development of the students	2.160 (1.013)	2.67
Collaboration of the colleges with industries to help students regarding job	1.693 (0.999)	2.67
Average of all indicators	2.586 (0.670)	

Source: End-line satisfaction survey, BIDS-2023. 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 case of the teaching and learning environment at the college, the principals are almost satisfied with the existing facilities. The mean level of satisfaction is 3.81 which is close to 4 (i.e., satisfied) in the Likert scale of satisfaction.

On the other hand, the mean level of satisfaction for other variables shows that, on an 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 in the Likert scale. Moreover, the quality of soft-skill development initiatives is 2.16 which is in the middle of dissatisfied and neither satisfied nor dissatisfied. The mean level of satisfaction for employment collaboration opportunities with industries is 1.6, which is the lowest among all other values in the Likert scale implying the principals are not satisfied at all with the existing collaboration facilities created by the colleges.

In table 28, 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 two overall satisfaction variables except for collaboration with industries for students' job placement, internet connection and speed and quality of soft-skill development. IDG awarded government and non-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 and non-government colleges. We do not find any significant differences between the IDG awarded non-government colleges and IDG

non-recipient non-government colleges in any of the five satisfaction indicators except for teaching and learning environment.

Table 28: Overall satisfaction regarding selected indicators (Govt. vs. non-Govt. colleges)

Variables	Government college			Non-government college		
	IDG College	Non-IDG College	Difference (p-value)	IDG College	Non-IDG College	Difference (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Teaching and learning environment at the college	3.667 (0.884)	3.300 (0.979)	0.367 (0.175)	3.813 (0.544)	3.222 (0.833)	0.590 ** (0.042)
Quality of academic infrastructure of the college	2.867 (1.008)	2.300 (0.801)	0.567 ** (0.040)	3.750 (0.931)	3.111 (1.054)	0.639 (0.130)
Internet connection and speed	2.800 (1.126)	2.400 (1.095)	0.400 (0.220)	2.625 (1.258)	2.333 (1.118)	0.292 (0.569)
Quality of soft-skills development of the students	2.200 (1.095)	2.000 (1.170)	0.200 (0.541)	2.250 (0.775)	2.222 (0.833)	0.028 (0.934)
Collaboration of the colleges with industries to help students regarding job	1.600 (0.932)	1.400 (0.821)	0.200 (0.440)	1.813 (0.911)	2.444 (1.424)	-0.632 (0.187)
Average of all indicators	2.627 (0.651)	2.280 (0.663)	0.347* (0.073)	2.850 (0.609)	2.667 (0.707)	0.183 (0.502)

Source: End-line satisfaction survey, BIDS-2023.

However, highly significant difference exists between IDG awarded colleges and IDG non-recipient colleges in case of two satisfaction indicators. The IDG awarded college principals reported to be more satisfied with the teaching and learning environment and academic infrastructure of the compared to IDG non-recipient colleges.

Table 29: Overall satisfaction regarding selected indicators (IDG vs. non. IDG colleges)

Variables	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Teaching and learning environment at the college	3.717 (0.779)	3.276 (0.922)	0.442 ** (0.029)	3.546 (0.858)
Quality of academic infrastructure of the college	3.174 (1.060)	2.552 (0.948)	0.622 ** (0.012)	2.933 (1.056)
Internet connection and speed	2.739 (1.163)	2.379 (1.083)	0.360 (0.185)	2.60 (1.138)
Quality of soft-skills development of the students	2.217 (0.987)	2.069 (1.067)	0.148 (0.541)	2.16 (1.013)
Collaboration of the colleges with industries to help students regarding job	1.674 (0.920)	1.724 (1.131)	-0.050 (0.834)	1.693 (0.999)
Average of all indicators	2.704 (0.639)	2.400 (0.689)	0.304** (0.055)	2.586 (0.670)

Source: End-line satisfaction survey, BIDS-2023.

In table 30 summarizes the overall satisfaction regarding selected indicators for IDG colleges overtime. we are trying to portrait the long run picture of providing IDG grants in NU affiliated colleges. It can be said that in case of overall satisfaction regarding selected indicators regarding teaching and learning environment, quality of academic infrastructure and internet connection and speed we find positive impact of IDG grant on IDG awarded colleges. However, the impact of IDG grant is weaker for increasing the quality of soft-skill development and increasing collaboration of the colleges with industries

Table 30: Overall satisfaction regarding selected indicators (IDG colleges only)

Variables	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (BL-EL)	Difference (ML-EL)
Teaching and learning environment at the college	3.59 (0.86)	3.90 (0.77)	3.71 (0.77)	0.12	-0.19
Quality of academic infrastructure of the college	2.95 (1.02)	3.32 (1.04)	3.17 (1.06)	0.22	-0.15
Internet connection and speed	2.51 (1.06)	2.95 (1.00)	2.73 (1.16)	0.22	-0.22
Quality of soft-skills development of the students	2.39 (1.02)	2.85 (1.01)	2.21 (0.98)	-0.18	-0.64
Collaboration of the colleges with industries to help students regarding job	1.73 (1.02)	1.71 (0.90)	1.67 (0.92)	-0.06	-0.04
Average of all indicators	2.634 (0.6902)	2.95 (0.70)	2.70 (0.63)	0.066	-0.25

Source: Satisfaction survey, different years.

2.3.7. IDG related Knowledge of College Principals who did not receive Institutional Development Grant (IDG)

Table 31 and 32 provides the responses of college principals who did not receive IDG grant on different topics concerning the intervention.

Among the respondents, 93 percent of the principals informed us that they knew about the IDG grant provision, 86 percent knew about the workshops being organized before IDG application procedure, 72 percent of the colleges applied for the IDG grant, and 97 percent of the college principals have agreed that their college will apply for the grant in future if the opportunity rises again. The disaggregated results shows that all the college principals either government or non-government knew about the IDG funding, had applied for it and all of them would apply again for the grant if another chance was given.

Table 31: IDG related information from IDG non-recipient college principals

Variables	Government college	Non-government college	All
Is your college informed about the Institutional Development Grant (IDG) provided by CEDP?	90	100	93.10
Did you know about the workshops organized before application process for IDG started?	85	88.89	86.21
Did your college applied for IDG facility?	60	100	72.41
If the project asks for more applications in the future, will you apply for it?	95	100	96.55

Source: End-line satisfaction survey, BIDS-2023.

Table 32 provides information on the colleges which did not receive the IDG funding regarding the workshop and reasons for not applying for the grant. It has been reported that the CEDP office and the website and authority of the colleges are the major sources of information about workshop organized for possible IDG funding. The other sources include information newspaper advertisement and project office respectively. Majority of principals reported the time constraint as the major reason behind not applying for the IDG funding.

Table 32: IDG related Information from IDG non-recipient college principals

Variables	Government college	Non-Govt. college	All
	%	%	%
Sources of information on workshops for possible IDG funding			
From Newspaper Advertisement	8.33	16.67	11.11
From the website of CEDP	29.17	50.00	36.11
By directly contacting with the Project Office	20.83	33.33	25.00
From the authority of other Colleges	41.67	---	27.78
Others			
Reasons behind not applying for the funding			
Could not prepare the proposal in given time	50.00		50.00
Application process seemed complicated	12.50		12.50
Your college does not need any grant at this	12.50		12.50
Applied for grant in another organization/project	---		
The college is currently being developed by other organization	----		
Others	25.00		25.00

Source: End-line satisfaction survey, BIDS-2023.

The overall results show institutional characteristics of NU affiliated colleges does not change much during the three-satisfaction survey period. This is basically the general characteristics of the affiliated colleges such as number of departments and teacher, designation of teachers etc. which usually does not vary much overtime.

The long run picture is encouraging; overtime the number of students enrollment into NU is increasing. In case of number of students studying in honors and master's level and students completing their honors and master's level from NU affiliated colleges from baseline satisfaction survey to end-line satisfaction survey has been increased. This implies that the colleges that have received IDG grants are successful in increasing their student enrollment and graduation number over time from baseline to end-line satisfaction survey.

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

This section focuses on the quality of teaching and learning environment, teaching abilities of the teachers, and the overall satisfaction of the teachers from the surveyed colleges. A total 929 teachers have been surveyed to have available information. The teachers from the selected colleges have provided their insightful thoughts on the general teaching and learning facilities, physical environment of the college, 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 analyzed their responses to determine the overall level of teachers' satisfaction at the NU-affiliated colleges.

2.4.1. 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 disaggregated level, etc.

Among the surveyed teachers, the proportion of male teachers was greater than that of their female counterparts in all the colleges (Table 33). In the IDG awarded and IDG non-recipient colleges this percentages are 71 percent and 65 percent respectively. We have found and interacted with more female teachers in the surveyed non-government colleges than in government colleges.

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 in the survey. There is no statistically significant difference of the proportion of teachers surveyed from different positions between IDG and non-IDG colleges except two exceptions.

Most of our surveyed teachers have Master's degree (95.16 percent), followed by PhD degree (1.73 percent) and M.Phil. degree (2.02 percent). As bachelor's (Honors) 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 of the degree levels i.e., PhD, MPhil, and Honors, the IDG awarded colleges are seen higher in proportionate compared to the IDG non- recipient colleges (Table 33).

Table 33: General Information (IDG vs. non-IDG colleges)

Details	Categories	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Gender	Male	71.47	64.84	6.32 (0.012)	69.29
	Female	28.53	35.16		30.71
Proportion of teachers interviewed	Ph.D.	1.84	1.54	1.677 (0.642)	1.73
	M.Phil.	2.15	1.76		2.02
	Masters	95.16	95.16		95.16
	Honors	0.86	1.54		1.08
Academic positions of the teachers	Professor	0.72 (1.29)	0.07 (0.26)	0.643*** (0)	0.50 (1.11)
	Associate Professor	3.00 (2.572)	2.11 (2.479)	0.888*** (0)	2.71 (2.58)
	Assistant Professor	7.50 (3.76)	4.34 (2.709)	3.165*** (0)	6.46 (3.76)
	Lecturer	10.77 (4.912)	10.75 (5.505)	0.017 (0.954)	10.76 (5.12)
	Lab Demonstrator/	0.14 (0.346)	0.03 (0.173)	0.108*** (0)	0.10 (0.30)
	Others	0.07 (0.259)	0.00 (0)	0.072*** (0)	0.05 (0.21)
Number of courses taught per semester/ year		7.85 (3.14)	7.21 (2.52)	0.638 *** (0.00)	7.64 (2.97)
Number of classes Taken per week		16.43 (8.16)	15.93 (7.32)	0.500 (0.269)	16.27 (2.89)
In-service training (number)		2.85 (2.59)	1.76 (2.51)	1.089 *** (0.00)	2.49 (2.62)

Table 34: General Information (Govt. vs. non-Govt colleges)

Variables		Government college		Chi2/ Difference (p-value)	Private college		Chi2/ Difference (p-value)
		IDG college	Non- IDG college		IDG college	Non- IDG college	
		Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Gender	Male	77.30	67.91	9.954 (0.002)	60.53	59.12	0.0901 (0.764)
	Female	22.30	32.09		39.47	40.88	
Proportion of teachers interviewed	Ph.D.	2.01	1.69	3.276 (0.351)	1.48	1.26	8.966 (0.030)
	M.Phil.	2.36	2.03		1.78	1.26	
	Masters	94.59	96.28		96.14	93.08	
	Honors	1.01	0.00		0.59	4.40	
Academic positions of the teachers	Professor	0.80 (0.981)	0.11 (0.315)	0.689*** (0.000)	0.57 (1.694)	0.00 (0.00)	0.567*** (0.000)
	Associate Professor	3.84 (2.439)	2.89 (2.743)	0.949*** (0.000)	1.53 (2.103)	0.67 (0.631)	0.861*** (0.000)
	Assistant Professor	7.82 (3.698)	4.29 (2.69)	3.532*** (0.000)	6.94 (3.806)	4.43 (2.75)	2.516*** (0.000)
	Lecturer	9.10 (4.359)	9.40 (5.788)	-0.302 (0.384)	13.69 (4.44)	13.26 (3.847)	0.437 (0.287)
	Lab Demonstrator/	0.14 (0.349)	0.00 (0)	0.142*** (0.000)	0.13 (0.341)	0.09 (0.284)	0.045 (0.145)
	Others	0.05 (0.22)	0.00 (0)	0.051*** (0.000)	0.11 (0.313)	0.00 (0)	0.110*** (0.000)
Number of courses taught per semester/ year		8.12 (3.16)	7.23 (2.64)	0.89 *** (0.00)	7.37 3.05	7.18 (2.29)	0.182 (0.504)
Number of classes Taken per week		16.20 (8.14)	16.15 (7.27)	0.054 (0.923)	16.84 8.20	15.54 (7.41)	1.305 (0.089)
In-service training (number)		3.18 (2.82)	1.86 (1.90)	1.316*** (0.00)	2.26 2.01	1.56 (3.37)	0.701** (0.004)

2.4.2. Perception about Existing Teaching-Learning Facilities

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

The academic calendar provided by the NU is followed in most of the occasions; which is evident from 93 percent of the cases in the IDG awarded colleges and 98 percent of the cases in the IDG non-awarded colleges. The difference between the IDG and non-IDG colleges is not statistically significant. Respectively, 75 percent and 72 percent of the IDG awarded and IDG non-recipient colleges distribute the academic calendar among the students at the beginning of the semester/year.

Around 16 percent of the teacher from the IDG awarded colleges responded that the academic curriculum is changed in a yearly frequency. The percent for the IDG non-recipient colleges is around 27 percent; and the mean difference is statistically significant. Others have reported to change the academic syllabus other than three monthly, six monthly, and yearly frequencies.

It has been seen that almost 81 percent of IDG awarded colleges are supposed to hold an academic meeting in every month. In case of IDG non-awarded colleges the percentage is 65. In terms of holding academic meetings in every three and six months, the IDG awarded colleges are seen to have less percentage in comparison to the IDG non-awarded ones. Around 76 percent of colleges including the IDG and non-IDG colleges arranges their monthly meeting at a regular interval.

Around 41 percent of the teachers in IDG awarded colleges responded that the course teachers can improve or update syllabus and course curriculum. The percentage of respondents is around 40 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 41 percent or almost 50 percent of the respondents agreed that improvement of syllabus and course curriculum can be done by respective teachers, 74 percent agreed that there is still scope for innovation in exam evaluation methods and 85 percent agreed that there is prevalence of good communication with other institutions for academic purposes (Table 35).

Around 9 percent of the college teachers in both IDG awarded and IDG non-recipient colleges never use multimedia during lecture. The difference is statistically significant between IDG and non IDG colleges. Around 55.47 percent of the teachers use multimedia sometimes, and around 7 percent of the teachers use multimedia very frequently.

Table 35: Existing Facilities in the College (for IDG vs. non-IDG)

Question		IDG colleges	Non-IDG colleges	Chi2/ Difference (p value)	All colleges
Do you follow the academic calendar provided by the National University?	Yes	92.79	98.24	0.000	94.58
Whether this calendar is distributed among the students before the start of the academic year/semester?	Yes	75.24	72.09	0.339	74.21
How often the National University improve or update syllabus and course curriculums?	Once in every 3 months	0.86	2.86	94.240** * (0.000)	1.52
	Once in every 6 months	1.18	3.74		2.02
	Once in a year	16.04	27.25		19.73
Whether there are opportunities for the teachers to participate in course curriculum and syllabus development	Yes	379 (40.80)	183 (40.22)	4.109 (0.250)	562 (40.61)
How often your department arranges academic meetings?	In every month	753 (81.05)	297 (65.27)	41.661 (0.000)	1050 (75.87)
	Once in every 3 months	121 (13.02)	111 (24.40)		232 (16.76)
	Once in every 6 months	23 (2.48)	19 (4.18)		42 (3.03)
	Once in a year	32 (3.44)	28 (6.15)		60 (4.34)
Is there any procedure for evaluation of teaching by the students?	Yes	416 (44.78)	195 (42.86)	0.457 (0.499)	611 (44.15)
Do senior teachers monitor the class of junior teachers for the betterment of their lectures or course curriculum?	Yes	497 (53.50)	277 (60.88)	6.7498 (0.009)	774 (95.92)
Is there scope for innovation in evaluation methods in examination for the students?	Yes	715 (76.96)	308 (67.69)	13.618 (0.00)	1023 (73.92)
Does the college have good communication with other institutions in your subject area?	Yes	792 (85.25)	383 (84.18)	0.276 (0.599)	1175 (84.90)

Question		IDG colleges	Non-IDG colleges	Chi ² / Difference (p value)	All colleges
Are you involved in research works?	Yes	199 (21.42)	77 (16.92)	3.870 (0.049)	276 (19.94)
How much important is it to do research to get promotion?	Not important at all	257 (57.66)	99 (21.76)	17.760 (0.001)	356 (25.72)
	Somewhat important	134 (14.42)	50 (10.99)		184 (13.29)
	Neither important nor unimportant	90 (9.69)	61 (13.41)		151 (10.91)
	Important	235 (25.30)	150 (32.97)		385 (27.42)
	Very important	213 (22.93)	95 (20.88)		308 (22.25)
Does your college/NU provide grant for research work?	Yes	99 (10.66)	32 (7.03)	4.679 (0.031)	131 (9.47)
Have you ever applied for any research grant?	Yes	57 (6.16)	16 (3.52)	4.244 (0.039)	73 (5.29)
Have you availed of any research grant?	Yes	28 (3.03))	7 (1.55)	2.706 (0.100)	35 (2.54)
How often you use multimedia for delivering lectures?	Never	31 (3.38)	103 (23.25)	182.370* ** (0.000)	134 (9.85)
	Very few times	92 (10.02)	79 (17.83)		171 (12.56)
	Sometimes	539 (58.71)	216 (48.76)		755 (55.47)
	Frequently	80 (8.71)	16 (3.61)		96 (7.05)
	Always	176 (19.17)	29 (6.55)		205 (15.06)
Do you provide time to the students for academic discussion/counselling after class?	Yes	904 (97.67)	428 (94.48)	9.127 (0.003)	1332 (96.59)
	Less than 1 hour	140 (15.56)	56 (13.11)	22.154 (0.00)	196 (14.77)

Question		IDG colleges	Non-IDG colleges	Chi ² / Difference (p value)	All colleges
If yes, how many hours a week?	1-2 hours	480 (53.33)	198 (46.37)		678 (51.09)
	3-5 hours	204 (22.67)	147 (34.43)		351 (26.45)
	5-7 hours	60 (6.67)	23 (5.39)		83 (6.25)
	More than 7 hours	16 (1.78)	3 (0.70)		19 (1.43)
How many students come to you last week for academic discussion/counselling after class? (average)		11.371 (19.49)	11.031 (10.07)	0.341 (0.737)	11.26 (16.99)

Research can help teachers to understand what works and why, what the short and long-term implications are for a certain action, provide a justification and rationale for decisions and actions in various important issues, help to build a repertoire to help deal with the unexpected, identify problems, make informed improvement and so forth. Apart from teaching and studying for academic purposes, research activities can significantly help the teachers broaden their knowledge and area of teaching.

As also observed, around 20 percent of teachers from the surveyed colleges are reported to remain involved in research activities in some form or the other. No further details of their research work were however collected under the current study as this was beyond the scope of the study. Considering that there is very little fund for research works for teachers in the colleges, 9 percent of the college teachers said that they have institutional funds for research. However, there is less possibility of getting the available funds and only 3 percent of the teachers acknowledged that they have received institutional funds for research. It is no wonder that the teachers do not get involved or initiate research works on their own.

Table 36: Existing Facilities in the College (for govt vs. non-govt.)

Question		Government college			Private college		
		IDG college	Non-IDG college	Chi2/ Difference (p-value)	IDG college	Non-IDG college	Chi2/ Difference (p-value)
Do you follow the academic calendar provided by the National University?	Yes	539 (91.05)	291 (98.31)	17.053 (0.000)	323 (95.85)	156 (98.11)	1.678 (0.195)
Whether this calendar is distributed among the students before the start of the academic year/semester?	Yes	440 (74.32)	217 (73.31)	0.633 (0.728)	259 (76.85)	111 (69.81)	2.828 (0.093)
How often the National University improve or update syllabus and course curriculums?	Once in every 3 months	6 (1.01)	6 (2.03)	101443 (0.00)	2 (0.59)	7 (4.40)	35.297 (0.009)
	Once in every 6 months	8 (1.35)	14 (4.73)		3 (0.89)	3 (1.89)	
	Once in a year	75 (12.67)	81 (27.36)		74 (21.96)	43 (27.04)	
Whether there are opportunities for the teachers to participate in course curriculum and syllabus development	Yes	200 (33.78)	112 (37.84)	3.510 (0.173)	179 (53.12)	71 (44.65)	4.99 (0.082)
How often your department arranges academic meetings?	In every month	490 (82.77)	194 (65.54)	33.142 (0.00)	263 (78.04)	103 (64.78)	10.818 (0.013)
	Once in every 3 months	68 (11.89)	67 (22.64)		53 (15.73)	44 (27.67)	
	Once in every 6 months	15 (2.53)	15 (5.07)		8 (2.37)	4 (2.52)	
	Once in a year	19 (3.21)	20 (6.76)		13 (3.86)	8 (5.03)	
Is there any procedure for evaluation of teaching by the students?	Yes	168 (28.38)	116 (39.19)	10.602 (0.001)	248 (73.59)	79 (49.69)	27.482 (0.00)
Do senior teachers monitor the class of junior teachers for the betterment of their lectures or course curriculum?	Yes	238 (40.20)	155 (52.36)	11.831 (0.001)	259 (76.85)	122 (76.73)	0.0009 (0.975)
Is there scope for innovation in evaluation methods in examination for the students?	Yes	417 (70.44)	188 (63.51)	4.359 (0.037)	298 (88.43)	120 (75.47)	13.682 (0.00)
Does the college have good communication with other institutions in your subject area?	Yes	473 (79.90)	243 (42.09)	0.609 (0.435)	319 (94.66)	140 (88.05)	6.834 (0.009)

Question		Government college			Private college		
		IDG college	Non-IDG college	Chi2/ Difference (p-value)	IDG college	Non-IDG college	Chi2/ Difference (p-value)
Are you involved in research works?	Yes	118 (19.93)	38 (12.84)	6.858 (0.009)	81 (24.04)	39 (24.53)	0.0143 (0.905)
How much important is it to do research to get promotion?	Not important at all	239 (40.37)	81 (27.36)	28.034 (0.000)	18 (5.34)	18 (11.32)	16.335 (0.003)
	Somewhat important	101 (17.06)	34 (11.59)		33 (9.79)	16 (10.06)	
	Neither important nor unimportant	80 (13.51)	55 (18.58)		10 (2.97)	6 (3.77)	
	Important	110 (18.58)	75 (25.34)		125 (37.09)	75 (47.17)	
	Very important	62 (10.47)	51 (17.23)		151 (44.81)	44 (27.67)	
Does your college/NU provide grant for research work?	Yes	40 (6.76)	27 (9.12)	1.582 (0.208)	59 (17.51)	5 (3.14)	19.829 (0.00)
Have you ever applied for any research grant?	Yes	40 (6.78)	15 (5.07)	0.992 (0.319)	17 (5.06)	1 (0.63)	6.046 (0.014)
Have you availed of any research grant?	Yes	22 (3.74)	7 (2.38)	1.132 (0.287)	6 (1.79)	0 (0.00)	2.882 (0.090)
How often you use multimedia for delivering lectures?	Never	27 (4.61)	62 (21.02)	81.144 (0.000)	4 (1.19)	41 (26.28)	119.754 (0.00)
	Very few times	77 (13.14)	57 (19.32)		15 (4.45)	22 (14.10)	
	Sometimes	344 (58.70)	141 (47.80)		195 (57.86)	75 (48.08)	
	Frequently	49 (8.36)	14 (4.75)		31 (9.20)	2 (1.28)	
	Always	85 (14.51)	16 (5.42)		91 (27.00)	13 (8.33)	
	Not applicable	4 (0.68)	5 (1.69)		1 (0.30)	3 (1.92)	
Do you provide time to the students for academic discussion/counselling after class?	Yes	573 (97.28)	284 (95.95)	1.150 (0.283)	331 (98.22)	144 (91.72)	
If yes, how many hours a week?	Less than 1 hour	93 (16.26)	42 (14.84)	3.723 (0.445)	47 (14.33)	14 (9.72)	30.730 (0.00)
	1-2 hours	304 (53.15)	145 (21.24)		176 (53.66)	53 (36.81)	
	3-5 hours	130 (22.73)	78 (27.56)		74 (22.56)	69 (47.92)	
	5-7 hours	35 (6.12)	16 (5.65)		25 (7.62)	7 (4.86)	

Question	Government college			Private college		
	IDG college	Non-IDG college	Chi2/ Difference (p-value)	IDG college	Non-IDG college	Chi2/ Difference (p-value)
More than 7 hours	10 (1.75)	2 (0.71)		6 (1.83)	1 (0.69)	
How many students come to you last week for academic discussion/counselling after class? (average)	10.111 (21.438)	10.611 (10.623)	-0.500 (0.718)	13.512 (0.865)	11.78 (0.732)	1.732 (0.202)

2.4.3. Academic Environment: Importance and Satisfaction

A positive classroom environment helps improve attention, reduce anxiety, and supports emotional and behavioral attitude of students. When educators foster a positive learning culture, learners are more likely to acquire higher motivation that leads to wonderful learning outcomes. Academic environment includes the physical condition of the classrooms, availability of internet connection, student's soft skill development, and availability of other facilities at the colleges.

One of the major objectives of the current survey is to ascertain teachers' current level of satisfaction about the existing teaching and learning environment of the colleges in terms of different aspects such as: physical infrastructure, internet connectivity, industry linkage, academic facilities, etc.

We start the discussion of how the faculty members attach their judgement of the level of importance to various indicators of academic and learning environment, and to what extent they are satisfied about the current status of those indicators. These are categorized into four broader components as follows: (1) physical infrastructure (13 indicators), (2) internet connectivity (6 indicators), (3) industry linkage and development of soft skills (11 indicators), and (4) academic facilities for teachers (10 indicators).

Using above indicators, teachers were asked to attach their level of satisfaction (in a 5-point scale, where 1 indicates highly dissatisfied and 5 indicates highly satisfied) to each considering the existing situation. We present the findings in the following subsections.

Teaching and learning environment in terms of physical infrastructure

Teachers responded that the physical infrastructure of the college are extremely important; the mean value of importance is more than 4 in a scale of 1 to 5 for a 'good' learning environment. Such infrastructure includes physical condition of classrooms, adequacy of classrooms, existence of multimedia equipped classrooms, use of multimedia and other modern classroom facilities for teaching, delivering lectures using Power Point slides, physical condition of exam halls, adequacy of exam halls, condition of computer labs, sufficiency of computers in the computer lab, condition of libraries /seminar libraries, availability of books and journals in the library, washroom facilities for male teachers, washroom facilities for female teachers and

presence/participation of students in the classes.

However, the satisfaction scores in all the items are between 2 and 3 (in a scale of 1 to 5), which means according to teachers' perception the physical conditions are average and there is still much room for improvement. For all the items the IDG awarded colleges show higher satisfaction compared to the IDG non-recipient colleges with the difference being statistically significant for all physical attributes of the colleges.

Table 37: Satisfaction about physical condition of classrooms (IDG vs. non-IDG colleges)

	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Physical condition of classrooms	3.08 (1.18)	2.33 (1.02)	0.755 *** (0.00)	2.83 (1.18)
Adequacy of classrooms	2.58 (1.18)	2.11 (0.99)	0.468 *** (0.00)	2.42 (1.14)
Existence of multimedia equipped classrooms	3.01 (1.11)	1.97 (0.98)	1.043 *** (0.00)	2.67 (1.17)
Use of multimedia and other modern classroom facilities for teaching	3.07 (1.08)	1.96 (1.07)	1.108 *** (0.00)	2.70 (1.19)
Delivering lectures using PPT slides	2.99 (1.15)	2.16 (1.13)	0.828 *** (0.00)	2.71 (1.21)
Physical condition of exam halls	3.01 (1.16)	(2.44) (1.12)	0.578 *** (0.000)	2.82 (1.18)
Adequacy of exam halls	2.79 (1.24)	(2.31) (1.10)	0.481 *** (0.000)	2.63 (1.22)
Condition of computer labs	3.25 (1.21)	(2.13) (1.08)	0.112 *** (0.000)	2.88 (1.28)
Sufficiency of computers in the computer lab	3.22 (1.20)	(2.05) (1.09)	0.171 *** (0.000)	2.84 (1.29)
Condition of libraries/Seminar libraries	3.07 (1.19)	(2.24) (1.06)	0.829 *** (0.000)	2.80 (1.21)
Availability of books and journals in the library	3.00 (1.18)	2.22 (1.07)	0.781 *** (0.000)	2.74 (1.20)
Washroom facilities for male teachers	3.0 (1.28)	2.48 (1.20)	0.544 *** (0.000)	2.84 (1.28)
Washroom facilities for female teachers	2.68 (1.33)	2.25 (1.34)	0.426 *** (0.000)	2.54 (1.35)

Presence/Participation of students in the classes	2.45 (1.17)	2.34 (1.09)	0.111 (0.093)	2.42 (1.14)
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Table 38: Satisfaction about physical condition of classrooms (govt vs. non-govt)

Variables	Government college			Private college		
	IDG college	Non-IDG college	Difference (p-value)	IDG college	Non-IDG college	Difference (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Physical condition of classrooms	2.81 (1.14)	2.18 (0.99)	0.632 *** (0.000)	3.56 (1.08)	2.60 (1.01)	0.956 *** (0.000)
Adequacy of classrooms	2.32 (1.11)	2.02 (0.97)	0.293 *** (0.000)	3.03 (1.16)	2.27 (1.02)	0.765*** (0.000)
Existence of multimedia equipped classrooms	2.92 (1.11)	1.95 (0.96)	0.968 *** (0.000)	3.18 (1.08)	2.01 (1.01)	1.172*** (0.000)
Use of multimedia and other modern classroom facilities for teaching	2.88 (1.06)	1.87 (0.97)	1.005 *** (0.000)	3.41 (1.02)	2.13 (1.22)	1.279 *** (0.000)
Delivering lectures using PPT slides	2.89 (1.10)	2.05 (1.03)	0.837 *** (0.000)	3.15 (1.21)	2.35 (1.28)	0.799*** (0.000)
Physical condition of exam halls	2.81 (1.15)	2.33 (1.11)	0.475 *** (0.000)	3.38 (1.09)	2.63 (1.13)	0.746*** (0.000)
Adequacy of exam halls	2.52 (1.19)	2.23 (1.10)	0.294 *** (0.000)	3.25 (1.21)	2.45 (1.08)	0.802*** (0.000)
Condition of computer labs	3.00 (1.23)	1.99 (1.01)	1.019 *** (0.000)	3.67 (1.06)	2.41 (1.14)	1.261*** (0.000)
Sufficiency of computers in the computer lab	3.00 (1.23)	1.87 (0.97)	1.133 *** (0.000)	3.61 (1.05)	2.39 (1.21)	1.218*** (0.000)
Condition of libraries/Seminar libraries	2.95 (1.18)	2.20 (1.00)	0.741 *** (0.000)	3.29 (1.17)	2.31 (1.17)	0.980*** (0.000)
Availability of books and journals in the library	2.90 (1.16)	2.25 (1.02)	0.654 *** (0.000)	3.18 (1.18)	2.17 (1.16)	1.009*** (0.000)
Washroom facilities for male teachers	2.91 (1.24)	2.34 (1.11)	0.568 *** (0.000)	3.25 (1.33)	2.75 (1.32)	0.497*** (0.000)
Washroom facilities for female teachers	2.51 (1.27)	2.03 (1.18)	0.481 *** (0.000)	3.000 (1.395)	2.680 (1.530)	0.320 * (0.028)

Presence/Participation of students in the classes	2.19 (1.09)	2.19 (1.06)	0.000 (0.996)	2.920 (1.160)	2.629 (1.094)	0.291 ** (0.008)
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Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Teaching and learning environment: internet connectivity

The importance of internet connectivity is highly acknowledged by the teachers across both IDG awarded and IDG non-recipient colleges. In all the indicators (i.e., availability of broadband connection in campus, availability of Wi-Fi connection in campus, quality of internet connection and speed, access to internet for teacher, use of internet by teachers to prepare class lectures and update knowledge, use of internet to communicate with students) the necessity score is more than 4 (in a scale of 1 to 5) for both types of colleges which means that the teachers think these attributes to be important for students' proper development of learning.

The satisfaction score for all indicators is between 2 and 3 which means that teachers think that issues related to internet connectivity in the colleges are still average, and can be improved further. The satisfaction scores are higher in the IDG awarded colleges compared to IDG non-recipient colleges for all indicators. The differences are statistically significant in all the cases except in the case of 'use of internet to communicate with student'.

Table 39: Satisfaction about internet connectivity (IDG vs. non IDG colleges only)

	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Availability of broadband connection in campus	4.41 (0.95)	4.62 (0.71)	-0.207 *** (0.000)	4.48 (0.88)
Availability of Wi-Fi connection in campus	4.46 (0.88)	4.58 (0.75)	-0.128 *** (0.000)	4.50 (0.84)
Quality of internet connection and speed	4.49 (0.87)	4.64 (0.65)	-0.147 ** (0.000)	4.54 (0.81)
Access to internet for teacher	4.50 (0.84)	4.69 (0.62)	-0.188 *** (0.000)	4.57 (0.78)
Use of internet by teachers to prepare class lectures and update knowledge	4.56 (0.76)	4.70 (0.59)	-0.142 *** (0.000)	4.60 (0.71)
Use of internet to communicate with students	4.46 (0.82)	4.65 (0.65)	-0.193 *** (0.000)	4.52 (0.77)

Table 40: Importance about internet connectivity

Variables	Government college			Private college		
	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Availability of broadband connection in campus	4.48 (0.89)	4.59 (0.76)	-0.111 (0.068)	4.30 (0.04)	4.67 (0.62)	-0.379 *** (0.000)
Availability of Wi-Fi connection in campus	4.48 (0.88)	4.57 (0.80)	-0.091 (0.136)	4.42 (0.87)	4.62 (0.63)	-0.195 * (0.012)
Quality of internet connection and speed	4.56 (0.78)	4.62 (0.70)	-0.059 (0.274)	4.35 (0.00)	4.66 (0.54)	-0.301 *** (0.000)
Access to internet for teacher	4.53 (0.80)	4.67 (0.68)	-0.140 * (0.010)	4.46 (0.91)	4.73 (0.49)	-0.275 *** (0.000)
Use of internet by teachers to prepare class lectures and update knowledge	4.57 (0.73)	4.70 (0.60)	-0.132 ** (0.008)	4.54 (0.80)	4.70 (0.58)	-0.161 * (0.024)
Use of internet to communicate with students	4.48 (0.79)	4.61 (0.71)	-0.130 * (0.018)	4.43 (0.87)	4.74 (0.51)	-0.309 *** (0.000)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Industry linkage and development of soft skill of the students

The importance of industry linkage measured by the indicators such as support for job placement/ internships for students by the college, career guidance services for students by the college, provision of inviting specialists to introduce students with the available opportunities in the industries of relevant sectors, organization of job fairs by the college, curriculum is designed in accordance with industry demand, students are provided with basic ICT skills necessary to step into the industry/ get jobs, inclusion of presentation in the courses to develop presentation skill of students, mandatory language courses for all students to improve language proficiency, students are introduced with the updated equipment and facilities used in the industry. students are taken to industries to broaden their practical knowledge college maintaining work related track record of the ex- students is also highly valued by the teachers.

However, the satisfaction scores for all the issues are between 1 and 2 (in a scale of 1 to 5), which indicates towards poor industry linkages of the colleges for students' job placement from the point of view of teachers. The mean differences between IDG awarded and IDG non-recipient colleges differ much between these two groups. Therefore, in this case, much could be done for improving the industry linkages of the colleges up to the satisfaction level of the

teachers. The low scoring of industry linkage is basically for: (i) the colleges were not fully prepared for this kind of collaboration at current stage, (ii) there is no official preparation for linking industry with the NU curriculum for industry collaboration. The collaboration so far done is ad hoc from personal reference/ initiatives of some teachers. (iii) Soft skill development some initiatives have been taken from the NU, such as: introduction of short courses. However, according to the teachers it is not up to the level of employers' satisfaction.

Table 43: Satisfaction: Industry linkage and development of soft skill of the students

	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Support for job placement/ internships for student by the college	1.68 (1.03)	1.60 (0.93)	0.082 (0.153)	1.65 (1.00)
Career guidance services for students by the college	2.23 (1.11)	2.14 (1.11)	0.086 (0.177)	2.20 (1.11)
Provision of inviting Specialists to introduce students with the available opportunities in industries of relevant sectors	1.85 (1.10)	1.63 (0.94)	0.215 *** (0.000)	1.77 (1.05)
Organization of job fairs by the college	1.52 (0.91)	1.36 (0.81)	0.160 ** (0.002)	1.47 (0.88)
Curriculum is designed in accordance with industry demand	1.90 (1.03)	1.78 (0.97)	0.118 * (0.043)	1.86 (1.01)
Students are provided With basic ICT skills necessary to step into the industry/get jobs	2.14 (1.09)	1.79 (0.97)	0.351 *** (0.000)	2.02 (1.07)
Inclusion of presentation in the courses to develop presentations skill of students	1.94 (1.04)	1.84 (1.07)	0.096 (0.113)	1.91 (1.05)
Mandatory language courses for all students to improve language proficiency	1.62 (0.91)	1.63 (0.98)	-0.016 (0.773)	1.62 (0.93)
Students are Introduced with the updated equipment and facilities used in the industry	1.73 (0.99)	1.63 (0.93)	0.097 (0.083)	1.69 (0.97)
Students are taken to Industries to broaden their practical knowledge	2.05 (1.17)	1.72 (0.95)	0.326 *** (0.000)	1.94 (1.11)
College maintaining Work related track record of the ex- students	1.84 (1.03)	1.65 (0.91)	0.192 *** (0.001)	1.78 (1.00)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 43: Satisfaction: Industry linkage and development of soft skill of the students

Variables	Government college			Private college		
	IDG college	Non- IDG college	Difference e (p-value)	IDG college	Non- IDG college	Difference e (p-value)
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	
Support for job placement internships for students by the college	1.44 (0.87)	1.67 (0.94)	-0.225 *** (0.000)	2.10 (1.15)	1.47 (0.90)	0.630 *** (0.000)
Career guidance services for students by the college	2.02 (1.03)	2.05 (1.04)	-0.022 (0.767)	2.58 (1.16)	2.32 (1.21)	0.267* (0.020)
Provision of inviting Specialists to introduce students with the available opportunities in industries of relevant sectors	1.59 (0.91)	1.56 (0.84)	0.030 (0.641)	2.29 (1.24)	1.76 (1.09)	0.534*** (0.000)
Organization of job fairs by the college	1.39 (0.80)	1.35 (0.75)	0.031 (0.589)	1.77 (1.02)	1.38 (0.92)	0.385*** (0.000)
Curriculum is designed in accordance with industry demand	1.75 (0.93)	1.82 (0.98)	-0.078 (0.247)	2.17 (1.14)	1.70 (0.95)	0.467*** (0.000)
Students are provided With basic ICT skills necessary to step into the industry/get jobs	1.91 (0.95)	1.75 (0.96)	0.160 * (0.018)	2.53 (1.21)	1.85 (1.00)	0.683*** (0.000)
Inclusion of presentation in the courses to develop presentation skills of students	1.73 (0.90)	1.82 (1.03)	-0.085 (0.209)	2.29 (1.17)	1.88 (1.16)	0.410*** (0.000)
Mandatory language courses for all students to improve language proficiency	1.47 (0.83)	1.61 (1.03)	-0.139 * (0.031)	1.87 (1.00)	1.67 (0.88)	0.199* (0.033)
Students are Introduced with the updated equipment and facilities used in the industry	1.54 (0.85)	1.58 (0.86)	-0.037 (0.544)	2.05 (1.12)	1.72 (1.04)	0.327** (0.002)
Students are taken to Industries to broaden their practical knowledge	1.87 (1.09)	1.74 (0.95)	0.127 (0.090)	2.35 (1.24)	1.67 (0.95)	0.680*** (0.000)
College maintaining Work related track record of the ex-students	1.60 (0.88)	1.62 (0.88)	-0.017 (0.788)	2.27 (1.14)	1.71 (0.95)	0.557*** (0.000)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Satisfaction: Academic facilities for teachers

In this part, we are estimating the satisfaction level of the teachers regarding some important indicators such as: provision of study leave, in house training arranged by the college, research opportunity, workshop/seminar arrangement etc. which are not part of IDG implementation; however, these indicators are important for overall education system of Bangladesh.

Teachers in both IDG awarded and IDG non-recipient colleges put very high value on the importance of academic facilities for teachers. The indicators measured in a scale of 1 to 5 are opportunities for study leave, college providing training for teachers and arranging workshops, college providing pedagogical training for teachers college providing on-the- job/ foundation trainings to the newly recruited teachers, opportunities to participate in seminars/ workshops/ conferences, opportunities for subject based training for teachers, incentives/ benefits provided for faculty development training, transparency of the opportunities to participate in faculty development trainings, institutional encouragements to teachers for doing research, institutions have facilities for teachers to do research.

However, satisfaction-scores (in a scale of 1 to 5) are slightly above 2 for all the indicators, which means that from teachers' point of view, they are not satisfied with the academic facilities prevailing in the surveyed colleges. The difference in the scores between IDG awarded and IDG non-recipient colleges is statistically significant for all the indicators except for opportunities to participate in seminar or workshops.

Table 43: Satisfaction by teachers about academic facilities

	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Opportunities for Study leave	2.60 (1.28)	2.20 (1.13)	0.395*** (0.000)	2.47 (1.24)
College providing training for teachers and arranging workshops	2.44 (1.10)	2.05 (1.03)	0.388*** (0.000)	2.31 (1.10)
College providing pedagogical training for teachers	2.22 (1.11)	1.99 (1.09)	0.235*** (0.000)	2.14 (1.11)
College providing on-the- job/ foundation trainings to the newly recruited teachers	1.91 (1.11)	1.75 (1.00)	0.168** (0.007)	2.86 (1.08)
Opportunities to participate in seminars/ workshops/ conferences	2.19 (1.15)	2.12 (1.15)	0.070 (0.293)	2.16 (1.15)
Opportunities for subject base training for teachers	2.38 (1.19)	2.08 (1.08)	0.298*** (0.000)	2.28 (1.17)

Incentives/benefits provided for faculty development training	2.10 (1.16)	1.92 (1.06)	0.178** (0.006)	2.04 (1.13)
Transparency of the opportunities to participate in faculty development trainings	2.72 (1.19)	2.38 (1.18)	0.341*** (0.000)	2.61 (1.20)
Institutional encouragements to teachers for doing research	2.30 (1.20)	2.95 (1.08)	0.345*** (0.000)	2.18 (1.170)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 44: Satisfaction by teachers about academic facilities

Variables	Government college			Private college		
	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)
	Mean (SD)	Mean (S.D)		Mean (SD)	Mean (SD)	
Opportunities for Study leave	2.34 (1.12)	2.15 (1.14)	0.182* (0.038)	3.06 (1.15)	2.29 (1.11)	0.760*** (0.000)
College providing training for teachers and arranging workshops	2.21 (1.01)	2.09 (1.05)	0.125 (0.088)	2.84 (1.15)	1.98 (0.99)	0.852*** (0.000)
College providing pedagogical training for teachers	1.92 (0.95)	2.01 (1.06)	-0.081 (0.252)	2.74 (1.17)	1.95 (1.14)	0.792*** (0.000)
College providing on-the- job/ foundation trainings to the newly recruited teachers	1.66 (0.95)	1.73 (0.96)	-0.072 (0.292)	2.36 (1.22)	1.77 (1.07)	0.587*** (0.000)
Opportunities to Participate in seminars/workshops/ conferences	1.95 (1.02)	2.01 (1.08)	-0.061 (0.416)	2.61 (1.25)	2.32 (1.24)	0.287* (0.017)
Opportunities for subject base training for teachers	2.12 (1.09)	1.95 (1.00)	0.169* (0.026)	2.82 (1.24)	2.31 (1.20)	0.510*** (0.000)
Incentives/benefits provided for faculty development training	1.88 (1.04)	1.95 (1.09)	-0.070 (0.355)	2.48 (1.26)	1.86 (1.00)	0.615*** (0.000)
Transparency of the opportunities to participate in faculty development trainings	2.46 (1.16)	2.27 (1.16)	0.198* (0.017)	3.18 (1.10)	2.60 (1.20)	0.581*** (0.000)

Institutional encouragements to teachers for doing research	2.11 (1.12)	1.90 (1.07)	0.205** (0.010)	2.63 (1.26)	2.05 (1.11)	0.588*** (0.000)
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Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

2.4.4. Work Time Allocation by Teachers

Teachers spend more than 43 percent of their time in teaching and preparing for classes, 21 percent of time in checking exam answer sheets of students, 17 percent of time in administrative activities, 6 percent of time in research activities, and 14 percent of time in self-development activities. This distribution of time allocation is very similar in the IDG awarded and IDG non-recipient colleges. The mean difference between these two types of colleges is statistically significant only for one indicator, namely ‘check copies and assignment of students’; which means teachers from IDG awarded colleges spend more time on self-development activities compared to that of IDG non-awarded colleges (Table 45).

Table 45: Work time allocation by teachers

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)
The share of work time devoted to teaching students and preparing for classes	43.41 (14.54)	42.57 (11.95)	0.839 (0.391)	41.47 (13.60)	47.132 (13.739)	-5.654*** (0.000)	44.16 (12.77)	42.71 (14.23)	1.456 (0.065)	43.19 (13.78)
The share of worktime devoted to check copies and assignments of students	19.99 (7.22)	21.44 (7.04)	-1.451** (0.005)	21.14 (7.30)	20.044 (6.641)	1.098 (0.108)	20.95 (6.93)	20.41 (7.26)	0.545 (0.184)	20.59 (7.16)
The share of worktime devoted to administrative and exam related tasks.	17.17 (8.10)	19.20 (8.65)	-2.027*** (0.001)	17.13 (8.09)	14.126 (7.097)	3.008*** (0.000)	17.16 (8.09)	17.42 (8.48)	-0.268 (0.569)	17.24 (8.22)
The share of worktime devoted to research related works	6.13 (6.56)	4.99 (6.23)	1.140* (0.032)	7.27 (6.67)	7.657 (5.341)	-0.379 (0.557)	6.56 (6.62)	6.03 (6.03)	0.523 (0.206)	6.39 (6.44)
Share of work time devoted to self-development activities	14.58 (8.37)	13.31 (6.83)	1.274* (0.024)	14.11 (7.47)	11.956 (7.246)	2.154** (0.003)	14.41 (8.05)	12.83 (7.00)	1.579*** (0.000)	13.89 (7.75)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

2.4.5. Overall Satisfaction of the Teachers

In order 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, with respect to five types of facilities: (1) Overall satisfaction about 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 46 shows that with respect to overall satisfaction about teaching-learning facilities of colleges, the highest mean level of satisfaction for teaching-learning facilities (3.01), followed by soft-skill development (2.99), academic infrastructure (2.95), industry collaboration (2.80), and connectivity through internet (2.48). The lowest mean value of satisfaction is found for connectivity through internet. The overall satisfaction level of the teachers stays between 1 and 3 (in a scale of 1 to 5) for these indicators.

Table 46: Overall satisfaction of the teachers by college type (IDG and non-IDG colleges)

	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Teaching-learning facilities	3.14 (1.09)	2.73 (1.13)	0.417*** (0.000)	3.01 (1.12)
Academic infrastructure	3.15 (1.12)	2.55 (1.11)	0.606*** (0.000)	2.95 (1.15)
Computer lab	3.19 (1.14)	2.21 (1.18)	0.980*** (0.000)	2.86 (1.24)
Quality of internet connection	2.68 (1.15)	2.09 (1.14)	0.596*** (0.000)	2.48 (1.18)
Quality of soft skills development opportunities for students	2.09 (1.07)	1.79 (0.98)	0.305*** (0.000)	2.99 (1.05)
Collaboration of the industrial establishment with the college for providing employment	1.84 (1.08)	1.73 (1.03)	0.103 (0.094)	2.80 (1.06)
Average of all indicators	2.68 (0.78)	2.18 (1.80)	0.498*** (0.000)	2.52 (1.82)

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 47: Overall satisfaction of the teachers by college type (IDG and non-IDG colleges)

Variables	Government college			Non-government college			All colleges Mean (SD)
	IDG college	Non- IDG college	Difference (p-value)	IDG college	Non- IDG college	Difference (p-value)	
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
Teaching-learning facilities	2.94 (1.09)	2.57 (1.13)	0.370*** (0.000)	3.50 (1.01)	3.02 (1.09)	0.482*** (0.000)	3.01 (1.12)
Academic infrastructure	2.84 (1.09)	2.35 (1.12)	0.492*** (0.000)	3.70 (0.98)	2.91 (1.00)	0.784*** (0.000)	2.95 (1.15)
Computer room	2.94 (1.15)	2.05 (1.05)	0.887*** (0.000)	3.63 (0.97)	2.50 (1.34)	0.132*** (0.000)	2.86 (1.24)
Quality of internet connection	2.58 (1.09)	2.16 (1.08)	0.426*** (0.000)	2.85 (1.24)	1.95 (1.25)	0.901*** (0.000)	2.48 (1.18)
Quality of soft skills development opportunities	1.86 (0.97)	1.71 (0.93)	0.153* (0.025)	2.50 (1.11)	1.93 (1.05)	0.563*** (0.000)	2.99 (1.05)
Collaboration of the industrial establishment with the college for providing	1.58 (0.90)	1.75 (0.99)	-0.164 (0.014)	2.28 (1.21)	1.71 (1.10)	0.572*** (0.000)	2.80 (1.06)
Average of all indicators	2.46 (0.69)	2.10 (0.81)	0.361*** (0.000)	3.07 (0.77)	2.34 (0.77)	0.731*** (0.000)	2.52 (1.82)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Table 48 shows the changes in the level of satisfaction of teachers in the IDG awarded college overtime. The changes from base-line to end-line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers in case of 4 indicators, namely: academic infrastructure, computer lab, quality of internet connection and collaboration with industry. However, for teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much; remains stagnant during the time between mid-line to end line satisfaction survey.

Table 48: Overall satisfaction of the teachers by college type (IDG colleges)

(Only the changes in the level of satisfaction are discussed here. To what extent the target is met is discussed under “Achievement and Progress based on Performance Indicators (Table 2)” in chapter 3.5 below)

	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (EL-BL)	Difference (EL-ML)
Teaching-learning facilities	3.33	3.14 (0.98)	3.14 (1.09)	-0.195	0
Academic infrastructure	2.91	3.08 (1.08)	3.15 (1.12)	0.235	0.07
Computer lab	-	-	3.19 (1.14)	3.19	3.19
Quality of internet connection	2.21	2.60 (1.11)	2.68 (1.15)	0.47	0.08
Quality of soft skills development opportunities for students	2.155	2.12 (1.06)	2.09 (1.07)	-0.065	-0.03
Collaboration of the industrial establishment with the college for providing employment	1.675	1.82 (1.02)	1.84 (1.07)	0.165	0.02
Average of all indicators	2.456	2.55 (0.769)	2.68 (0.78)	0.224	0.13

The overall results shows that the changes from base-line to end-line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers in case of 4 indicators, namely: academic infrastructure, computer lab, quality of internet connection and collaboration with industry. However, for teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much; remains stagnant during the time between mid-line to end-line satisfaction survey. Usually, the teachers are unhappy about the overall educational environment due to lack of incentives, over work and low remuneration which is reflected through their satisfaction scores.

2.5. QUALITY OF TEACHING AND LEARNING ENVIRONMENT: FINDING FROM THE STUDENT SURVEY

In this chapter, we enlist their socio-familial and economic characteristics, views and satisfaction level on various teaching-learning experiences, infrastructure, investment and other facilities provided to them and also their overall satisfaction level attached with those.

2.5.1. General Information of the Student Sample

Students in the end line satisfaction survey are either students of last two years of the honors or masters. We have tried to incorporate all types of students so that we can get an understanding of requirements and satisfaction level of all.

Following the baseline survey, our survey students are mostly from the 5th/6th semester category (57.06 percent students), followed by 7th/8th semester category (33.65 percent students) and masters' category (2.29 percent of students). This distribution pattern is similar for when we consider IDG funding categories where we see that most students surveyed were in the 5th/6th semesters, followed by 7th/8th semester and masters.

When asked about their last available results in GPA/CGPA, on an average it seems that in IDG funded colleges, students have slightly greater grade point average than their non-IDG counterparts (Table 58). The students passing this level have almost similar results. We see on an average they have an average CGPA of 4.20 in SSC and 3.83 in HSC out of 5 on an average. For all the IDG colleges, students seem to have better results than the non-IDG college students in different categories of our analysis (Table 49).

Table 49: General Information (IDG vs. non-IDG colleges)

Details	Categories	IDG colleges	Non-IDG colleges	Chi2/ Difference (p value)	All colleges
Gender	Male	884 (39.86)	317 (30.96)	23.781 (0.000)***	1201 (37.05)
	Female	1334 (60.14)	707 (69.04)		2041 (62.95)
Current semester	3 rd year	1248 (56.62)	588 (57.99)	13.052*** (0.001)	1836 (57.05)
	4 th year	724 (32.85)	359 (35.40)		1083 (33.65)
	Masters	232 (10.53)	67 (6.61)		299 (9.29)
Average GPA/ CGPA from last session		3.01 (0.339)	2.96 (0.299)	0.0481*** (0.0001)	2.998 (0.328)
GPA (average) in HSC		3.86 (0.605)	3.77 (0.556)	0.090*** (0.0001)	3.83 (0.592)
GPA (average) in SSC		4.23 (0.536)	4.11 (0.497)	0.120*** (0.000)	4.20 (0.527)

2.5.2. General Information about the Academic Engagement of the Students

In Table 50 we show the general information about the course work and class loads of the students. All students on an average attend 7 classes among the 9 classes held in a week. For IDG and non-IDG colleges this number is almost similar.

Evaluation of students' academic performance is not only related to their classes and examinations but it is also determined and modified through their out of class activities. Generally, students pass time in library, laboratories and computer labs and working on the internet other than their classes. They also spend time doing other kind of internet surfing than studying. Students have to devote some to completing assignments and attending seminars and symposiums too which all contribute to their accumulation of knowledge. All these information is enlisted in Table 50.

We see that students reportedly spend more than 9 hours in library on an average every week. Evident shows that students from IDG awarded colleges spend more time than the students from IDG non-recipient colleges. Students in general spend 7.50 hours per week in laboratory, 5.49 hours per week in computer labs, 3 hours per day over the internet for browsing and 1.5 hours per day for using internet for studying according to survey data. This shows that students spend more hours with mobile phone for browsing on internet than using it for studying purpose.

Noticeably, for being involved in constructive works like involving themselves in library work, computer lab work, field work, and studying through internet use students from IDG awarded colleges seem to be way ahead than students in IDG non-recipient colleges.

Table 50: Information about course work and class loads of students (IDG vs non- IDG colleges)

Details	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
How many classes are held in a week?	9.39 (6.707)	8.88 (7.166)	0.513* (0.048)	9.23 (6.86)
How many classes have you attended (last week)?	6.92 (24.618)	6.08 (20.857)	0.837 (0.356)	6.64 (23.44)
How many hours per week do you spend in the library? (Please write the answer in hours)	11.49 (39.645)	8.60 (32.816)	2.888* (0.044)	9.47 (35.03)
How many hours per week do you spend in the laboratory? (Please write the answer in hours)	8.34 (36.81)	5.49 (19.388)	2.849 (0.128)	7.50 (32.70)
How many hours per week do you spend in the computer lab? (Please write the answer in hours)	6.22 (32.398)	3.98 (21.638)	2.235 (0.098)	5.49 (29.35)
How many minutes do you spend over the internet daily?	180.53 (133.627)	152.61 (133.541)	27.923*** (0)	161.35 (134.17)
How many minutes do you spend over the internet daily for study purposes?	81.23 (77.339)	70.80 (76.263)	10.428*** (0)	74.05 (76.74)
For how many courses did you have to prepare assignments during last academic year?	4.30 (15.006)	3.50 (15.363)	0.802 (0.204)	4.03 (15.13)
How many presentations did you have to give last academic year?	5.75 (56.074)	2.25 (35.023)	3.504 (0.113)	4.57 (49.99)
How many term papers did you have to submit last academic year?	3.82 (51.241)	2.24 (37.604)	1.58 (0.476)	3.29 (47.13)
How many workshops/seminars have you attended last academic year?	2.82 (35.164)	0.86 (3.975)	1.961 (0.113)	2.15 (28.63)

To get a view on 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, prevalence of online classes, online assignment submission and student politics inside college campuses. We present the data in Table 51. As a whole, all colleges give a good review for the academic environment in the colleges. We see that classes are held regularly (86.73 percent), there are full time classes (94.75 percent), problems are solved regularly in the class lessons (89.19 percent), and teachers provide the students with extra consultation time (75.58 percent). These indicators are points towards prevalence of good academic environment in the colleges are more prominent in the IDG awarded colleges.

Other issues including getting handouts, online class availability and attendance and online assignment submissions are also more positive than not for the surveyed students. The availability of online provisions in the colleges had been a good indicator of positive academic environment during the pandemic period. But these are quite irrelevant in the regular day-to-day class scenario; as we can surely say that physical attendance is much preferable and appreciated than being online. Another good indication of a good academic environment is the non-hampering student politics in college campuses.

Table 51: Academic environment in colleges (only for IDG non-govt. colleges)

Details	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Classes held regularly in departments	889 (87.16)	1914 (86.53)	0.239 (0.624)	2803 (86.73)
Teachers teach full time during the class time	969 (94.72)	2099 (94.76)	0.0024 (0.961)	3068 (94.75)
Handouts are provided	594 (60.55)	1142 (53.31)	14.269 (0.00)	1736 (55.59)
Problem solving exercises regularly practiced in the class	918 (90.89)	1946 (88.41)	4.405 (0.036)	2864 (89.19)
Teachers provide consultation time after classes	1754 (79.47)	778 (76.65)	3.295 (0.069)	2532 (78.58)
Progress of study is hampered by student politics	502 (22.75)	238 (23.38)	0.158 (0.691)	740 (22.95)

2.5.3. Perception of Importance and Satisfaction of the Students

This sub-section is quite crucial for our analysis as in this part we depict the satisfaction level of students on different aspects of their colleges. This information is considered and labeled as students' own perceptions and none have been influenced or manipulated during data collection process. The perception has been captured through a ranking system. Like we have done it in the previous chapter, satisfaction level has been captured using the same 5 points where 1 stand for not at all satisfactory and 5 stands for very satisfactory.

Satisfaction about Teaching and Learning Environment of the Colleges

We have considered that the teaching-learning environment in the colleges will depend upon certain other factor namely Ability of teachers to clearly explain difficult and complex concepts in the classroom, Teachers' overall competency and up-to date knowledge related to the subject matter, availability of teachers after class hour for consultation, following of the course syllabus accordingly, completing the courses/curriculum/ syllabus within time at an even pace, learning outcomes of the course to be provided with the syllabus, opportunities for teaching evaluation by the students, the overall quality of the course materials (reference books, journals, handouts, etc., the amount of practical work (if applicable) in laboratories and workshops in the courses, involvement in group work, and the overall balance between theory and practice/experiment in the department.

When the students were asked to provide with their perception on satisfaction of the same features of the colleges, we see that there are much to be done for these in the colleges. Though satisfaction level were slightly more than average for all the above-mentioned indicators of teaching-learning environment of the colleges, there is still much to aspire for in case of the amount of practical work (if applicable) in laboratories and workshops in our courses, involvement in group work and the overall balance between theory and practice/experiment in the department to make these features more satisfactory for the students. It is quite clear and supported by survey data presented in Table 52 that, the satisfaction on these different aspects of the colleges is more positive among the students of the IDG awarded colleges than the IDG non-recipient colleges.

Table 52: Satisfaction of teaching and learning

Academic environment	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Ability of teachers to clearly explain difficult and complex concepts in the classroom	3.70 (1.00)	3.62 (1.02)	0.074 (0.053)	3.67 (1.01)
Teachers' overall competency and up-to date knowledge related to the subject matter	3.69 (1.02)	3.61 (1.02)	0.078* (0.044)	3.66 (1.02)
Availability of teachers after class hour for consultation	3.36 (1.18)	3.39 (1.17)	-0.029 (0.508)	3.36 (1.17)
Follow the course syllabus accordingly	3.40 (1.17)	3.34 (1.22)	0.057 (0.207)	3.38 (1.18)
Completing the courses/curriculum/ syllabus within time at an even pace	3.29 (1.30)	3.22 (1.34)	0.069 (0.168)	3.27 (1.31)
Learning outcomes of the course is provided with the syllabus	3.29 (1.23)	3.24 (1.25)	0.051 (0.276)	3.28 (1.24)
Opportunities for teaching evaluation by the students	3.03 (1.30)	2.88 (1.36)	0.147** (0.003)	2.98 (1.32)
The overall quality of the course materials (reference books, journals, handouts, etc.	3.17 (1.25)	2.98 (1.31)	0.188*** (0.000)	3.11 (1.27)
The amount of practical work (if applicable) in laboratories and workshops in our courses	2.61 (1.29)	2.31 (1.31)	0.305 (0.000)	2.52 (1.30)
Involvement in group work	2.86 (1.35)	2.73 (1.37)	0.131* (0.011)	2.81 (1.36)
The overall balance between theory and practice/experiment in our department	2.85 (1.28)	2.63 (1.33)	0.215*** (0.000)	2.78 (1.30)

Source: End-line satisfaction survey, BIDS-2023.

Note: Level of importance is measured on a 5 point scale, where 1 indicates not at all important and 5 indicates very important. The mean values of importance are reported in the above table.

Satisfaction about Infrastructural Facilities

The infrastructure facilities of the colleges are evaluated through availability of multimedia equipped classrooms, use of multimedia by the teachers for teaching, adequacy of classrooms, improvement of the current condition of the equipment in classrooms, condition of the equipment in the libraries/ seminar libraries, adequacy of books and journals in the libraries, improvement of the current condition of the equipment in the computer lab, sufficiency of computers in the computer lab, quality of scientific laboratories (adequacy and availability of instruments, raw materials, etc.), availability of pure drinking water in the college compound, common room facility for students, opportunity to participate in extra-curricular activities, adequacy of washroom facilities for male students, improvement of the current condition of the washrooms, hygiene and cleanliness of the washrooms, overall cleanliness of the college, uninterrupted power supply during class time and overall safety and security condition of the college campus.

Satisfaction of students on the above discussed infrastructure facilities is not quite there from their own perspectives as is presented in table 53. We see that for all the infrastructure related features of the colleges, students mostly are well below their satisfactory level (as evidenced by average satisfaction level being less than 4 which stands for just satisfactory threshold). In case of IDG awarded colleges, the satisfaction among the students on these features are higher than that of the IDG non-recipient college students. Thus, somewhat indicates increase in satisfaction among the students after IDG fund has been granted in those colleges which in turn shows the positive impact of IDG funds in the colleges.

Table 53: Satisfaction about infrastructural facilities

Academic environment	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Availability of multimedia equipped Classrooms	3.10 (1.43)	2.19 (1.41)	0.910*** (0.000)	2.82 (1.48)
Use of multimedia by the teachers for teaching	2.99 (1.39)	2.19 (1.39)	0.807*** (0.000)	2.74 (1.44)
Adequacy of classrooms	2.87 (1.38)	2.68 (1.36)	0.189*** (0.000)	2.81 (1.38)
Improvement of the current condition of the equipment in classrooms	3.03 (1.26)	2.49 (1.31)	0.534*** (0.000)	2.86 (1.30)
Condition of the equipment in the libraries/ seminar libraries	2.94 (1.27)	2.34 (1.26)	0.597*** (0.000)	2.75 (1.30)
Adequacy of books and journals in the libraries	2.93 (1.30)	2.49 (1.26)	0.438*** (0.000)	2.79 (1.30)
Improvement of the current condition of the equipment in the computer lab	2.87 (1.32)	2.19 (1.26)	0.677*** (0.000)	2.65 (1.34)
Sufficiency of computers in the computer lab	2.69 (1.34)	2.09 (1.26)	0.598*** (0.000)	2.50 (1.34)
Quality of scientific laboratories (adequacy and availability of instruments, raw materials, etc.)	3.60 (1.27)	2.08 (1.23)	0.521*** (0.000)	2.44 (1.28)
Availability of pure drinking water in the college compound	2.09 (1.43)	2.79 (1.40)	0.306*** (0.000)	3.00 (1.43)
Common room facility for students	2.78 (1.42)	2.51 (1.41)	0.274*** (0.000)	2.70 (1.42)
Opportunity to participate in extra-curricular activities	2.71 (1.30)	2.44 (1.33)	0.265*** (0.000)	2.62 (1.31)
Adequacy of washroom facilities for male students	2.76 (1.36)	2.42 (1.28)	0.343*** (0.000)	2.67 (1.35)
Adequacy of washroom facilities for female students	2.83 (1.39)	2.57 (1.38)	0.260*** (0.000)	2.75 (1.39)

Improvement of the current condition of the washrooms	2.66 (1.34)	2.28 (1.28)	0.377*** (0.000)	2.54 (1.33)
Hygiene & cleanliness of the washrooms	2.64 (1.35)	2.32 (1.31)	0.316*** (0.000)	2.54 (1.34)
Overall cleanliness of the college	3.25 (1.21)	2.93 (1.23)	0.323*** (0.000)	3.15 (1.23)
Uninterrupted power supply during class time	3.08 (1.29)	2.80 (1.32)	0.278*** (0.000)	2.99 (1.30)
Overall safety and security condition of the college campus	3.49 (1.23)	3.29 (1.31)	0.207*** (0.000)	3.43 (1.26)

Satisfaction about Linkages with the Industry

Students in all the surveyed colleges give great importance to the industry linkage of the colleges. The data related to this is shown in Table 54. From their perspective support for job placement/internships for students, availability of counseling services for job search support, curriculum are designed in accordance with industry demand, provision of inviting to introduce students with the available opportunities in the industries of relevant sectors, organizing job fairs by the college, opportunities to develop ICT skills necessary to step into the industry/get jobs, opportunities to develop presentation skills, opportunities to develop language proficiency to communicate better in the workplace, opportunities to improve English language proficiency (writing and speaking), opportunities to get introduced with the updated equipment and facilities used in the industry, opportunities to visit industries to gather practical knowledge and college maintaining work related track record of the ex- students are all very important for maintaining a good industry linkage in the colleges.

The satisfaction level on the prevailing industry linkage of the colleges is shown in Table 54. On an average, the industry linkage evaluated through the above-mentioned indicators in the colleges are very poor in satisfaction. In fact, it seems that most students though find some features to be very important for their entrance and growth in the job market, are mostly dissatisfied with the existing linkage scenario of the colleges. In this case too, IDG college students though are dissatisfied as a whole, are in better position than their non-IDG counterparts.

Table 54: Satisfaction about Linkages with the Industry

Academic environment	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Support for job placement/ internships for students	1.85 (1.23)	1.83 (1.21)	0.021 (0.655)	1.85 (1.22)
Availability of counseling services for job search support	2.09 (1.27)	2.04 (1.27)	0.054 (0.258)	2.07 (1.27)
Curriculum are designed in accordance with industry demand	2.44 (1.24)	2.30 (1.23)	0.136** (0.004)	2.39 (1.24)
Provision of inviting to introduce students with the available opportunities in the industries of relevant sectors	2.25 (1.27)	2.13 (1.29)	0.119* (0.014)	2.21 (1.28)
Organizing job fairs by the College	1.79 (1.20)	1.75 (1.20)	0.041 (0.363)	1.77 (1.20)
Opportunities to develop ICT Skills necessary to step into the industry/get jobs	1.93 (1.23)	1.86 (1.22)	0.075 (0.108)	1.91 (1.23)
Opportunities to develop presentation skills	2.18 (1.25)	2.11 (1.24)	0.073 (0.124)	2.16 (1.24)

Opportunities to develop language proficiency to communicate better in the workplace	2.13 (1.26)	2.07 (1.27)	0.065 (0.173)	2.11 (1.27)
Opportunities to improve English language proficiency (writing and speaking)	2.11 (1.29)	1.98 (1.26)	0.130** (0.007)	2.07 (1.28)
Opportunities to get introduced with the updated equipment and facilities used in the industry	2.12 (1.23)	1.94 (1.20)	0.176*** (0.000)	2.06 (1.22)
Opportunities to visit industries to gather practical knowledge	2.07 (1.24)	2.00 (1.26)	0.070 (0.140)	2.04 (1.25)
Maintaining work related track record of the ex- students	2.19 (1.23)	2.11 (1.21)	0.084 (0.070)	2.17 (1.22)

Skill Requirements for Jobs and Self-assessment of Skill Level by the Students

When asked about their perception of skill requirements and assessment of their self-skills, students think that qualities like knowledge of contemporary issues in relevant sector, willingness to learn new thing, understanding and taking direction for work assignments, leadership quality, critical thinking and analytical skills, working under pressure, time management, basic computer skill, flexibility (adaptability under any circumstances), creativity, working as a team and communication skill are of great value of importance. On an average, these qualities or characteristics are very important from their point of view as a part of their skill adequacy and development.

When asked about students' satisfaction level on the same skill sets, they seem like they are dissatisfied with their skills in these different aspects other than flexibility, creativity, team spirit and communication skill in which cases they are mostly neither satisfied nor dissatisfied (Table 55). The level of satisfaction on this different skill set possession is higher among the students of the IDG colleges.

Table 55: Satisfaction about skill requirements for jobs and self-assessment of skill level

Skill Component	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Knowledge of contemporary issues in relevant sector	2.81 (1.14)	2.72 (1.15)	0.095* (0.029)	2.78 (1.14)
Willingness to learn new thing	3.08 (1.30)	3.07 (1.29)	0.000 (0.994)	3.07 (1.30)
Understanding and taking direction for work assignments	3.01 (1.20)	3.05 (1.19)	-0.042 (0.350)	3.02 (1.19)
Leadership quality	2.88 (1.25)	2.93 (1.24)	-0.057 (0.229)	2.90 (1.25)
Critical thinking and analytical Skills	2.97 (1.22)	2.95 (1.23)	0.022 (0.639)	2.97 (1.23)
Can work under pressure	3.15 (1.24)	3.10 (1.22)	0.053 (0.253)	3.14 (1.23)
Time management	3.18 (1.25)	3.14 (1.25)	0.046 (0.329)	3.17 (1.25)
Basic computer skill	2.80 (1.34)	2.85 (1.35)	-0.055 (0.284)	2.81 (1.34)
Flexibility (adaptability under any circumstances)	3.28 (1.24)	3.24 (1.28)	0.040 (0.399)	3.27 (1.25)
Creativity	3.16 (1.22)	3.18 (1.26)	-0.025 (0.588)	3.16 (1.23)
Working as a team	3.23 (1.29)	3.15 (1.31)	0.079 (0.109)	3.21 (1.30)
Communication Skill	3.30 (1.27)	3.28 (1.27)	0.024 (0.616)	3.29 (1.27)

Perception of Importance and Satisfaction about Internet Connectivity

In different aspects of evaluating the importance of internet connectivity in the colleges, we see that availability of internet in campus (broadband connection), availability of internet in campus (wi-fi connection), quality of internet connection, access to internet for study purpose, use of internet by teachers to update their knowledge, and use of internet by teachers and students to communicate with each other are considered to be important features for a good internet connectivity condition in the colleges (Table 77).

Satisfaction level on the same is quite poor for the students of the surveyed colleges as is evident in Table 56. The average satisfaction level seems to be between 1 to 2.5 on a 5-point scale for all of the features discussed before as part of the internet connectivity condition. Here again we see that student from IDG colleges are in better position when considering the level of satisfaction on internet connectivity aspects than the IDG non-recipient ones.

Table 56: Satisfaction about internet connectivity

Internet Connectivity	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Availability of Internet in campus (broadband connection)	1.93 (1.22)	1.73 (1.16)	0.198*** (0.000)	1.87 (1.20)
Availability of Internet in campus (Wi-Fi connection)	1.93 (1.26)	1.79 (1.19)	0.142** (0.002)	1.88 (1.24)
Quality of Internet connection	2.01 (1.24)	1.89 (1.23)	0.116* (0.013)	1.97 (1.23)
Access to Internet for study Purpose	2.06 (1.29)	1.91 (1.26)	0.153** (0.002)	2.01 (1.28)
Use of Internet by teachers to update their knowledge	2.60 (1.38)	2.32 (1.34)	0.279*** (0.000)	2.51 (1.38)
Use of internet by teachers and students to communicate with each other	2.40 (1.33)	2.33 (1.35)	0.078 (0.123)	2.38 (1.34)

Overall Satisfaction of Students on National University Provided Services

Students were asked to express their satisfaction level on several services provided by the colleges under national universities. These include satisfaction about course curriculum, satisfaction about time duration to complete the syllabus, satisfaction about time duration of exam time, satisfaction about time to publish result after the exam and satisfaction about website provided services. For all these services students seem neither satisfied nor dissatisfied on a whole. The satisfaction among the IDG college students is in slightly better position than that of their IDG non-recipient counterparts (Table 57).

Table 57: Satisfaction of students about national university provided services

Internet Connectivity	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Satisfaction about Course curriculum	2.68 (1.21)	2.58 (1.25)	0.098* (0.035)	2.65 (1.22)
Satisfaction about Time duration to complete the Syllabus	2.20 (1.23)	2.13 (1.21)	0.068 (0.140)	2.15 (1.21)
Satisfaction about Time duration of exam time	2.79 (1.30)	2.70 (1.30)	0.090 (0.069)	2.76 (1.30)
Satisfaction about Time to publish result after the Exam	2.24 (1.25)	2.16 (1.25)	0.085 (0.074)	2.18 (1.25)
Satisfaction about Website Provided Service	2.68 (1.21)	2.70 (1.19)	-0.019 (0.689)	2.69 (1.21)

2.5.4. Overall Satisfaction of Students on Different Facilities of Colleges

Students' overall satisfaction about teaching and learning environment depends on a number of factors. In the previous section, we asked students to rank their satisfaction on a scale of one to five for various indicators. Here we ask them 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 58, students of overall colleges are found satisfied about the teaching skills of the teachers, with a mean level of satisfaction 3.86 (SD 0.99). This is followed by teaching and learning facilities provided by the colleges (2.72) and development of students' soft-skills (2.52).

Table 58: Overall Satisfaction of students about different facilities of the colleges

Infrastructural facility	IDG colleges Mean (SD)	Non-IDG colleges Mean (SD)	Chi2/ Difference (p value)	All colleges Mean (SD)
Teaching-Learning facilities	2.89 (0.91)	2.32 (0.95)	0.569*** (0.000)	2.71 (0.96)
Access to ICT facilities	2.48 (1.18)	2.01 (1.09)	0.469*** (0.000)	2.33 (1.17)
Teaching skills of teacher	3.93 (0.95)	3.71 (1.05)	0.217*** (0.000)	3.86 (0.99)
Development of students' soft skills	2.58 (1.30)	2.40 (1.29)	0.174*** (0.000)	2.52 (1.30)
College's linkage with industry	2.32 (1.33)	2.20 (1.30)	0.118* (0.019)	2.28 (1.32)
Average of all overall satisfaction indicators	3.53 (1.14)	3.36 (1.15)	0.164*** (0.000)	3.48 (1.14)

The students of the IDG awarded colleges are more satisfied in proclamation of their own perceptions. Though 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 satisfied nor dissatisfied category as shown in table 59. Similarly, when considering other features of the colleges, students from IDG awarded colleges are more inclined towards satisfaction scale than the IDG non-recipient ones.

Students are found least satisfied about the current state of University-Industry collaboration with the lowest satisfaction level of 2.28 in scale 5. These findings are similar to the level of satisfaction of teachers, as discussed in the previous section.

Table 59 is the most important table of this analysis where we are trying to see the changes in satisfaction level of the students from baseline to end-line satisfaction survey. It can be seen that in case of all the 5 indicators of infrastructural facility at the college students' satisfaction have increase from baseline to end-line satisfaction survey. Overall, there is a graduation of 1 Likert scale above from baseline to end-line satisfaction survey (average 0.98)

Table 59: Overall Satisfaction of students over time (IDG colleges only)

Infrastructural facility	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (BL-EL)	Difference (ML-EL)
Teaching-Learning facilities	2.825	2.73 (0.92)	2.89 (0.91)	0.065	0.16
Access to ICT facilities	2.16	2.22 (1.12)	2.48 (1.18)	0.32	0.26
Teaching skills of teacher	3.825	4.00 (0.94)	3.93 (0.95)	0.13	-0.07
Development of students' soft skills	1.895	2.49 (1.29)	2.58 (1.30)	0.69	0.09
College's linkage with industry	2.115	2.12 (1.28)	2.32 (1.33)	0.22	0.22
Average of all overall satisfaction indicators	2.55	2.71 (0.79)	3.53 (1.14)	0.98	0.82

In conclusion, the students of the IDG awarded colleges are more satisfied in expressing their own perceptions. Though 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 satisfied nor dissatisfied category. Similarly, when considering other features of the colleges, students from IDG awarded colleges are more inclined towards satisfaction scale than the IDG non-recipient ones.

The changes in satisfaction level of the students from base-line to end-line satisfaction survey show that in case of all the 5 indicators of infrastructural facility at the college students' satisfaction have increase from baseline to endline satisfaction survey. Overall, there is a graduation of 1 Likert scale above from baseline to endline satisfaction survey.

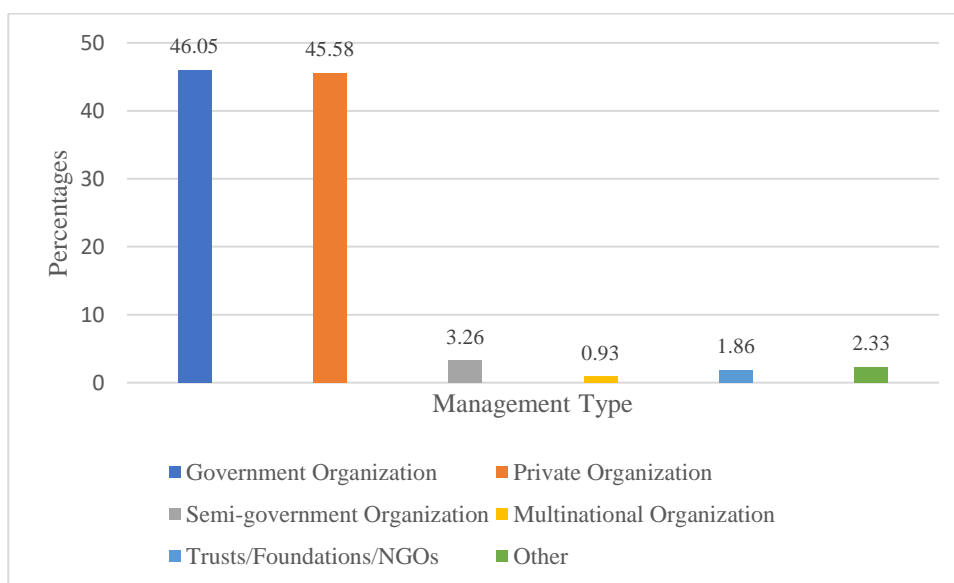
2.6: EMPLOYERS OPINIONS ON KNOWLEDGE AND SKILLS OF NU GRADUATES

This section is based on the response of employers who have hired graduates from National University (NU) affiliated Hon’s and Masters colleges. We have surveyed 215 employers with an equal ratio of 50:50 from government and non-government organizations to have information on the level of satisfaction level of employers on hiring employees who have graduated from NU affiliated colleges.

2.6.1. Characteristics of Employers

With the help of authorities of respective NU affiliated colleges, the employers of NU graduates were traced and interviewed (Figure 2). Among the respondent, 46 percent belong to government organizations and rest 54 percent belong to non-government organizations including private organization (45.58 percent), trust/foundation/NGOs (1.86 percent), semi-government organizations (3.26 percent) and multinational organization (0.93 percent).

Figure 2: Distribution of the employers by management type



Source: End-line satisfaction survey, BIDS-2023.

Table 60 shows that the total number of employees in employers’ organization is 40 on an average, among which 27 percent (11 employees) are graduated from NU affiliated colleges. Gender disaggregation shows that 7 employees are male and 4 are female and all of them are graduated from National University. In the last 12 months, our respective employer’s organizations have recruited 5 employees on an average, and 2 employees are from NU affiliated college on an average.

Table 60: Number of employees from NU affiliated colleges

Questions	Mid-term Satisfaction Survey (MTSS) (2022)			Endline Satisfaction Survey (ELSS) (2023)			Difference (MTSS-ELSS)
	Number of males	Number of females	Total	Number of males	Number of females	Total	
Total number of employees in current office	45.01	22.91	67.92	23.67	16.82	40.49	-27.43
Total number of NU college graduates in current office	21.24	8.93	30.18	7.09	3.87	10.96	-19.22
Total number of employees recruited in last 12 months	7.42	6.05	13.46	3.27	2.17	5.44	-8.02
Total number of NU college graduates' employees recruited in last 12 months	1.25	0.53	1.78	1.28	1.04	2.32	0.54

Source: End-line satisfaction survey, BIDS-2023.

If we compare these results with the mid-line data we see that the number of employees employment reduced to 27 percentage points from 2022 to 2023 and the recruitment of employees also reduces. However, the number of NU graduates' employment has increased by .54 percentage points, which is quite encouraging. However, as the sampled employers are different in endline and mid-term satisfaction survey, it will not be logical to conclude anything regarding employment of NU graduates' overtime. To check this, we have taken information on recruitment of employees for the last 5 years from the same organizations (Table 61).

Table 61: Employment Status Over Time in the Organization

Year	Total number of Employees Mean (SD)			Total number of Employees Graduated from NU Mean (SD)		
	Male	Female	Total	Male	Female	Total
2023	23.67 (37.47)	16.82 (89.42)	40.49	7.09 (13.96)	4.00 (7.88)	11.09
2022	23.26 (36.80)	16.21 (79.58)	39.47	6.95 (14.01)	3.87 (7.84)	10.82
2021	21.52 (34.09)	10.17 (20.53)	31.69	6.70 (13.89)	3.85 (7.97)	10.55
2020	23.16 (41.97)	9.65 (15.82)	32.81	6.46 (13.09)	3.97 (7.65)	10.43
2019	21.17 (32.58)	10.84 (25.00)	32.01	6.33 (12.76)	3.47 (5.78)	9.8

Source: End-line satisfaction survey, BIDS-2023.

2.6.2. Satisfaction Level of the Employers with the Existing Skills of Employees

Table 62 lists the satisfaction level of employers with 19 attributes of employees that were ranked by the employers in order of importance. The level of satisfaction was measured in 10-point scale, with 10 as highly satisfied and 1 with least satisfied. The table shows the mean level of satisfaction about employees' skills who were graduated from NU and also the percentage of respondents showing highly satisfied with their skills. The level of satisfaction is disaggregated by government and non-government employers' response.

Top six skills with which the employers are highly satisfied, are: written and verbal communication (in Bengali), reliability, behavior at workplace, teamwork, and time management. The employers are least satisfied with the following 4 qualities of the graduates: (a) advanced computer skill, (b), basic computer skill (c) English language proficiency, and (d) critical thinking & analytical skills. There is not significant difference between the rating of government employers and the non-government employers except for the case of knowledge of contemporary issues, willingness to learn, and basic computer skills. The government employers rated their satisfaction level significantly higher than that of non-government employers in case of the behavior qualities of the NU graduates.

Table 62: Satisfaction with key employee skills

Criteria	All employers		Govt. employers	Non- govt. employers	Difference (p-value)
	Mean	Very Satisfied	Mean	Mean	
	(SD)	(%)	(SD)	(SD)	
Adaptability	7.59 (1.83)	20.1	7.83 (1.756)	7.39 (1.867)	0.437 (0.081)
Creativity	6.99 (2.00)	15.8	7.25 (1.986)	6.77 (1.997)	0.485 (0.076)
Reliability	7.74 (1.95)	26.1	7.90 (1.935)	7.60 (1.96)	0.296 (0.269)
General Professional/ Academic Knowledge	6.92 (2.12)	16.3	7.27 (2.175)	6.62 (2.042)	0.652* (0.025)
Behavior at work place	7.66 (1.91)	22.8	7.86 (1.938)	7.48 (1.886)	0.376 (0.152)
Knowledge of contemporary issues in relevant Sector and shows eagerness to apply in works	6.83 (2.00)	11.6	7.21 (1.934)	6.50 (1.998)	0.712** (0.009)
Team work	7.42 (1.96)	21.0	7.48 (1.95)	7.37 (1.984)	0.11 (0.685)
Willingness to learn	7.03 (2.19)	16.7	7.50 (1.94)	6.64 (2.316)	0.857** (0.004)

Understanding and properly providing directions for work assignments	7.17 (1.95)	15.9	7.52 (1.955)	6.87 (1.899)	0.646* (0.015)
Strong critical thinking & analytical skills	6.59 (2.06)	10.8	6.89 (1.979)	6.33 (2.106)	0.558* (0.048)
Work Related Practical Knowledge	6.89 (1.94)	12.6	7.13 (1.978)	6.69 (1.885)	0.442 (0.096)
Working Under Pressure	6.99 (2.00)	14.0	7.03 (2.108)	6.96 (1.908)	0.074 (0.789)
Skills in Decision Making	6.98 (2.02)	15.4	7.25 (2.012)	6.74 (2.013)	0.513 (0.064)
Written Communication (in Bengali)	7.56 (2.02)	26.5	7.83 (1.89)	7.33 (2.109)	0.501 (0.07)
Verbal Communication (in Bengali)	7.68 (1.92)	28.4	7.74 (1.941)	7.64 (1.917)	0.099 (0.707)
English Language Proficiency	6.10 (2.07)	6.6	6.26 (1.957)	5.97 (2.163)	0.298 (0.297)
Basic Computer Skill	6.16 (2.16)	7.0	6.64 (2.023)	5.75 (2.189)	0.891** (0.002)
Advanced Computer Skill	4.97 (2.49)	5.8	5.23 (2.356)	4.74 (2.582)	0.488 (0.158)
Time Management	7.41 (2.07)	21.2	7.54 (2.092)	7.30 (2.061)	0.243 (0.397)

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, &*** refer to 10% ,5 % & 1%, level of Satisfaction

We have also asked the employers about the skills and abilities of NU graduates that makes them more employable. Table 63 shows the findings relevant to that. Employers were asked to choose multiple answers. The table shows that 76.7 % of employers believe that the NU graduates are hardworking and willing to learn new things and 71 percent of employers said that it is easy to train them up. 69.3 percent of the employees have found that the NU graduates do not switch jobs frequently, while 57.2 percent of employers have found NU graduates are interested to work with lower pay. Almost 60 percent of employers agree that NU graduates are good at team work. Moreover, 51.6 percent of employers said that NU college graduates are skillful, knowledgeable and 50 percent said they possess recommendable soft skills. According to our results, the government employers responded more positively in favor of NU graduates than the non-government employers.

Table 63: Skills and abilities of the NU college graduates (multiple answer)

Skills and abilities	Tick Mark (poly response, %)	Govt. employers	Non-govt. employers
NU college graduates are skillful and knowledgeable	51.6	54.6	49.1
They possess recommendable soft skills	49.3	49.5	49.1
Hard working and willing to learn new things	76.7	76.8	76.7
Easy to train up	70.2	70.7	69.8
Innovative	36.7	40.4	33.6
Good at team work	59.5	58.6	60.3
They do not switch jobs frequently	69.3	62.6	75.0
Interested to work with lower pay	57.2	48.5	64.7
Others	2.8	3.0	2.6

Source: End-line satisfaction survey, BIDS-2023.

2.6.3. Overall Satisfaction of Employers

Overall satisfaction with the skills and qualities of NU graduates is reported in Table 64 if the employers employed at least one NU graduate in the last 12 months. The mean overall satisfaction is 3.66 out of a 5-point scale. That means, on average, the employers are closed to satisfied with the NU graduates as this value is more closed 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. However, the average does explain the real scenario. That's why we have taken in to consideration the distribution of satisfaction level in figure 3.

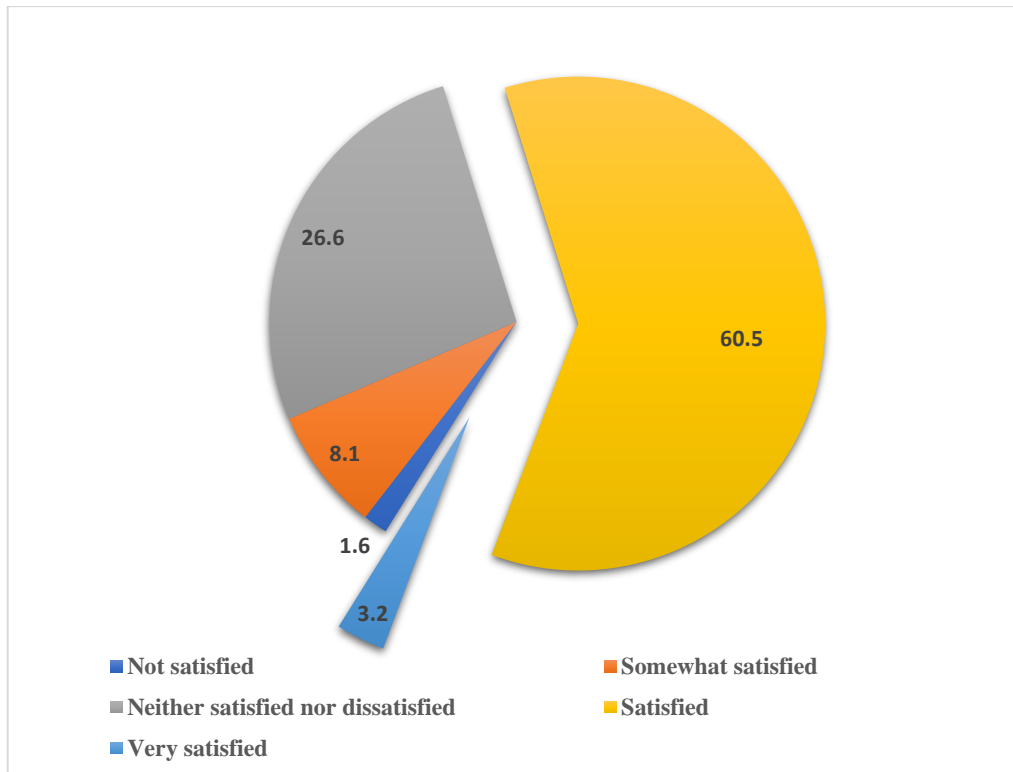
Table 64: Overall employer satisfaction about NU graduates

Overall Satisfaction with Skills and Qualities	All	Govt.	Non-govt.	Difference (p-value)
	Mean (SD)	Mean (SD)	Mean (SD)	
	3.66 (0.76)	3.77 (0.67)	3.49 (0.79)	

Source: End-line satisfaction survey, BIDS-2023.

Note: *, **, and *** represents significant at 10%, 5% and 1% level.

Figure 3: Distribution of employers' satisfaction level



Source: End-line satisfaction survey, BIDS-2023.

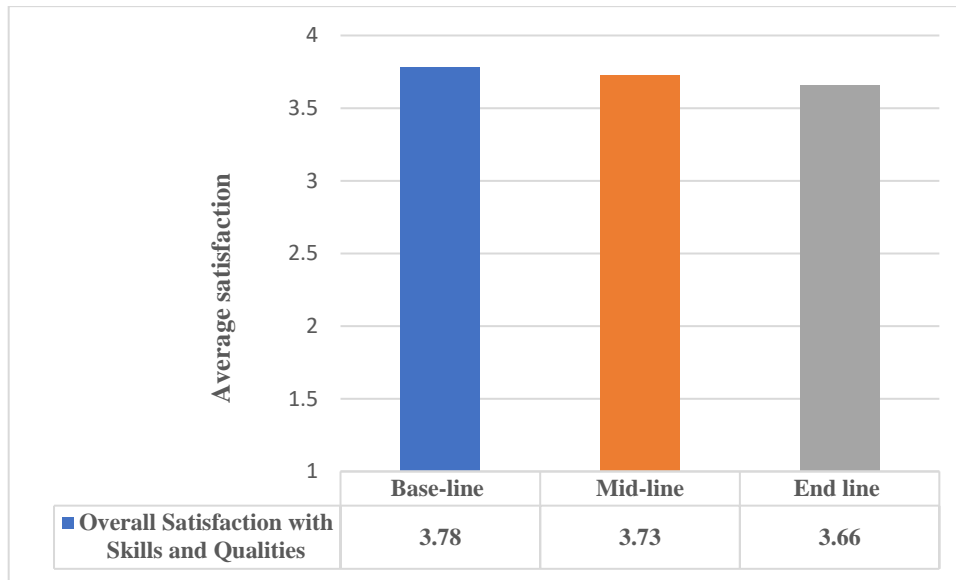
Figure 3 shows although the mean satisfaction level is 3.66 out of a 5-point scale, almost 64 percent of the sampled employers are satisfied with the skills and qualities of the recruited NU graduates within the last 12 months which is quite encouraging.

The overtime change in the satisfaction level of the employers from base line to endline survey is presented in Table 65. The results show that the employers' satisfaction level does not change much and remain stagnant close to 4 during the survey periods (Figure 4).

Table 65: Overall employer satisfaction about NU graduates (graph)

Details	Base-line (BL) Mean (SD)	Mid-line (ML) Mean (SD)	End line (EL) Mean (SD)	Difference (BL-EL)	Difference (ML-EL)
Overall Satisfaction with Skills and Qualities	3.78 (0.70)	3.73 (0.849)	3.66 (0.76)	-0.05	-0.07

Figure 4: Overall employer satisfaction about NU graduates



2.6.4. 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 each talent if they agreed. Over 80 percent of the employers believe that NU students should develop their talents in four following areas out of the total seven: (a) English language proficiency, (b) computer/ICT skill, (c) communication skills, and (d) presentation skills (Table 66). A higher percentage of non-government employers consider that NU graduates should improve all the skills than government counterpart. However, higher percentage of government employers suggest that graduates of NU affiliated college should improve their computer/ ICT skills and technical knowledge.

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 employer who work in government organizations, advise NU graduates to sharpen their computer or ICT skills as well as their technical knowledge skill to compete in the current job market situation.

Table 66: Qualities of NU Graduates that Need Improvements

Skills	All employers (Tick Mark Percentage)	Govt. employers (% of respondents)	Non-govt. employers (% of respondents)
Communication Skill	81.9	80.8	82.8
Presentation Skill	81.9	78.8	84.5
Group Work Activity (Teamwork)	74.4	72.7	75.9
Problem Solving Skill	78.6	77.8	79.3
Technical Knowledge	76.3	78.8	74.1
English Language Proficiency	88.8	88.9	88.8
Computer/ICT Skill	86.5	89.9	83.6

Source: End-line satisfaction survey, BIDS-2023.

The overall results shows that although the overall satisfaction level of the employers remain same over the time during the three-satisfaction survey starting from 2021 to 2023, a major proportion of employers are satisfied with quality and skills of employed NU graduates. Majority of the employers believe that the NU graduates are hardworking and willing to learn new things, they are easy to train them up and they do not switch jobs frequently. However, they need to improve their English language proficiency, computer/ICT skill, communication skills, and presentation skills to make them more competent with the current employment situation.

PART III: PROJECT EFFECTIVENESS

3.1 Teaching-Learning Environment

In this chapter, we describe the general characteristics as well as the facilities available in the surveyed colleges. These information on the colleges have been gathered from the IDG manager/principals with the help of the administrative staffs of the respective colleges. In table 1, all these generic information on the surveyed colleges have been presented. Among the 75 total surveyed colleges, 46 colleges received funding from IDG and 29 colleges did not receive any funding from IDG. Also, 66.67% were government and 33.33% were non-government (50 and 25 in numbers respectively). Among the 50 government colleges, 30 were IDG-recipient colleges and 20 were non-IDG colleges and from the 25 non-government colleges, 16 were IDG-recipient colleges and 9 were non-IDG colleges.

35, 10 and 1 colleges (76%, 22% and 2% respectively) of the 46 IDG-recipient ones were co-education (together), only girls and co-education (separate) colleges respectively. 20 and 9 of the non-IDG ones (6% and 31% respectively) of the 29 non-IDG colleges were co-education (together) and only girls' colleges. In total, there were 2,58,033 male and 2,45,609 female (51.23% and 48.76% respectively) students in all the 75 colleges. In those surveyed 46 IDG-recipient colleges, there were a total of 180698 male (50.03% of the total students at those colleges) and 180464 female (49.97% of the total students at those colleges) students. Subsequently, in those 29 surveyed non-IDG colleges, there were a total of 77335 male (54.28% of the total students at those colleges) and 65145 female (45.72% of the total students at those colleges) students.

Table 1: General Characteristics of Colleges

Indicators	IDG Recipient Colleges		Non-IDG Colleges		All Colleges	
	Number	%	Number	%	Number	%
Distribution of College Types						
Government	30	65.22	20	68.97	50	66.67
Non-Government	16	34.78	9	31.03	25	33.33
Total	46	100	29	100	75	100
Distribution of College Education System Types						
Only Boys	0	0	0	0	0	0
Only Girls	10	21.74	9	31.03	19	25.33

Co-education (Together)	35	76.09	20	68.97	55	73.33
Co-education (Separate)	1	2.17	0	0.00	1	1.33
Total	46	100	29	100	75	100
Distribution of Students at the Colleges						
Total Male Students	180698	50.03	77335	54.28	258033	51.23
Total Female Students	180464	49.97	65145	45.72	245609	48.76
Total	361162	100	142480	100	503642	100

Table 2 presents information on the facilities and establishments available in the surveyed colleges. In the surveyed colleges, there were 2746 classrooms of which 1928 belong to the IDG-recipient colleges and 818 belong to the non-IDG colleges (classroom percentages were 70.21% and 29.79% respectively). As accounted, there were a total of 843 multimedia classrooms in those colleges, of which 725 belong to the IDG-recipient colleges and 118 belong to the non-IDG colleges (multimedia classroom percentages were 86.01% and 13.99% respectively showing a very number of them belonging to the IDG-recipient colleges). As one of the major reasons for IDG funding was to modernize the existing facilities at the colleges, this higher number in the existence of multimedia classrooms are self-explanatory. Without IDG funding, this number could also be very low just like the number of multimedia classrooms in the non-IDG colleges.

Apart from that, the total number of Bangabandhu corner, Muktijuddho corner, Childcare/daycare corner, Mothers corner, establishment of employment cells in the colleges, arrangement of workshop for facilitating students' and teachers' skill development and arrangement of job fair are higher in the IDG-recipient colleges than the non-IDG colleges.

Table 2: Number of Facilities/Establishments in the Colleges

Indicators	IDG Recipient Colleges		Non-IDG Colleges		All Colleges	
	Number	%	Number	%	Number	%
No. of Classrooms	1928	70.21	818	29.79	2746	76.52
No. of Multimedia Classrooms	725	86.01	118	13.99	843	23.48

No. of Bangabandhu Corner	40	86.96	18	62.07	58	77.33
No. of Muktiyuddho Corner	36	78.26	14	48.28	50	66.67
No. of Childcare/Daycare Corner	13	28.26	0	0.00	13	17.33
No. of Mothers Corner	26	56.52	5	17.24	31	41.33
Establishment of Employment Cell	45	97.83	21	72.41	66	88.00
Arrangement of Workshop	2	4.44	0	0.00	2	2.70
Carrying out of any Tracer Study	3	6.52	2	7.14	5	6.76
Arrangement of Job Fairs	2	4.35	0	0.00	2	2.67

The major purpose of this study is to see how the IDG recipient colleges have fared with the facilities provided to the. In table 3, we focus on the developments made with IDG funding in those colleges. Compliance of Social and Environmental Safety Measures, Library Renovation, Purchasing of Books for Library, Renovation/Establishment of Computer Lab, Establishment of Multifunctional ICT Lab, Renovation/Establishment of Science Lab, Provisions for arranging Pure Drinking Water Facilities in the colleges and Modernization of Auditoriums have been in the plans for most of these colleges and the works have been completed successfully. Provisions including Internet/Wi-Fi Network/ ICT Corner facilities, Establishment of Computer Networking, and Management Information System are still mostly works in progress for the colleges that had plans for those.

Table 3: Information on the Status of the other development activities undertaken by the IDG-Recipient Colleges

Sl. No	Activities	Number				Percentage			
		Yes	No	Not Applicable	In-Progress	Yes	No	Not Applicable	In-Progress

1	Study Zone with ICT Facilities	13	31	2	0	28.3	67.4	4.4	0
2	Library Renovation	37	7	2	0	80.4	15.2	4.4	0
3	Books for Library	33	10	3	0	71.7	21.7	6.5	0
4	Self-Assessment Review	11	23	3	9	23.9	50.0	6.5	19.6
5	Renovation/Establishment of Computer Lab	43	3	0	0	93.5	6.5	0	0
6	Establishment of Multifunctional ICT Lab	28	11	1	6	60.9	23.9	2.2	13.0
7	Renovation/Establishment of Science Lab	31	15	0	0	67.4	32.6	0	0
8	Fire Extinguisher	10	35	1	0	21.7	76.1	2.2	0
9	Internet/Wi-Fi Network/ ICT Corner	14	6	0	26	30.4	13.0	0	56.5
10	Establishment of Computer Networking	14	8	0	24	30.4	17.4	0	52.2
11	Management Information System (MIS)	4	21	0	21	8.7	45.7	0	45.7
12	Bangabandhu Corner	13	28	4	1	28.3	60.9	8.7	2.2
13	Muktijuddho Corner	9	28	9	0	19.6	60.9	19.6	0
14	Childcare/Daycare Center	11	7	26	2	23.9	15.2	56.5	4.4
15	Mothers' Corner	18	12	15	1	39.1	26.1	32.6	2.2
16	Modernization of Auditoriums	25	17	4	0	54.4	37.0	8.7	0
17	Power Generator	17	22	3	4	37.0	47.8	6.5	8.7
18	Pure Drinking Water	35	7	0	4	76.1	15.2	0	8.7
19	Employment Cell for Students	0	45	1	0	0	97.8	2.2	0
20	Workshops with Probable Employers	2	37	7	0	4.4	80.4	15.2	0
21	Completion of any Tracer Study	3	42	1	0	6.5	91.3	2.2	0

22	Steps Taken for Increasing Employment Rate of the Students	8	34	4	0	17.4	73.9	8.7	0
23	Compliance of Social and Environmental Safety Measures	37	3	6	0	80.4	6.5	13.0	0

Overall, in the surveyed colleges, a total of 2746 classrooms were observed, with 70.21% (1928 classrooms) belonging to IDG-recipient colleges and 29.79% (818 classrooms) to non-IDG colleges. Notably, out of the 843 multimedia classrooms in these colleges, 86.01% (725 classrooms) were in IDG-recipient colleges, highlighting a significant emphasis on modernizing facilities through IDG funding. This stark contrast with non-IDG colleges underscores the impact of funding on multimedia infrastructure.

The higher number of Bangabandhu corner, Muktijuddho corner, Childcare/daycare corner, Mothers' corner, establishment of employment cell, workshop for skill development, and job fair in IDG-recipient colleges further exemplify the positive outcomes of IDG funding. This suggests that IDG initiatives have successfully contributed to enhancing various aspects of college facilities and opportunities for ensuring better teaching-learning environment, setting them apart from non-IDG colleges in these regards.

Compliance of Social and Environmental Safety Measures, Library Renovation, Purchasing of Books for Library, Renovation/Establishment of Computer Lab, Establishment of Multifunctional ICT Lab, Renovation/Establishment of Science Lab, Provisions for arranging Pure Drinking Water Facilities in the colleges and Modernization of Auditoriums have been in the plans for most of these colleges and the works have been completed successfully. Provisions including Internet/Wi-Fi Network/ICT Corner facilities, Establishment of Networking, and Management Information System are still mostly works in progress for the colleges that had plans for those.

3.2 Students Enrollment, Attendance and Graduation Rates

In this chapter we show different information of the students from the colleges as reported. In some cases, we show the difference value of different indicators between the IDG-recipient colleges and the non-IDG ones for 2023 and in some cases, we see the patterns of difference for different indicators in these colleges over a six-year period (from 2018 to 2023). We select these years, as 2017 is considered to be the year that CEDP took off with the funding from IDG.

In table 1, some enrollment information of the students for each department on an average has been presented for the year 2023. According to our survey information there were 10 departments per college for which we collected data. The data presented in this table has been summarized from collecting data for all the departments of each college. At honors level, average enrollment capacity and average number of enrollments of all the students in the IDG-recipient colleges seem to be significantly and positively higher than those of the non-IDG colleges. The same is true for the master's level students' average enrollments and the capacity though the values are not statistically significant. The increase in the capacity and actual average increase in the enrollments the honor's level of the IDG-recipient colleges in comparison to the non-IDG colleges can be attributed to the IDG facilitation.

Table 1: Enrollment Information of the Colleges in 2023

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
Average enrollment capacity	120.42	91.86	112.71	28.559***	0.000
Average number of enrollments	87.18	65.73	81.70	21.444**	0.002
Average % of enrollments	71.73	72.07	71.81	-0.340	0.903
Average number of female student enrollments	44.90	41.38	44.05	3.524	0.517

Average % of female student enrollments	57.78	57.29	57.66	0.492	0.875
Average number of male student enrollments	52.89	36.88	48.55	16.017***	0.001
Average % of male student enrollments	58.83	56.23	58.12	2.599	0.212
Master's Level					
Average enrollment capacity	120.68	93.57	117.52	27.102	0.256
Average number of enrollments	117.95	84.83	114.91	33.116	0.316
Average % of enrollments	83.43	84.62	83.55	-1.189	0.887
Average number of female student enrollments	59.18	44.14	57.66	15.041	0.354
Average % of female student enrollments	59.17	58.11	59.08	1.063	0.921
Average number of male student enrollments	65.14	36.27	62.54	28.871	0.140
Average % of male student enrollments	56.19	44.08	55.09	12.109*	0.025

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

From 2018 to 2023, there has been significantly greater number of average enrollment of students in the IDG-recipient colleges than the non-IDG colleges. This holds true for the enrollment number

in both the honors and master’s level of the colleges (except for the master’s level of year 2019 and 2020). The difference between the findings of these two types of colleges is statistically significant only for the year 2023 at honor’s level and none of the years between 2021-2023 at master’s level of the colleges (Table 2).

Table 2: Average Enrollment of Students over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor’s Level					
2023	83.46	63.56	78.40	19.903**	0.003
2022	78.66	74.97	77.66	3.69	0.522
2021	80.59	79.21	80.20	1.38	0.779
2020	80.10	79.64	79.97	0.45	0.924
2019	75.37	72.86	74.66	2.50	0.610
2018	76.05	71.76	74.86	4.28	0.397
Master’s Level					
2023	109.29	84.83	107.25	24.46	0.450
2022	115.05	74.81	109.73	40.24	0.145
2021	106.72	90.30	103.73	16.41	0.291
2020	96.76	107.28	98.79	-10.52	0.518
2019	118.01	118.49	118.10	-0.47	0.983
2018	98.77	96.33	98.31	2.44	0.888

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

By dividing the students’ percentages of attendances in 2023 by the total number of enrolled students in the same year, we estimate the attendance rate of the students at NU colleges and report those in table 3. Though not statistically significant, we see that the attendance rate for all and male students are higher in the IDG-recipient colleges than that of the non-IDG colleges (Table 3).

Table 3: Students’ Attendance Rate in 2023

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
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Honor's Level					
Average Attendance rate of Male Students	58.38	58.19	58.33	0.18	0.95
Average Attendance rate of Female Students	67.88	63.71	66.85	4.16	0.42
Average Attendance rate of All Students	61.57	57.55	60.56	4.01	0.10
Master's Level					
Average Attendance rate of Male Students	48.18	36.93	47.04	11.24	0.21
Average Attendance rate of Female Students	53.35	46.21	52.70	7.13	0.37
Average Attendance rate of All Students	50.92	42.25	50.19	8.66	0.25

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

As have been reported by the surveyed colleges, in all the six years for which we collected data at the honors level and at the master's level, there are higher rates of attendance for NU students in IDG recipient colleges than in non-IDG colleges. For the years 2023, 2021, 2020 and 2019 at the honor's level and 2023 at the master's level, the differences between the attendance rates of these colleges seem to be higher and statistically significant (Table 4). Students' attendance over their enrollment numbers being significant bears positive response for the IDG funding among the surveyed colleges. It can be assumed that the changes made with a view to improving the teaching-learning environment at the colleges have been successful in drawing the students to their respective colleges.

Table 4: Students' Attendance Rate over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value

Honor's Level					
2023	71.49	56.26	68.94	15.234*	0.033
2022	65.47	57.52	64.30	7.945	0.072
2021	64.52	53.56	62.00	10.957*	0.014
2020	63.02	52.36	60.89	10.661*	0.015
2019	66.33	56.14	64.71	10.187*	0.045
2018	64.69	58.70	64.49	5.990	0.181
Master's Level					
2023	63.01	34.56	57.54	28.443*	0.029
2022	62.20	50.18	56.33	12.021	0.290
2021	53.23	52.22	51.23	1.010	0.884
2020	60.29	49.89	55.53	10.401	0.367
2019	58.35	46.45	54.20	11.895	0.310
2018	55.18	48.97	53.40	6.202	0.429

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

In table 5 and 6, we show the attendance rates for male and female students separately for the IDG recipient and non-IDG colleges. For male students, at both honors and master's level, the attendance rates seem to be higher in the IDG recipient colleges than in the non-IDG colleges (though the rate is only statistically significant for honor's level male students for the year 2020). For female students, attendance rates at honor's level were higher in non-IDG colleges in 2018. And from 2019 to 2023 the attendance rates for both the honors and master's level attendance rates of the female students were higher for IDG recipient colleges than the non-IDG colleges though the rates are not statistically significant.

Table 5: Male Students' Attendance Rate over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
2023	68.35	56.65	67.52	11.70	0.168
2022	67.04	60.41	66.70	6.628	0.394
2021	62.22	55.41	61.02	6.810	0.317

2020	61.01	48.76	58.93	12.259*	0.046
2019	66.34	55.57	64.91	10.771	0.106
2018	67.25	58.57	67.05	8.687	0.329
Master's Level					
2023	79.36	25.66	668.82	53.700	0.097
2022	83.96	56.73	68.08	27.229	0.495
2021	53.12	46.09	49.32	7.028	0.560
2020	56.82	43.08	54.20	13.740	0.300
2019	89.85	37.50	67.19	52.358	0.434
2018	56.86	40.94	53.37	15.918	0.154

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

Table 6: Female Students' Attendance Rate over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
2023	68.05	58.01	65.80	10.05	0.078
2022	65.53	60.85	63.62	4.67	0.442
2021	66.95	60.04	63.84	6.91	0.299
2020	64.72	57.87	62.48	6.85	0.212
2019	67.72	63.90	65.95	3.82	0.602
2018	66.00	73.62	65.90	-7.62	0.495
Master's Level					
2023	58.57	43.05	53.85	15.52	0.163
2022	57.82	45.30	52.02	12.52	0.096
2021	54.42	49.61	52.62	4.81	0.456
2020	60.00	47.42	55.76	12.57	0.265
2019	56.30	42.73	53.75	13.56	0.110

2018	56.66	47.34	52.99	9.32	0.335
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Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

In table 7 we show the information on average participation rates, average passing rates and average completion rates of students in both the IDG recipient and non-IDG colleges at honors and master's levels in 2023. We estimate the participation rate by dividing the number of students attending the examination by number of students enrolled and multiplying the value by 100; the pass rates by dividing the average number of students passing the examination by average number of students that attending the examination and multiplying the value by 100 and the completion rate by dividing the average passing number of students by the number of students enrolled and multiplying the value by 100.

At the Honor's level, IDG recipient colleges exhibit significantly higher average student participation in examinations (73.63) compared to non-IDG colleges (50.70), resulting in a substantial difference of 22.92 at 5% level of significance. Also, at the Honor's level, IDG recipient colleges exhibit significantly higher average student graduation (79.14) compared to non-IDG colleges (49.33), resulting in a substantial difference of 29.81 at 5% level of significance. However, differences in other indicators such as participation rates, completion rates, and passing rates are not statistically significant.

Similarly, at the Master's level, IDG recipient colleges outperform non-IDG colleges in the average number of participation in examination, average number of graduating/passing students, participation rates, completion rates, and passing rates as has been shown with the positive differences between the outcomes of IDG recipient and non-IDG colleges. But the differences are positive with no statistically significant results. However, the nuances of these effects warrant further investigation, taking into account the complex dynamics of educational environments and potential confounding variables as we cannot conclude that the positive responses come from the availability of IDG funding.

Table 7: Students' Pass Rate Information in 2023

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
Average Number of Student Participation in the Examination	73.63	50.70	68.48	22.922**	0.005
Average Participation Rate of Students	87.43	87.37	87.41	0.062	0.980

Average number of Graduating/Passing Students	79.14	49.33	70.80	29.808**	0.002
Average Completion Rate	82.01	77.26	80.67	4.744	0.238
Average Passing Rate	88.50	90.31	89.01	-1.804	0.560
Average Number of Students Graduating/Passing with CGPA>3.00	36.09	23.09	31.80	12.999	0.108
Average Number of Students Graduating/Passing with 2<CGPA<2.99	47.73	26.96	40.81	20.766*	0.013
Average Number of Students Graduating/Passing with CGPA<2.00	10.16	5.50	8.63	4.662	0.103
Master's Level					
Average Number of Student Participation in the Examination	114.05	66.25	109.09	47.808	0.207
Average Participation Rate of Students	93.29	93.25	93.29	0.043	0.986
Average number of Graduating/Passing Students	99.00	53.00	93.95	46.000	0.122
Average Completion Rate	89.47	88.52	89.36	0.946	0.927
Average Passing Rate	88.53	88.16	88.49	0.374	0.956
Average Number of Students Graduating/Passing with CGPA>3.00	47.12	21.37	44.48	25.754	0.368

Average Number of Students Graduating/Passing with $2 < \text{CGPA} < 2.99$	62.48	33.57	59.85	28.914	0.299
Average Number of Students Graduating/Passing with $\text{CGPA} < 2.00$	13.67	5.00	12.82	8.676	0.338

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

In table 8, 9 and 10 we show year wise information on the students' pass rates, results of the ones getting more than CGPA 3.00 and completion rates in both the IDG recipient and non-IDG colleges. The trends vary for these indicators over the years. But, none of the results that are statistically significant bear any positive notion for the IDG recipient colleges. Although the differences in the pass rates are negative (i.e., non-IDG college students' pass rates are higher than the students at IDG colleges), the gap has been decreasing in the advancing years (though again no significant statistical difference is seen for those too). It is important to note that, even when these values are statistically significant, these differences should be interpreted cautiously, considering the multitude of factors that could contribute to fluctuations in pass rates, including institutional policies, teaching quality, student demographics, curriculum changes, or the academic preparedness of students etc.

Table 8: Students' Pass Rates over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
2023	88.50	90.31	89.01	-1.804	0.150
2022	88.38	88.69	88.46	-0.309	0.727
2021	86.73	85.48	86.34	1.252	0.125
2020	84.67	84.71	84.68	-0.033	0.961
2019	83.57	85.01	83.95	-1.433*	0.041
2018	86.83	86.39	86.71	0.438	0.473
Master's Level					
2023	88.53	88.16	88.49	0.374	0.890
2022	86.49	87.82	86.64	-1.330	0.558
2021	88.01	90.25	88.34	-2.244	0.111

2020	86.44	88.83	86.89	-2.387*	0.011
2019	83.80	91.22	85.11	-7.423***	0.000
2018	84.22	88.19	84.90	-3.975***	0.001

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

Table 9: Students' Obtaining More than CGPA 3.00 over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
2023	36.09	23.09	31.80	12.99	0.107
2022	30.43	25.05	29.00	5.38	0.244
2021	27.08	24.17	26.11	2.90	0.378
2020	28.56	29.28	28.75	-0.71	0.798
2019	25.23	25.49	25.30	-0.25	0.927
2018	26.25	25.70	26.10	0.55	0.844
Master's Level					
2023	47.12	21.37	44.48	25.75	0.184
2022	40.41	28.72	39.19	11.68	0.588
2021	36.34	29.25	35.22	7.09	0.499
2020	37.81	55.03	41.08	-17.22	0.057
2019	41.18	60.82	44.84	-19.64	0.040
2018	36.56	55.65	39.99	-19.09	0.037

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

Table 10: Students' Completion Rates over the Years

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Honor's Level					
2023	82.01	77.26	80.67	4.74	0.237
2022	79.63	75.51	78.61	4.11	0.156
2021	79.01	71.93	76.84	7.07	0.0078
2020	76.21	73.41	75.48	2.80	0.175

2019	73.50	73.85	73.59	-0.35	0.876
2018	75.85	76.75	76.09	-0.90	0.713
Master's Level					
2023	89.47	88.52	89.36	0.945	0.927
2022	81.28	83.70	81.54	-2.42	0.657
2021	82.69	86.57	83.26	-3.88	0.324
2020	84.95	91.50	86.19	-6.54	0.221
2019	80.10	92.41	82.28	-12.31	0.0006
2018	80.10	86.33	81.18	-6.23	0.0489

Overall, apart from significant positive changes in the number of enrollment, average attendance rate, average number of participation and average number of passing rate at some years for the students in the IDG recipient colleges in comparison to the non-IDG colleges, there do not seem to have significant differences in case of the students' participation rates, completion rates or pass rates over the years between the two types of colleges. As the changes like increase in attendance rates are easy to locate and is reflected well in the short run, changes like improvement in the completion rate and pass rates may come eventually, and after certain level of participation and engagement on part of the students, and improvement in teaching-learning environment.

3.3 Teachers' and Staff Posting, Training and Development in the Colleges

In this chapter we show the employment and training related information of the teachers and other employees in the IDG recipient and non-IDG colleges. The results shown in table 1 highlight variations in teacher deployment patterns, particularly in terms of the number and gender distribution of teachers, between IDG recipient and non-IDG colleges in the year 2023. The indicators include the average number of sanctioned teaching posts, the average number of employed teachers, the average percentage of employed teachers, the average number of male teachers, the average percentage of male teachers, the average number of female teachers, and the average percentage of female teachers. The surveyed IDG recipient colleges have a significantly higher average number of sanctioned teaching posts (86.76) compared to non-IDG colleges (58.53), resulting in a substantial statistical difference of 28.23 with p-value of 0.003. This indicates a disparity in the allocation of teaching positions between the two groups. IDG recipient colleges also employ a significantly higher average number of teachers (73.84) compared to non-IDG colleges (46.03), with a notable difference of 27.81 and p-value of 0.001. This suggests that IDG recipient colleges have a significantly larger teaching workforce than their comparison group of non-IDG colleges. The difference for employed male and female teachers are statistically higher for IDG recipient colleges than the non-IDG ones.

Table 1: Teachers' Deployment Information in 2023

Indicators	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
Average number of sanctioned teaching posts	86.76	58.53	76.08	28.225**	0.003
Average number of employed teachers	73.84	46.03	63.62	27.812**	0.001
Average % of employed teachers	85.89	79.37	83.18	6.119	0.098
Average number of male teachers	50.43	30.32	42.82	20.113**	0.002
Average % of male teachers	69.10	64.07	67.20	5.037	0.256

Average number of female teachers	23.93	15.71	20.78	8.219*	0.025
Average % of female teachers	31.58	35.93	33.24	-4.351	0.322

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

Over the last 6 years (from 2018 to 2023) there have been a positive difference between the average employment rate of teachers at the IDG recipient colleges and the non-IDG colleges (Table 2). These results underscore a persistent though statistically insignificant difference in teacher employment between IDG recipient and non-IDG colleges over the years considered. The consistency of this pattern implies the existence of structural factors or policy dynamics influencing teacher allocation across these institutional categories. But, one of goals of the initiation of the project using IDG was to increase teachers' deployment which seems to be comparatively higher achieved in the IDG recipient colleges. But, seeing the statistical insignificance in the nature of the results, we cannot conclude that the IDG funding is responsible for this accomplishment.

Table 2: Teachers' Average Deployment Rate over the Years

Year	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
2023	85.49	79.37	83.18	6.11	0.098
2022	83.53	78.44	81.48	5.09	0.236
2021	85.41	78.63	82.68	6.77	0.068
2020	84.80	79.35	82.60	5.45	0.143
2019	84.82	80.09	83.00	4.73	0.189
2018	84.49	80.67	82.99	3.81	0.291

Note: The *, **, *** represent 10%, 5%, and 1% significance levels, respectively.

Over the six years from 2018 to 2023, there have been more employees employed in the IDG recipient colleges than the non-IDG colleges. Though the employment rates over their available posts seem to be statistically insignificant, the rates seem to be increasing in the IDG recipient colleges (Table 3).

Table 3: Deployment Rate of College Employees (Other than Teachers) over the Years

Year	IDG Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-Value
2023	79.58	68.11	75.55	11.46	0.123

2022	75.17	75.03	75.12	0.14	0.986
2021	73.02	71.05	72.39	1.97	0.813
2020	76.49	71.69	74.89	4.80	0.525
2019	74.57	67.91	72.30	6.65	0.436
2018	74.34	66.14	71.61	8.19	0.333

Aside from employing greater number of teachers, their improvements through training them were also envisioned to be achieved in the project timeline. Keeping up with this goal, many training were supposed to be organized through CEDP and others. The number of teachers trained through the arranged trainings have been enlisted in table 4 and we see a consecutively increasing number of teachers being trained in their college premises over these years. In these last 6 years, a total of 5329 teachers were trained of whom 2275 received training through CEDP and 3054 through other organizations including training programs arranged by their respective colleges. Training of teachers reached their highest numbers in 2022 and 2023. In fact, the project is going through a no cost extension for the sole purpose of ensuring training for more teachers at the NU colleges.

Table 4: Information on Teachers’ Training over the Years

Year	No. of Trained Teachers (through CEDP)	No. of Trained Teachers (apart from CEDP)	No. of Total Trained Teachers
2023	993	595	1588
2022	659	649	1308
2021	316	547	863
2020	137	338	475
2019	97	514	611
2018	73	411	484
Total	2275	3054	5329

The project and subsequent trainings were initiated after setting a goal of training a definite number of teachers and other employees from the IDG recipient colleges. In the following tables we present the achievement scenario of the said goals for both of these entities at the respective IDG recipient colleges. For the teachers at those colleges a total goal of training 2967 teachers was set in the beginning of the project. Over the years, the number of teachers that received trainings amounted to a total of 2855 which is 96.23% of the total set goal (Table 5).

For the IDG recipient colleges, a total goal of training 1413 employees was set in the beginning of the project. Over the years, the employees that received trainings amounted to a total of 1291 which is 91.40% of the total set goal (Table 6).

It has been confirmed from the key respondents from the colleges that, more initiatives are being taken to arrange for trainings of the teachers before the end of the official project date. And the project timeline has been extended with a no-cost extension clause.

Table 5: Information on Teachers' Training for IDG-Recipient Colleges

Year	Target	Total No. of Teachers Trained in the Year	Proportion of Target Fulfilment
2023	2967	1313	44.25
2022	2967	959	32.32
2021	2967	420	14.16
2020	2967	67	2.26
2019	2967	79	2.66
2018	2967	17	0.57
Total	2967	2855	96.23

Table 6: Information on Employees' Training for IDG-Recipient Colleges

Year	Target	Total No. of Other Employees Trained in the Year	Proportion of Target Fulfilment
2023	1413	682	48.30
2022	1413	450	31.80
2021	1413	155	11.00
2020	1413	4	0.30
2019	1413	0	0
2018	1413	0	0
Total	1413	1291	91.40

In this part of the chapter, we summarize information from the IDG managers and present some of their views on the overall workings of the project. The colleges surveyed for this study has undergone multiple development projects in the last five years. Though the IDG recipient colleges received fundings from WB, some development in those colleges were also done through fundings

that came from other sources. In table 7, we only look into the works done through IDG funding at the 46 sample colleges. From the table, it is seen that all 46 colleges renovated classrooms with the funding from IDG. 42 colleges (91.30% of the 46 colleges) purchased smartboards, 39 colleges (84.78% of the 46 colleges) purchased multimedia equipment, and 33 colleges (71.33% of the 46 colleges) purchased books for their libraries with the funds available. Among these 46 colleges, in 45 lessons were provided through digital apparatus availed by IDG funding, in 42 colleges teaching sessions were carried through those digital apparatus, 43 colleges and 32 colleges arranged for ICT and Management training respectively through the available IDG funding.

Table 7: Information on the IDG expenditure of the Recipient Colleges

Sl. No.	Item Description	No. of Colleges Making the Development ²	% of Colleges Making the Development
1	Renovation of Classrooms	46	100
2	Multimedia Purchase	39	84.78
3	Smartboard Purchase	42	91.30
4	Arrangement of In-house ICT Training	43	93.47
5	Arrangement of In-house Management Training	32	69.56
6	Arrangement of In-house Other Training	4	8.69
7	Lessons Provided through Digital Apparatus Available in the Colleges	45	97.82
8	Sessions carried on through Digital Apparatus	42	91.30
9	Books bought for College Libraries	33	71.33

The development works done in the colleges were aimed to improve the overall teaching-learning environment of the colleges and in table 8 and 9 we include the perception of the IDG managers on the success and their satisfaction level of the whole project. 56.52% of the IDG managers perceive the project to be very successful and 43.48% perceive the project to be somewhat successful. Their satisfaction level on the project activities also is quite high. 71.74% of the IDG managers seem to be very satisfied with the outcome of the project, 26.09% seem to be somewhat

² The total number of IDG recipient colleges here are 46, which have been randomly selected and surveyed for the purpose of the analysis. These colleges act as the representative of all IDG-recipient colleges.

satisfied and 2.17% are neither satisfied nor dissatisfied with the project activities carried out through the years.

Table 8: Level of Success of the Project (Perception of the IDG manager)

Scale of Success	Number	Percentage
Very Successful	26	56.52
Somewhat Successful	20	43.48
Neither Successful nor Unsuccessful	0	0
Not that Successful	0	0
Not at all Successful	0	0
Total	46	100.00

Table 9: Level of Satisfaction of the Project (Perception of the IDG manager)

Satisfaction Scale	Number	Percentage
Very Satisfied	33	71.74
Somewhat Satisfied	12	26.09
Neither Satisfied nor Dissatisfied	1	2.17
Not that Satisfied	0	0
Not at all Satisfied	0	0
Total	46	100

Overall, there has been significant increase in the sanctioned teaching posts in the IDG recipient colleges than the non-IDG colleges. Teachers' employment rate over the last 6 years have also significantly increased in the IDG recipient colleges than the non-IDG colleges. The employment rates for other employees at the colleges have also increased though the differences for IDG recipient and non-IDG colleges are not statistically significant. Many training programs have been arranged and 96.23% of the targeted teachers and 91.40% of the targeted employees (Other than teachers) have gained some kind of training through CEDP or other organization. The project has been extended to ensure the proper training of the teachers. About 71.74% of the IDG managers seem to be very satisfied with the outcome of the project, 26.09% seem to be somewhat satisfied and 2.17% are neither satisfied nor dissatisfied with the project activities carried out through the years. According to the IDG managers, almost all agreed that the project has been carried through

a need-based approach determined by themselves and allocating adequate budget to the colleges, recruiting manpower with proper technical knowledge, providing maintenance supports to the colleges after the ending of the project and regular monitoring are the keys to make the benefits of the project more sustainable and positive.

3.4 Students' Attendance and Utilization of College Facilities: A Reality Check

In an attempt to see the existing condition in the colleges, we took measures to visit the renovated classrooms, ICT labs, science laboratories and other facilities there. In this chapter we present the findings from those visits. These visits were made in normal working days and the field researchers noted the findings and reported accordingly. On an average, every team of field researchers at each college were asked to visit 8 classrooms, 2 libraries including 1 central library and 1 seminar library which could be of any department, 1 ICT lab, 2 science labs, and other established facilities in the colleges including Bangabandhu corner, Muktijuddho corner, Study zone with ICT facilities etc. The classrooms have been renovated in different ways and we classify them in four types which enlist Improved with Smart Board, Improved with Multimedia Projector, Renovated and/or Redecorated Classrooms without Smart Board or Multimedia Projector, and Traditional/Old Classrooms. The field researchers visited all 75 colleges (i.e., 46 IDG recipient colleges and 29 non-IDG colleges). According to our final observation, on an average 7 classrooms from each of the colleges were visited (For the IDG- recipient colleges, the number is 8 for each college and for non-IDG colleges, the number is 7 for each college) and a total of 498 courses from 27 departments were covered during the field visits to the colleges. In table 1, we see that there is a significant difference of renovated classrooms more specifically classrooms that have been renovated with smart board and multimedia projector being available in the IDG-recipient colleges compared to the non-IDG colleges. And also, with lack of funding from IDG, classrooms with newer or these modern features are absent in the non-IDG colleges.

Table 1: Types and Numbers of Classrooms in the Colleges

Type of Classrooms	Average No. of Classrooms				
	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Renovated with Smart Board	2	0	1	1.956***	0.000
Renovated with Multimedia Projector	2	1	2	1.222*	0.023
Renovated Classrooms but without Smart Board or Multimedia Projector	2	1	2	0.445	0.402
Traditional/Old Classroom	1	4	2	-2.634***	0.000
Total	7	6	7	0.989*	0.011

4.1 Results from Direct/ Physical Checking of the Capacity, Participation, and Utilization of College Facilities

We estimate the proportion of students present in the classrooms during the field visits by dividing the number of students present on that day to the number of total students taking a particular course from a particular subject and multiplying the value by 100. In table 2, we see that students' attendance is significantly higher for the renovated with smart board and renovated with multimedia classrooms of the IDG-recipient colleges than the non-IDG colleges. The student attendance rate is almost same for both the IDG-recipient colleges and non-IDG colleges (41.19% in the non-IDG colleges and 40.98% in the IDG-recipient colleges) and there seem to be no significant difference between their student attendance rates.

Table 2: Students' Attendance Rate in Classrooms

Type of Classrooms	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Renovated with Smart Board	21.35	0.00	12.98	21.352***	0.000
Renovated with Multimedia Projector	32.15	0.00	19.55	32.153*	0.049
Renovated Classrooms but without Smart Board or Multimedia Projector	17.72	19.12	18.27	-1.404	0.784
Traditional/Old Classroom	22.86	32.29	26.56	-9.435	0.097
Total	40.98	41.19	41.06	-0.201	0.945

In table 3, we present attendance rate for male and female students in the national universities. We see that both male and female students' attendances are significantly higher for the renovated with smart board and renovated with multimedia classrooms of the IDG-recipient colleges than the non-IDG colleges. Also, the attendance rate for female students' shows more increase than their male counterparts (22.65% compared to 16.35% in the renovated with smartboard-classrooms and 16.56% compared to 13.49% in the renovated with multimedia projector classrooms). Overall, attendance of male, female and all students in IDG-recipient colleges seem higher than the non-IDG college male, female and all students, though the differences are not statistically significant.

Table 3: Students' Attendance Rate in Classrooms (Male vs. Female)

Type of Classrooms	IDG-Recipient Colleges		Non-IDG Colleges		All Colleges		Difference		P-value	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Renovated with Smart Board	16.35	22.65	0.00	0.00	9.94	13.78	16.354***	22.652**	0.000	0.000
Renovated with Multimedia Projector	19.42	27.29	5.93	10.73	14.13	20.80	13.491**	16.564*	0.006	0.004
Renovated Classrooms but without Smart Board or Multimedia Projector	12.91	19.04	12.63	19.44	12.80	19.20	0.287	-0.406	0.953	0.94
Traditional/Old Classroom	17.48	22.50	23.42	32.85	19.81	26.55	-5.944	-10.347	0.305	0.076
Total	30.28	42.38	28.62	41.57	29.63	42.06	1.661	0.814	0.742	0.788

To see how conducting various improvement works in the colleges have influenced the utilization/usage rate of the existing facilities in the colleges, we estimate the utilization/usage rate of those facilities. To get this rate, we divide the number of people using the facility on a particular day to the total capacity of that facility being used at a time and multiply the value by 100. In Table 4 and 5, we present the utilization rate, the average capacity and average attendance rate respectively for the central libraries of the colleges. Data shows that utilization rate of the central libraries is significantly higher for the modern/renovated libraries of IDG-recipient colleges than the non-IDG colleges. Also, the difference between the usage of the libraries in these two types of colleges is positive with IDG-recipient colleges getting more users in their library facilities. We also see that, the average capacity and average attendance in the central libraries of the IDG-recipient colleges are significantly higher than the non-IDG colleges.

Table 4: Students' Utilization Rates of Central Libraries

Type of Central Libraries	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Modern	21.48	3.60	14.48	17.881*	0.028
Traditional	11.71	15.28	13.11	-3.565	0.665
Total	34.31	18.88	28.26	15.426	0.146

Table 5: Students' Capacity and Attendance in Central Libraries

Type of Central Libraries	Average Capacity of Students				Average Attendance of Students			
	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value
Modern	42.69	6.21	36.482***	0.001	11.96	1.52	10.438*	0.01
Traditional	22.91	33.28	-10.365	0.218	6.04	6.31	-0.266	0.94
Total	66.27	39.48	26.784**	0.008	18.33	7.83	10.506*	0.029

Similar types of evidence can be seen in case of the seminar libraries at the visited colleges. In table 6 and 7 we enlist the utilization rate, the average capacity and average attendance rate respectively for the seminar libraries of the colleges. We see that utilization rate of the seminar libraries is significantly higher (16.98% higher and the difference is significant at 10% level of significance) for the modern/renovated seminar libraries of IDG-recipient colleges than the non-IDG colleges. Also, the difference between the usage of the libraries in these two types of colleges is positive with IDG-recipient colleges getting more users in their seminar libraries. We also see that, the average capacity and average attendance in the modern seminar libraries of the IDG-recipient colleges are significantly higher than the non-IDG colleges.

Table 6: Students' Utilization Rates of Seminar Libraries

Type of Seminar Libraries	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Modern	18.17	1.18	11.51	16.988*	0.014
Traditional	12.16	21.27	15.73	-9.104	0.146
Total	30.33	22.45	27.24	7.884	0.34

Table 7: Students' Capacity and Attendance in Seminar Libraries

Type of Seminar Libraries	Average Capacity of Students				Average Attendance of Students			
	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value
Modern	14.96	1.97	12.990**	0.003	4.67	0.38	4.287*	0.023
Traditional	8.82	12.48	-3.661	0.237	3.22	3.86	-0.64	0.654
Total	23.78	14.45	9.330*	0.023	7.89	4.24	3.648	0.082

In table 8 and 9, we depict the utilization/usage rate of the ICT labs at the colleges. The utilization rate, overall user capacity and average attendance number are positively higher for modern ICT labs at the IDG-recipient colleges than the non-IDG colleges. On the other hand, the utilization rate of the traditional ICT facilities at the IDG-recipient colleges are significantly negative than that of the traditional ICT facilities at the non-IDG colleges. Maybe having IDG to improve or modernize the ICT labs helped the colleges, because it has been realized during our visit to all surveyed colleges that, the average capacity in those labs have increased significantly. Though the difference between average attendance at the ICT labs is only significant for the modern ones at those colleges.

Table 8: Students' Utilization Rates of ICT Labs

Type of ICT Labs	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Modern	43.33	13.41	17.04	29.920***	0.000
Traditional	1.51	12.03	4.08	-10.523***	0.001
Total	46.27	25.45	21.12	20.818***	0.001

Table 9: Students' Capacity and Attendance at ICT Labs

Type of ICT Labs	Average Capacity of Students				Average Attendance of Students			
	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value
Modern	43.33	13.41	29.920**	0.000	11.93	2.86	9.071**	0.007
Traditional	1.51	12.03	-10.523**	0.001	0.31	3.62	-3.31	0.088
Total	46.27	25.45	20.818**	0.001	12.24	6.48	5.762	0.124

In our task of visiting 2 science labs from each of the colleges, we could visit at least 2 from each IDG-recipient college and 1 from each non-IDG college. Overall, 71 science labs from the IDG-recipient colleges, 34 from non-IDG colleges and 105 from all colleges were visited. From the IDG-recipient colleges, 26 chemistry labs, 20 physics labs, 13 zoology labs, 7 botany labs and 5 other labs were visited whereas from the non-IDG colleges, 9 chemistry, 8 physics, 6 botany, 6 zoology and 5 other labs were visited. These visits happened at random times and the numbers were not predetermined (Table 10).

Table 10: Total Numbers of Science Labs Visited

Type of Science Labs	No. of Labs Visited		
	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges
Physics	20	8	28
Chemistry	26	9	35
Botany	7	6	13
Zoology	13	5	18
Others	5	6	11
Total	71	34	105

Utilization rates for the modern science labs were higher and statistically significant for IDG-recipient colleges than the non-IDG ones (Table 11). The capacity of students using the science labs at a particular time was significantly higher for the modernized science labs at the IDG recipient colleges (Table 12).

Table 11: Students' Utilization Rates of Science Labs

Type of Science Labs	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Modern	22.48	3.23	14.94	19.249**	0.006
Traditional	8.47	18.04	12.22	-9.569	0.082
Total	25.08	22.31	24.00	2.772	0.718

Table 12: Students' Capacity and Attendance at Science Labs

Type of Science Labs	Average Capacity of Students				Average Attendance of Students			
	IDG-Recipient Colleges	Non-IDG Colleges	Difference	P-value	IDG-Recipient	Non-IDG Colleges	Difference	P-value

					Colleges			
Modern	49.82	8.28	41.546* *	0.004	25.00	5.17	19.828	0.114
Traditional	26.91	46.59	-19.675	0.086	6.78	16.97	-10.188	0.062
Total	76.91	54.86	22.049	0.153	31.82	22.14	9.684	0.458

In the same way as discussed earlier, we estimate the utilization rates for the established Bangabandhu corners, Muktijuddho corners and Study zones with ICT facilities of the colleges. Though Bangabandhu corners and Study zone with ICT facilities in the IDG-recipient colleges get more usage than the non-IDG ones, the muktijuddho corners do not. Though we cannot possibly say whether these usage rates have anything to do with the fundings of the IDG. In fact, the differences seen are not also statistically significant.

Table 13: Students' Utilization Rates of Other Facilities/Establishments in Colleges

Type of Establishments/Facilities	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Bangabandhu Corner	11.97	8.18	10.48	3.781	0.565
Muktijuddho Corner	6.78	7.48	7.05	-0.702	0.902
Study Zone with ICT Facilities	2.96	0.00	1.80	2.963	0.205

In table 14, 15 and 16 we enlist the special characteristics of the Bangabandhu corners, Muktijuddho corners and the Study zones with ICT facilities respectively at the colleges. We see that most of the facilities in these physical establishments are more available for the IDG-recipient colleges than the non-IDG colleges. Specifically different attributes include having computers, internet connections and trainings in the study zones of some of the IDG-recipient colleges.

Table 14: Special Characteristics of Bangabandhu Corner

Main Facilities/characteristics	IDG-Recipient Colleges		Non-IDG Colleges		All Colleges	
	Number	%	Number	%	Number	%

Chairs tables and books are available	15	25.4	7	25.9	22	25.6
Arrangement of reading with books	13	22.0	5	18.5	18	20.9
Family and political pictures of Bangabandhu	13	22.0	7	25.9	20	23.3
An opportunity to learn about Bangabandhu	5	8.5	3	11.1	8	9.3
Knowing the system and history of liberation war	7	11.9	1	3.7	8	9.3
Enriching knowledge about Bangabandhu's autobiography	4	6.8	3	11.1	7	8.1
Various books written about Bangabandhu	1	1.7	1	3.7	2	2.3
Air condition	1	1.7	0	0	1	1.2
Total	59	100.0	27	100.0	86	100.0

Table 15: Special Characteristics of Muktiyuddho Corner

Main Facilities/characteristics	IDG-Recipient Colleges		Non-IDG Colleges		All Colleges	
	Number	%	Number	%	Number	%
Anyone can read books	2	8.3	2	14.3	4	10.5
History of Liberation War	6	25.0	3	21.4	9	23.7
Book/picture	11	45.8	6	42.9	17	44.7
High/low bench to sit	1	4.2	1	7.1	2	5.3
Knowing history and having consciousness	2	8.3	2	14.3	4	10.5
Newspapers	1	4.2	0	0	1	2.6
Air condition	1	4.2	0	0	1	2.6
Total	24	100.0	14	100.0	38	100.0

Table 16: Special Characteristics of Study Zone with ICT Facilities

Main Facilities/characteristics	IDG-Recipient Colleges		Non-IDG Colleges		All Colleges	
	Number	%	Number	%	Number	%
Constant internet connection	2	33.3	0	0	2	25.0
Computer	2	33.3	1	50.0	3	37.5
Modern furniture	1	16.7	0	0	1	12.5
Projector	0	0	1	50.0	1	12.5
Various course/trainings	1	16.7	0	0	1	12.5
Total	6	100.0	2	100.0	8	100.0

During the direct verification of students' attendance and utilization of the colleges' facilities, it was grossly seen that all the modernized classrooms, labs, laboratories, libraries and other facilities including the Bangabandhu corners, muktijuddho corners and study zone with ICT facilities in the IDG recipient colleges had significantly positive usage ratio than the non-IDG colleges. The attendance results from the colleges and the direct verification on the day of the survey visits coincides and show significantly positive outcome for the IDG recipient colleges than the non-IDG colleges.

3.5 Achievement and Progress Based on Activity Milestones, Performance Indicators, and Environmental Safeguard

In this chapter we summarize the findings from the surveyed colleges that received IDG and invested them in the betterment and development projects targeted for themselves. The funds disbursed to each college were utilized in these projects and each of them were accountable to CEDP for the achievements of the targets set for these projects by themselves. In this reference, there were some indicative targets termed as *Activity Milestones* that the respective colleges put forth to be achieved in a particular proposed timeline. In table 1, the achievements and progress on these milestones have been summarized for the 46 surveyed IDG-recipient colleges. These milestones involved buying goods and conducting renovation and other infrastructure development works in the projects and activities like arranging trainings, self-assessment reviews, library automation, networking and establishing internet connectivity, power sub stations, industry partnerships, recruiting IDG staffs at colleges and introducing soft skill development program etc. Among all these initiatives and activities most of the directly doable tasks have been completed (I.e., recruiting IDG staffs at colleges, 100%; purchasing goods and conducting the renovation works, almost 90% etc.). The teaching- learning environment at colleges and training for the college employees (i.e., teachers and other staffs) have been improved and arranged for respectively. Some of the targets being on the forefront of the college development endeavors were initiated but was later realized to have been not fully possible to be carried forth in this initial phase. Issues like self-assessment review, automation, industry partnership initiatives, establishing networking and connectivity etc. have been thought over and dealt with to some extent and are expected to be successful eventually.

Table 1: Achievement and Progress on Activity Milestones

Milestones	Achievement/Progress (%)
Goods	90.20
Works	89.50
CMIS/Networking and connectivity/Internet	37.20
Training	82.90
Self-assessment review	47.80
Industry partnership	6.00
Library Automation	55.00
Power sub-station	12.50
Establishment of lab	77.50

Improve quality teaching-learning environment	80.00
Introduce soft skill programs	40.00
Establish industry partnership	33.00
Recruitment of staff for IDG	100.00

To assess the fulfillment of the targets set out by the colleges, we need to also look into the performance level of the respective colleges. The information shown in table 2 depicts the present situation of this indicator as reported by the respective colleges. We see that thing to do with the modernization of the teaching-learning equipment and facilities like increased attendance in the modernized classrooms, teachers' interest for taking classes with multimedia setups, increased attendance in the ICT and Science Labs, improved teaching-learning environment and effective information and communication system have made greater advancement in the colleges with having up to 100% of their targets being fulfilled. When it comes to teachers' taking classes using smart boards 57.98% of them seem to be already on-board. As fully utilizing the smart boards need some getting used to and much exposure to the available smart boards, this target achievement can be thought to be very promising. Also, the fact that steps are being taken to increase students' employability and soft skills in the colleges are a positive stride towards the achievement of the teaching-learning outcomes of the colleges. As reported by the colleges, measures are being taken to ensure MIS usage, and internet connectivity and Wi-fi networks are being set up and students' and teachers' training are being arranged. Colleges are also taking initiatives to sign Memorandum of Understandings (MoUs) with different organizations and arranging for internships programs and job fairs to increase the possibility of employment of the NU graduates.

Table 2: Achievement and Progress based on Performance Indicators

Indicators	Initial Value (as per IDP)	Target Value by completion (as per IDP)	Current value (as of 30 June 2023)	Target fulfillment status	Remark*
Increased student attendance in modernized classrooms	34.71	71.05	58.13	81.62	<i>On-track</i>
Increased teachers' interest for taking class with multimedia	11.10	109.46	88.40	65.79	<i>On-track</i>
Increased teachers' interest for taking class with Smart board	1.85	74.23	42.85	57.98	<i>Need attention</i>
Increased student attendance in ICT labs	17.70	64.70	51.77	86.41	<i>On-track</i>

Increased student attendance in the Science labs	29.94	65.56	58.61	99.22	<i>On-track</i>
Improved teaching management capacity	17.80	82.60	61.34	82.78	<i>On-track</i>
Increased internet connectivity/wifi	8.88	86.93	27.38	37.93	<i>Need attention</i>
Effective use of CMIS for departments	5.48	53.39	5.48	7.25	<i>Need attention</i>
Practice and prepare self-assessment reports	0.00	62.22	27.04	32.02	<i>Need attention</i>
Enrichment of resources in the library	25.71	65.62	46.43	72.92	<i>On-track</i>
Increased professional/internship training	11.36	19.09	3.00	3.89	<i>Need attention</i>
Increase students' participation in the job fair	10.50	19.00	6.70	16.11	<i>Need attention</i>
Increase students' participation in online class	15.17	77.22	51.78	57.62	<i>Need attention</i>
Passing rate of the students	72.00	72.00	75.00	104.17	<i>On-track</i>
Introduction of soft skill programs and other trainings	5.00	35.00	7.50	37.50	<i>Need attention</i>
Improving quality of teaching and learning environment	5.00	20.00	16.00	80.00	<i>On-track</i>
Effective information and communication system	30.00	90.00	75.00	83.33	<i>On-track</i>
MoU signed for exchange program with other organizations	0.00	5.00	0.00	0.00	<i>Need attention</i>
Hygienic and clean environment	30.00	80.00	50.00	62.50	<i>On-track</i>
Student access in language club facility	0.00	20.50	0.50	50.00	<i>Need attention</i>
Increased number of students' employment	5.00	40.00	0.00	0.00	<i>Need attention</i>

* If Target fulfillment is less than 60% it is marked as "need attention".

With all the focus on the achievement and performance indicators in the IDG recipient colleges, ensuring environmental safeguard compliances were also a valid concern. In table 3, we show if the safeguard related issues bear any negative impact of the development works done in those colleges. We see that almost all the works were carried out in the college premises and none had any negative notion to create any kind of environmental hazard while the works were being done.

Table 3: Environmental Safeguard Compliances in the IDG Recipient Colleges

Environmental Safeguard related Issues/Topics	Yes		No		Not applicable		Total	
	N	%	N	%	N	%	N	%
If the task/renovation work has been carried on/done within the college compound	45	97.83	1	2.17	.	.	46	100
If the task/renovation work has disturbed other academic activities in the colleges	4	8.70	42	91.30	.	.	46	100
If the ground water was contaminated with/contained any trace of Arsenic, Manganese or Iron	11	23.91	32	69.57	3	6.52	46	100
If any natural water bodies in the college complex were filled up due to the construction work under the project	.	.	46	100	.	.	46	100
If there was any drainage congestion or water logging in the college/site premises before intervention	6	13.04	39	84.78	1	2.17	46	100
If there was any drainage congestion or water logging in the college/site premises during the implementation of the renovation work	4	8.70	41	89.13	1	2.17	46	100
If there is any drainage congestion or water logging in the college/site premises now/at present	4	8.70	42	91.30	.	.	46	100
If there were any loud noises during the implementation period of the renovation work	2	4.35	44	95.65	.	.	46	100
If there were any kind of dust pollution/problem around the renovation sites during the implementation period of the renovation work	2	4.35	44	95.65	.	.	46	100
If there has been any kind of temporary stoppage of the water supply and sanitation system	.	.	46	100	.	.	46	100
If any refrigeration/air conditioning units and tube lights/CFL bulbs has been removed/disposed of during implementation period of the renovation work	8	17.39	38	82.61	.	.	46	100
If any kind of liquid waste, or an item containing liquids (including oils), needed to be transported off-site for reuse, recycle or disposal during implementation period of the renovation work	1	2.17	45	97.83	.	.	46	100
If any kind of building materials containing asbestos has been removed/disposed of during implementation period of the renovation work	2	4.35	43	93.48	1	2.17	46	100

Environmental Safeguard related Issues/Topics	Yes		No		Not applicable		Total	
	N	%	N	%	N	%	N	%
If any kind of any building materials has been removed/disposed of that were coated with lead-based paint during implementation period of the renovation work	1	2.17	42	91.30	3	6.52	46	100
If any kind of any building materials has been removed/disposed of that contained lead, silver or chrome during implementation period of the renovation work	1	2.17	41	89.13	4	8.70	46	100
If any kind of any mercury-containing devices (switches, gauges, thermostats) has been removed/disposed of during implementation period of the renovation work	2	4.35	40	86.96	4	8.70	46	100
If any installed emergency generator set or other above ground storage tank (AST) has been removed	2	4.44	43	95.56	.	.	46	100
If the renovation work had any indirect impact on environment and ecosystem	2	4.35	43	93.48	1	2.17	46	100

The milestones achieved include procuring goods, renovating infrastructure, and conducting various activities such as training, self-assessment reviews, library automation, and networking. Directly achievable tasks, like recruiting IDG staff at colleges (100%) and purchasing goods with renovations (90%), have been largely completed. The teaching-learning environment at colleges has improved, and training for employees has been organized. Some developmental targets were initiated but proved challenging in this phase. Challenges related to self-assessment reviews, automation, industry partnerships, and connectivity have been considered and partially addressed, with expected success in the future.

Colleges have made significant strides in modernizing teaching-learning equipment and facilities, achieving up to 100% of their targets. Approximately 57.98% of teachers are using smart boards, showing promising progress despite the need for familiarity. Efforts to enhance students' employability and soft skills are positively impacting teaching-learning outcomes. Colleges are actively addressing measures like MIS usage, internet connectivity, Wi-Fi networks, and organizing training for both students and teachers. Initiatives such as MoU with organizations, internships, and job fairs aim to boost the employment possibilities for NU graduates. Moreover, there were no negative repercussions on the environment from the carrying out of the development activities done through IDG funding.

3.6 Improvements in Employment Outcome: Evidence from Tracer Studies

This chapter discusses the employment outcome of CEDP based on the tracer studies carried out under the project. Table-1 shows the employment outcome of NU graduates as evident in different studies. In 2015, labor force participation rate was 51% which had risen to 65% in year 2018 and 2019. Now in 2023, labor force participation rate is 91.08%. So, it is clear from the data that over the time more and more NU graduates are joining the labor force. According to 2021 tracer study, percentage of unemployed NU graduates was 66% which declined to 28.24% as found in tracer study 2023. So, we can say that employment status of NU graduates has improved, as percentage of unemployed of NU graduates have decreased over time. Among the employed NU graduates, 21% were salaried employed, 1.5% were self-employed according to 2021 tracer study. These figures have risen to 42.28% for salaried employed graduates and 16.24% for self-employed graduates according to tracer study 2023. The data proofs that number of both salaried employed and self-employed graduates have increased in two-year period. Besides these two types of employment options, graduates that get involved in full-time/part-time has also increased after two years from 7% in 2021 to 13.22% in 2023.

Table 1: Employment outcome of NU graduates’ results/evidence from different studies

Status	2015 ¹	2018 ²	2019 ³	2021 ⁴	2023 ⁵
Labor force participation rate	51%	65%	65%	-	91.08%
% of unemployed	-	46%	46%	66%	28.24%
% of salaried employed	-	-	-	21%	42.28%
% of self employed	-	5.77%	-	1.5%	16.24%
% involved in full-time/part-time study	-	-	-	7%	13.22%

¹How Does the Short-Term Training Program Contribute to Skills Development in Bangladesh? A Tracer Study of the Short-Term Training Graduates – World Bank, 2015

²Tracer Study of Graduates of Universities in Bangladesh – BIDS, UGC, 2018

³Graduate Tracking Survey on Affiliated Colleges of Bangladesh National University - World Bank, 2021

⁴Tracer Study on Graduates of Tertiary Level Colleges – BIDS, CEDP, 2021

Table 2: Distribution of current status of graduates (Tracer study 2023)

Status	Male	Female	Total
In labor force	95.90%	84.40%	91.08%
Not in labor force	4.10%	15.60%	8.92%

Table 2 shows the distribution of current status of NU graduates according to tracer study 2023. Here, the table clearly shows that percentage of male graduates in labor force is higher than female as 95.90% of male graduates are in the labor force which is 84.40% for female.

Table 3: Graduate (%) by employment status and gender' in 2021 and 2023

Status	Tracer study (2021) (%)			Follow up tracer study (2023) following calculation of tracer study (2021) (%)			Follow up tracer study (2023) (%)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Salaried employed	30.74	11.64	20.93	34.92	19.43	28.73	64.92	27.10	42.28
Self-employed	2.51	0.36	1.40	16.30	2.86	10.93	22.43	6.51	16.24
Unemployed	60.98	70.31	65.77	34.10	68.71	47.91	19.96	34.31	28.20
Full time/part time study	5.14	8.55	6.9	14.67	9.00	12.40	16.15	8.61	13.22
Not in labor force	0.63	9.14	5.00	-	-	-	-	-	-
Total	100	100	100	100	100	100	100	100	100

Table 3 shows the employment status of NU graduates in year 2021 and 2023 (following the calculation of tracer study of both year 2021 and 2023). Percentage of salaried employed according to tracer study 2021 report is 20.93%. By following the same calculation of tracer study 2021, salaried employed among graduates is 28.73% in 2023 although it is much higher as per the definition used in tracer study 2023 report which is 42.28%. That means no matter which calculation method we follow percentage of salaried employed graduates have increased after two years.

Another thing is clear that, percentage of self-employed graduates has also increased (from 1.4% in 2021 to 10.93% - 16.24% in 2023) no matter which calculation method is followed. Similar scenarios can be seen in terms of graduates that are involved in full time/part time study (from 6.9% in 2021 to 12.40%/13.22% in 2023). That means in 2023, number of both self-employed graduates and graduates that are involved in full time/part time study have increased. All these also mean that number of unemployed graduates have decreased too and table shows the exact same thing.

Among the salaried employed graduates, 64.92% are male and 27.10% are female according to tracer study 2023 report which was 30.74% for male and 11.64% for female in tracer study 2021 report. That means, although salaried employed graduates have increased both among male and female, number of male graduates with salaried employment is higher than female in both years. Beside this, self- employed graduate has also increased among both genders, but percentage of male self-employed graduates are much lower than female in tracer study 2023 report.

Table 4: Comparison of employment outcome by types of employment

Status of graduate	Tracer study (2021) (%)	Follow up tracer study (2023) following calculation of tracer study (2021) (%)	Follow up tracer study (2023) (%)
Salaried employed	21	28.73	42.28
Self- employed	1.5	10.93	16.24
Unemployed	66	47.91	28.24

Table 4 shows the Comparison of employment outcome by types of employment among NU graduates in year 2021 and 2023 (following the calculation of tracer study of both year 2021 and 2023). Percentage of salaried employed according to tracer study 2021 report is 21%. By following the same calculation of tracer study 2021, salaried employed among graduates shows 28.73% in 2023 although it is much higher based on tracer on study 2023 report which is 42.29%. But one thing is clear that, percentage of salaried-employed graduates has increased no matter which calculation method is followed. Similar scenarios can be seen in terms of graduates that are self-employed. In 2023, number of self-employed graduates have increased. All these also mean that number of unemployed graduates have decreased too and table shows the exact same thing. Whine tracer study 2021 report shows that 66% graduates were unemployed, it decreased to 28.24% in tracer study report 2023. Even if tracer study 2021 calculation method is followed the percentage of unemployed graduates are much lower in 2023 which is 47.91%.

Table 5: Reasons for not working in the area of specialization

Reasons	2021 (Tracer study 2021)			2023 (Tracer study 2023)		
	Government colleges (%)	Non-government colleges (%)	All colleges (%)	Government colleges (%)	Non-government colleges (%)	All colleges (%)
Lack of relevant job	77.36	91.07	79.86	61.59	66.86	64.52
Lack of career progression	3.885	1.32	2.78	15.22	17.44	16.45
Poor remuneration	21.545	23.03	20.83	10.87	9.30	10.00
Poor working conditions	6.715	10.15	9.03	-	-	-
Lack of job satisfaction	11.775	11.09	10.42	10.87	6.40	8.39
Others	0.945	6.02	3.47	0.72	-	0.32

Note: Lack of relevant job=1, Lack of career progression=2, Poor remuneration=3, Lack of job satisfaction=4, Poor working conditions=5, Others=99 (Multiple answers possible)

Table 5 shows NU graduates' reasons for not working in the area of specialization according to tracer study in both year 2021 and 2023. Main reason chosen by NU graduates (79.86%) according to tracer study 2021 is lack of relevant jobs followed by poor remuneration (20.83%), lack of job satisfaction (10.42%), poor working conditions (9.03%) and lack of career progression (2.78%). The scenario is a bit different according to tracer study 2023. Main reason chosen by NU graduates (64.52%) is lack of relevant jobs followed by lack of career progression (16.45%), poor remuneration (10.00%) and lack of job satisfaction (8.39%).

Majority of graduates think that there is non-availability of relevant jobs in their area of specialization. In 2021, 79.86% college graduates stated that they are having difficulty in finding relevant jobs which decreased to 64.52% in 2023. In both years, non-government college graduates complained most about this problem. This scenario proves that although graduates are now able to find relevant jobs more than before there is still huge lack of relevant jobs in their specialized areas. Some other reasons that graduate emphasized are poor remuneration, poor working conditions and lack of job satisfaction for not choosing jobs in their specialized area. Although the scenario gets better in 2023 as the level of dissatisfaction is much less than 2021. That means graduates now suffer less from poor remuneration and lack of job satisfaction than year 2021, but graduates still complain about lack of career progression in their specialized area and that is 16.45% according to tracer study report 2023 which was 2.78% in 2021, and this dissatisfaction is visible in both government and non-government colleges in both years.

Table 6: Reasons for starting business/own enterprises

Reasons	% of self-employed graduates	
	2021 (Tracer study 2021)	2023 (Tracer study 2023)
Always wanted to start a business	56.52	22.6
Could not find a good job	30.43	47.6
Saw good business opportunities	21.74	21.6
Was invited by partner	0.00	6.3
To meet family expenses	-	0.5
Self interest	-	0.5
Others	8.70	1.0

Note: Always wanted to start a business=1, Could not find a good job=2, Saw good business opportunities=3, Was invited by partner=4, To meet family expenses=5, Self-interest=6, Others=99 (Multiple answers possible)

Table 6 shows the reasons for starting business/own enterprises among self-employed NU graduates according to tracer study both in year 2021 and 2023. In tracer study 2021, main reason chosen by self-employed graduates (56.52%) was that they always wanted to start a business followed by could not find a good job (30.43 %) and saw good business opportunities (21.74%). But this scenario gets changed according to tracer study 2023 where main reason chosen by self-employed graduates (47.6 %) was that they could not find a good job. Other reasons chosen by them for starting their business/ own enterprises are ‘always wanted to start a business (22.6%)’, ‘saw good business opportunities (21.6%)’ and ‘invited by partner (6.3%)’.

Table 7: Mean level of agreement

**(in a 1 to 4 scale where fully disagree=1, somewhat disagree=2, agree=3, fully agree=4)
regarding academic and skill training provided by the college**

Statement	2021 (Tracer study 2021)		2023 (Tracer study 2023)	
	Govt.	Non-Govt.	Govt.	Non-Govt.
The knowledge and technical skills I am learning at the college will likely provide a good basis for the skills I need for my work	2.59	2.68	2.76	3.21
ICT skills that I am learning at the college will likely provide a good basis for computer skills for my future work	2.05	2.31	2.61	2.88
Soft skills (teamwork, communication skills, problem solving) that I am learning at the college is adequate and useful for my future work success	-	-	2.63	2.79
Access to the internet and computers are adequate in the program	2.22	2.30	2.03	2.32
Access to books, journals and databases is adequate for research projects and learning purposes	-	-	2.15	2.32
The labs, equipment, and facilities we use at the department are sufficiently up to date relative to real technologies used in the industry	-	-	2.16	2.37

Table 7 presents the mean level of agreement among students regarding academic and skill training provided by the college. There are some improvements we see when we compare the mean agreement score between tracer study 2021 and 2023, and non-government college students have a slightly more positive view than government college students in most cases in both years.

Table 8: Availability of career counselling services at college

Questions	2021 (Tracer study 2021)					2023 (Tracer study 2023)				
	GH	GM	NGH	NGM	Total	GH	GM	NGH	NGM	Total
Is there a career counselling or job placement office at your college? Yes=1	6.17	1.36	6.31	3.00	4.55	12.9	9.1	13.5	21.7	13.3
Do you think that there should be one such counselling service in every college? Yes=1	100	99.1	99.7	100	99.64	99.2	99.2	98.9	98.3	99.0

Table 8 shows the availability of career counselling services at the colleges and student's perception about it. According to tracer study 2023, 13.3% students from different colleges said that they have a career counselling or job placement office in their college which was 4.55% according to tracer study 2021. Almost all the students from all colleges agree that they need a career counselling service in their college and it is true for both the tracer studies.

Table 9: Effectiveness of career counselling services at college from tracer study 2023

Effectiveness	Govt.			Non-Govt.			All colleges		
	H	M	T	H	M	T	H	M	T
Not effective at all	12.5	90.9	44.4	16.0	46.2	22.2	15.2	66.7	28.9
Somewhat effective	37.5	-	22.2	36.0	15.4	31.7	36.4	8.3	28.9
Effective	25.0	-	14.8	26.0	15.4	23.8	25.8	8.3	21.1
Very effective	25.0	9.1	18.5	22.0	23.1	22.2	22.7	16.7	21.1

Note: Not effective at all=1, Somewhat effective=2, Effective=3, Very effective=4

According to 2023 tracer study, 42.2% students in all college think that career counselling services are helpful for them and students in non-government colleges seem to be more inclined towards this service than students in government colleges.

Table 10: Student’s participation in co-curriculum activities in 2023 (Tracer study 2023)

Questions	Govt.			Non-Govt.			All colleges		
	H	M	T	H	M	T	H	M	T
Are you involved in any co-curriculum activities in or outside college? Yes=1	32.3	32.2	32.2	31.4	23.3	30.2	31.6	29.3	31.0
If yes, then have you received any award or certificate? Yes=1	72.5	76.9	74.7	73.3	92.9	75.4	73.1	81.1	75.1

About 31% among all students at different colleges, 32.2% of students in government colleges and 30.2% of students in non-government colleges take part in co-curriculum activities according to 2023 tracer study. Among them, 75.1% of all students, 74.7% of government college students and 75.4% of non-government college students have received awards and other certifications.

Table 11: Student’s perception about their future in 2023 (Tracer study 2023)

How optimistic are you about the future?	Govt.			Non-Govt.			All colleges		
	H	M	T	H	M	T	H	M	T
Not optimistic at all	2.4	1.7	2.0	3.2	8.3	4.0	3.0	3.9	3.3
Somewhat optimistic	13.7	8.3	11.0	17.3	18.3	17.4	16.4	11.6	15.1
Careless about the future	2.4	4.1	3.3	5.1	8.3	5.6	4.5	5.5	4.7
Optimistic/Hopeful	48.4	44.6	46.5	40.5	48.3	41.6	42.5	45.9	43.4
Very optimistic	33.1	41.3	37.1	33.8	16.7	31.4	33.6	33.1	33.5

Note: Not optimistic at all=1, Somewhat optimistic=2, Careless about the future=3, Optimistic/Hopeful=4, Very optimistic=5

About 76.9% college students seem to be optimistic about their future prospects in life. The majority of students in all categories consider themselves “Optimistic/Hopeful” about the future, with government college students having the highest percentage in this category. Correspondingly, a significant portion of students express being “Very optimistic” about the future, with non-government college students having the highest percentage in this category. The percentages for “Not optimistic at all” and “Careless about the future” are very low.

Table 12: Students' lifestyle compared to their parents (Tracer study 2023)

How do you think your life will be compared to your parents?	Govt.			Non-Govt			All colleges		
	H	M	T	H	M	T	H	M	T
Very good	36.3	18.2	27.3	30.3	15.0	28.1	31.8	17.1	27.9
Good	55.6	76.0	65.7	57.8	63.3	58.6	57.3	71.8	61.2
Remain the same	3.2	3.3	3.3	7.0	8.3	7.2	6.1	5.0	5.8
Bad	1.6	2.5	2.0	2.7	11.7	4.0	2.4	5.5	3.3
Very Bad	3.2	-	1.6	2.2	1.7	2.1	2.4	0.6	1.9

Note: Very good=1, Good=2, Remain the same=3, Bad=4, Very Bad=5

Most students perceive their life to be good and very good compared to their parents' lives. The majority of students across all categories expect their lives to be "Good" in comparison to their parents, with government students having the highest percentage in this category. A significant percentage of government students believe that their lives will be "Very good" compared to their parents. Non-government students also express this optimism, but to a lesser extent. A small percentage of students believe that their lives will "Remain the same" as that of their parents, while even smaller percentages think that their lives will be "Bad" or "Very bad"

Table 13: Aspects of graduates considered by employers during recruitment

Skills and abilities	2021 (Tracer study 2021)	2023 (Tracer study 2023)
Skillful and knowledgeable	66.49	51.4
Possess recommendable soft skills	70.1	42.1
Hardworking and willing to learn new things	89.43	82.2
Easy to train up	79.38	68.2
Innovative	75.65	30.8
Good at team work	-	56.1
Do not switch jobs frequently	-	90.7
Willing to work with lower salary	-	84.1
Smartness	73.94	-

We value college degree qualifications (Bachelor and Masters)	85.05	-
Others	33.33	-

According to tracer study 2021, hardworking and willing to learn new things was the most cited reason (89.43%) by employers, followed by valuing college degree qualifications (85.05%), easy to train up (79.38%), innovativeness (75.65%), smartness (73.94%), possess soft skills (70.1%), skillful and knowledgeable (66.49%). But according to tracer study 2023 most cited reasons (90.7%) by employers was that NU graduates do not switch job easily followed by willing to work with lower salary (84.1%), hardworking and willing to learn new things (82.2%), easy to train up (68.2%), good at team work (56.1%), skillful and knowledgeable (51.4%), possess soft skills (42.1%) and innovativeness (30.8%).

Table 14: Match between actual and desired qualification of hired NU graduates

Does the employee's institutional qualifications match their recruitment needs?	% of employers	
	2021 (Tracer study 2021)	2023 (Tracer study 2023)
Yes	85.84	88.8
No	14.16	11.2

According to tracer study 2021, 85.84% employers respond that employee's institutional qualifications match their recruitment needs which rises to 88.8% according to tracer study 2023. This means NU curriculum become more market and job responsive/relevant over time.

Table 15: Skill/areas where employers think universities should train their graduates more

Skills/training area	Employers' responses	
	2021 (Tracer study 2021)	2023 (Tracer study 2023)
Communication skill	82.83	75.7
Presentation skill	-	72.0
Group work activity	74.68	60.8
Problem solving skill	81.55	74.8
Technical knowledge	-	83.2
English language proficiency	79.83	89.7

Computer/ICT skill	83.69	89.7
Reading and writing in Bangla	64.81	-
Numeracy skill (calculation, numerical data analysis)	63.52	-
Theoretical knowledge about specific technology	57.94	-
Practical skill for specific technology	64.76	-
Others	71.43	3.7

According to tracer study 2021, main cited skill/areas (83.69%) where employes think universities should train their graduates most is computer/ICT skill followed by communication skill (82.83%), problem solving skill (81.55%), English language proficiency (79.83%), group work activity (74.68%). Some other skills that employers emphasized which need improvements are reading and writing in Bangla (64.81%), numeracy skill (calculation, numerical data analysis) (63.52%), theoretical knowledge about specific technology (57.94%) and practical skill for specific technology (64.76%).

When we look at tracer study 2023, main cited skill/areas by employes that need improvements are English language proficiency (89.7%), computer/ICT skill (89.7%) and technical knowledge (83.2%). Other skill/areas that most employers emphasize for improvements are communication skill (75.7%), problem solving skill (74.8%), presentation skill (72%) and group work activity (60.8%). These findings conform the general perception that the NU graduates have deficiency in mastering critical skills.

3.7 Efficiency and Sustainability

This chapter discusses the efficiency and the sustainability aspects of the project. Efficiency can be investigated through the utilization of funds; fiduciary issues; and strengths, weaknesses, opportunities and limitations while implementing the project. Sustainability is looked into through the elements of renovation and modernization of the existing physical facilities; enhancement of teaching skills; provision of ICT equipment, multimedia, lab equipment, scientific instruments, and other teaching-learning tools in the colleges; establishment of networking and connectivity; enhancement of training and capacity building; introduction of institution-industry linkages; strengthening of planning and management capacity for institutional development; etc.

3.7.1 Efficiency

In addition to collecting data on endline satisfaction and project-effectiveness, previous studies carried out under CEDP also constituted an integral part of this effectiveness study. They included the tracer studies, the satisfaction surveys, and the DLI-4 results verifications. DLI-4 results verification categorically dealt with the utilizations of funds and fiduciary issues. We have reviewed and analyzed all the previous reports and data and used for the present study also.

From the DLI-4 Year 6(a) results verification, it is clearly observed that the resources under the project have been utilized quite efficiently following all due protocols (i.e., IDG Operational Manual and PPR). Before presenting the results to some details, a summary of the results based on the key verification areas including fund utilization against DLI target are presented through the following two matrices with the status on achievement and compliances of DLI-4 Year 6(a) in the last column.

Reference to DLI	DLI Target	Actual Average Utilization	Evidence Used by the Study Team	Status/Remarks
DLI-4 Year 6(a)	On average 65% of the total allocated budget of the competitive funding is utilized in accordance with the operation manual	77.3%	<ul style="list-style-type: none"> ▪ Operations Manual ▪ IDPs ▪ FMPs ▪ FMRs ▪ Study Team's Own Verification with the Colleges 	Fully Achieved

Reference to DLI	Key Verification Areas	Status/Remarks
DLI-4 Year 6(a)	Fund Utilization	Fully Achieved
	FM Reporting	Fully Complied
	Compliance of Fund Utilization According to the IDG Operational Manual	Fully Complied
	Environmental and Social Safeguard Issues	Fully Complied

The overall results, as observed above, are impressive. The overall utilization rate stands at 77.3%, well above the target of 65%. This indicates that a significant portion of the allocated funds has already been used for institutional development. It is also expected that during the rest of the period, another good proportion of allocated fund will also be spent to complete the remaining activities. Regarding the use of procurement methods, we see a clear move from manual tender to electronic tender. Among various procurement methods, OTM (e-GP) being the most prevalent at 85.4% among the total OTMs used for the procurement. We also observe that the IDG operations manual, the APP and the PPR were fully followed in most cases while procuring the works and goods. For example, in 100% of the cases, at least one member of the tender evaluation committee was included in the tender opening committee, ensuring continuity and transparency. For both goods and works, certifications regarding quality and completion were obtained in 100% of the cases. Certifications were duly registered in the Measurement Book (MB) by the responsible engineer, indicating adherence to established procedures. No complaints were filed about the procurement process, and no tender/quotation was cancelled because of any complaint.

The study team also physically verified the procured goods and works. The verification results encompass various aspects of renovation and procurement components, including furniture, electrical and electronics, ICT equipment, books, journals, lab items, and other laboratory equipment. In most cases, implementation rates and functionality are quite encouraging, and most of them are also being used for the purposes they were intended to. For example, for renovations, completion rates exceed 90%, with functionality rates generally exceeding 95%. Furniture procurement components often exceed 95%. The functionality of these items is generally strong. Overall, the procured furniture effectively serves its intended purposes. Procurement of information and communication technology (ICT) equipment, such as laptops, desktops, printers, and multimedia tools, is prominent. Implementation rates are high, and functionality rates often exceed 95%. These ICT items are actively used as intended. Overall, the data reflects commendable efforts in renovating and equipping educational and research spaces, ensuring functionality, and promoting usage aligned with their intended purposes.

All these clearly indicate that the resources were used efficiently following all due protocols and serving their intended purposes well.

Strengths and Weaknesses of the Project

Improvement in Teaching Learning Environment:

All the renovations or works done and items purchased under the project are done for ascertaining a good teaching-learning environment for students which would encourage them to increase their attendance and participation in regular classes and increase their pass rates. The renovations which include decorating, furnishing and refurbishing, fitting fans and ACs etc. thus done in the existing classrooms, libraries, laboratories and other such places improve the teaching-learning environment by making the students more comfortable in those places. Additionally, investments in teacher training have improved teaching methods, classroom behavior, and office management understanding for teachers. Renovations of auditoriums are expected to boost cultural activities and mindset development.

Technology Upgradation:

The incorporation of modern educational materials, particularly smart boards and multimedia, has simplified the teaching process and accelerated students' comprehension of lessons. This technological advancement has also led to the growth of "up-to-dated" education, making it easier for teachers to present readily available information from reliable online sources while teaching them with pre-designed learning materials i.e., class notes and reference information and engaging students actively in the learning process.

Improvement of ICT, Library and Laboratory Facilities:

The facilitation in libraries (books, journal, digital library), ICT labs (Computer and related products) and laboratories (scientific equipment, chemicals, etc.) will help the students to gather technical and practical knowledge. Additionally, the establishment of high-quality ICT labs and the introduction of professional courses are commendable initiatives that broaden educational opportunities and help them prepare for future employments at IT or related sectors. The project's emphasis on modernity enables students to engage with global standards. Renovation of libraries, study zones, and increased book supplies with air conditioning have prompted students to utilize library resources more actively, leading to an expansion of their knowledge.

Improvement in Safety and Hygiene Issues:

Initiatives to enhance student comfort, including renovated washrooms and separate facilities for female students, have contributed to a more welcoming college environment. While installing CCTV cameras in the college premises helps the authorities to ascertain student safety inside colleges, the provision of clean water (through installing water filters) on campus reduces the risk of waterborne diseases among teachers and students.

Improvement of Specialized Facilities:

The introduction of a Mother's Corner has positively impacted female students with breastfeeding children. The development of gymnasium facilities contributes to the physical and mental well-being of students and fosters a conducive learning environment. Other

specialized facilities introduced or established through IDP (like Bangabandhu Corner and Muktijuddho corner, etc.) help the students learn more about their history and culture.

The project has some weaknesses too which include:

Limited Fund:

There were three budget ranges for colleges which we earlier introduced as Category-A, Category-B and Category-C colleges. These budgets were distributed according to certain criteria of CEDP. Some of the colleges mentioned the budgets to a real hindrance as there were certain limitation to utilizing them. They also do not agree to the distribution criteria of CEDP. These colleges have highlighted that the allocated funds have proven to be insufficient for their development plans, forcing them to adopt a highly conservative approach in their expenditure. Though from analytical point of view, considering there exists a disparity between the allocated resources and the actual demand, this should not lead to any potential resource shortfall in meeting project objectives. This is because, the colleges asked for and planned the modifications for themselves and their timeline were also their own set initiative.

Concerns about Maintenance:

There were many new technologies, facilities, and machines established/introduced through the IDG in colleges. The project does not include provisions for the maintenance of materials acquired through the project, posing potential challenges in ensuring the sustainability of these resources. The absence of clear guidelines regarding the cost of post-project maintenance raises uncertainties about the financial sustainability of project outcomes and resource upkeep.

Limit on Building Infrastructure:

The funding disbursed through CEDP does not allow the colleges to build physical infrastructures like buildings, classrooms, libraries etc. though the funds can be used to renovate or redecorate them. Many colleges seem to think of it as a major problem as they do not have classrooms and such physical facilities. If they do not have classrooms then there would be no use of any further funding or renovating projects.

Tender and Bidding Works:

The starting of the sub-projects under the IDG funding requires calling for bids from different vendors and then choosing the vendor with most gain and least cost. During this procurement process, there were tenders called and some reported that the manual bidding created problems for the management committees at respective colleges as there were issues including incidents such as getting threats from local bidders.

Low Skilled Management:

The persons i.e., IDG Focal persons and management team, involved in the projects at different colleges got the opportunity to learn about issues related to the overall management of the project through training programs designed for them. But some reported that the time for such trainings were so little that they could not grasp all the knowledge in that time and that led them to be ill-prepared and low-skilled to handle all things involved in the project.

Low Incentives compared to Works:

Teachers at different colleges were asked to be involved in the process of IDG funding disbursement and related procurement in this project. These teachers were asked to fulfil these duties in addition to their existing teaching and other related works at colleges. Though they get a certain amount of money for their time, energy and effort, they reported that the payment is not up to the mark which does not encourage them much to come forward and do their jobs enthusiastically.

3.7.2 Sustainability

To look into the sustainability issues, two aspects are noteworthy. First, to explore what the project has actually produced to enhance the learning outcome at the IDG supported tertiary level colleges, employability of the NU graduates. What the project has actually produced in respect of the above is presented through the following three tables (please note that these were also discussed in details in the previous chapters also).

Table 1: Achievement and Progress on Activity Milestones

Milestones	Achievement/Progress (%)
Goods	90.20
Works	89.50
CMIS/Networking and connectivity/Internet	37.20
Training	82.90
Self-assessment review	47.80
Industry partnership	6.00
Library Automation	55.00
Establishment of lab	77.50
Improve quality teaching-learning environment	80.00
Introduce soft skill programs	40.00
Establish industry partnership	33.00
Recruitment of staff for IDG	100.00

From the above table, we observe that the project has already produced significant number of goods and services to enhance teaching-learning environment in the colleges except a few areas where it needs further improvement including networking and industry linkages.

Table 2: Achievement and Progress based on Performance Indicators

Indicators	Initial Value (as per IDP)	Target Value by completion (as per IDP)	Current value (as of 30 June 2023)	Target fulfillment status	Remark*
Increased student attendance in modernized classrooms	34.71	71.05	58.13	81.62	<i>On-track</i>
Increased teachers' interest for taking class with multimedia	11.10	109.46	88.40	65.79	<i>On-track</i>
Increased teachers' interest for taking class with Smart board	1.85	74.23	42.85	57.98	<i>Need attention</i>
Increased student attendance in ICT labs	17.70	64.70	51.77	86.41	<i>On-track</i>
Increased student attendance in the Science labs	29.94	65.56	58.61	99.22	<i>On-track</i>
Improved teaching management capacity	17.80	82.60	61.34	82.78	<i>On-track</i>
Increased internet connectivity/wifi	8.88	86.93	27.38	37.93	<i>Need attention</i>
Enrichment of resources in the library	25.71	65.62	46.43	72.92	<i>On-track</i>
Increased professional/internship training	11.36	19.09	3.00	3.89	<i>Need attention</i>
Increase students' participation in the job fair	10.50	19.00	6.70	16.11	<i>Need attention</i>
Passing rate of the students	72.00	72.00	75.00	104.17	<i>On-track</i>
Introduction of soft skill programs and other trainings	5.00	35.00	7.50	37.50	<i>Need attention</i>
Improving quality of teaching and learning environment	5.00	20.00	16.00	80.00	<i>On-track</i>
Effective information and communication system	30.00	90.00	75.00	83.33	<i>On-track</i>
Hygienic and clean environment	30.00	80.00	50.00	62.50	<i>On-track</i>
Increased number of students' employment	5.00	40.00	0.00	0.00	<i>Need attention</i>

* If Target fulfillment is less than 60% it is marked as "need attention".

Above table also clearly shows the goods and services that the project has produced is now contributing to achieve the teaching-learning outcome with a few exception including, once again, networking and industry linkages.

Table 3: Employment outcome of NU graduates’ results/evidence from different studies

Status	2015 ¹	2018 ²	2019 ³	2021 ⁴	2023 ⁵
Labor force participation rate	51%	65%	65%	-	91.08%
% of unemployed	-	46%	46%	66%	28.24%
% of salaried employed	-	-	-	21%	42.28%
% of self employed	-	5.77%	-	1.5%	16.24%
% involved in full-time/part-time study	-	-	-	7%	13.22%

Regarding employment outcome, it is clearly evident that the rates of unemployment among NU graduates has reduced significantly in over the project period.

As this has been a first attempt of this sort for improving the teaching-learning environment of the NU colleges, these efforts are and have been quite remarkable in themselves. But while assessing and monitoring the project outcome, the fact that this project needs overseeing became glaringly obvious. To realize the long-term outcomes, the project entities need guidance and fund. The repairment and servicing of the objects procured is a major concern for almost all colleges. From the perspective of school administrators, the long-term assessment of overall satisfaction at IDG colleges reveals a positive influence of IDG grants on the teaching and learning environment, and academic infrastructure quality. However, the impact of IDG grants appears to be less pronounced in enhancing the quality of soft-skill development and fostering collaboration between colleges and industries.

The evolution in student satisfaction levels, as observed in the baseline to endline satisfaction survey, indicates an increase in satisfaction across all five indicators of college infrastructural facilities. Throughout the three satisfaction surveys conducted from 2021 to 2023, the general satisfaction level among employers remains consistent. Nevertheless, a notable portion of employers expresses satisfaction with the quality and skills exhibited by graduates from NU. These satisfaction levels been measured in the short term and after looking into the user’s satisfaction mark ups, but to have better outcome in the future, we need to keep the products

in working quality and that needs maintenance. As has been seen from the findings of satisfaction and users' significant utilization rate (from physical verification of the modernized establishments), the modernized equipment and establishments need proper maintenance and care which would ensure their longevity and the outcome in usage and satisfaction sustainable.

Exit plan and sustainability

Major issue here is about the maintenance of works, goods and equipment procured under the project once the project is over. There is no budget for maintenance of all of these in the college budget. It is therefore important to have an exit plan for the entire project with clear implications for the colleges. Technically sound staff is also required to maintain the some of the equipment that has been procured under the study. These are indeed very important to ensure the benefits of the project on a sustainable basis. Continuing teachers education and bringing more colleges under similar project is also important to have sustained impact throughout the country.

PART-IV: SUMMARY, CONCLUSION AND RECOMMENDATION

Summary of the Findings

Findings from End-line Satisfaction Survey

Response from the Principals

The overall results show institutional characteristics of NU affiliated colleges does not change much during the three-satisfaction survey period. This is basically the general characteristics of the affiliated colleges such as number of departments and teacher, designation of teachers etc. which usually does not vary much overtime.

The long run picture is encouraging; overtime the number of students enrollment into NU is increasing. In case of number of students studying in honors and master's level and students completing their honors and master's level from NU affiliated colleges from baseline satisfaction survey to end-line satisfaction survey has been increased. This implies that the colleges that have received IDG grants are successful in increasing their student enrollment and graduation number over time from baseline to end-line satisfaction survey.

On the other hand, it is encouraging that overtime the available facilities in the IDG colleges have been increasing. Number of class room, multimedia, laboratories, computer lab have shown a positive increase from baseline satisfaction survey to end-line satisfaction survey. This implies that the colleges that have received IDG grants are successful in increasing the available facilities in the colleges overtime.

The overall satisfaction regarding selected indicators for IDG colleges overtime show that in case of overall satisfaction regarding selected indicators regarding teaching and learning environment, quality of academic infrastructure and internet connection and speed we find positive impact of IDG grand on IDG awarded colleges. However, the impact of IDG grant is weaker for increasing the quality of soft-skill development and increasing collaboration of the colleges with industries.

Response from the Teachers

The results show that with respect to overall satisfaction about teaching-learning facilities of colleges, the highest mean level of satisfaction for teaching-learning facilities (3.01), followed by soft-skill development (2.99), academic infrastructure (2.95), industry collaboration (2.80), and connectivity through internet (2.48). The lowest mean value of satisfaction is found for connectivity through internet. The overall satisfaction level of the teachers stays between 1 and 3 (in a scale of 1 to 5) for these indicators.

The changes from base line to end line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers in case of 4 indicators, namely: academic infrastructure, computer lab, quality of internet connection and collaboration with industry. However, for teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much; remains stagnant during the time between mid-line to end-line satisfaction survey. Usually, the teachers are unhappy about the

overall educational environment due to lack of incentives, over work and low remuneration which is reflected through their satisfaction scores.

Response from the Students

The survey results show that students of overall colleges are found satisfied about the teaching skills of the teachers, with a mean level of satisfaction 3.86. This is followed by teaching and learning facilities provided by the colleges (2.72) and development of students' soft-skills (2.52).

The students of the IDG awarded colleges are more satisfied in expressing their own perceptions. Though 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 satisfied nor dissatisfied category as shown in table 59. Similarly, when considering other features of the colleges, students from IDG awarded colleges are more inclined towards satisfaction scale than the IDG non-recipient ones.

Students are found least satisfied about the current state of University-Industry collaboration with the lowest satisfaction level of 2.28 in scale 5. These findings are similar to the level of satisfaction of teachers, as discussed in the previous section.

The changes in satisfaction level of the students from baseline to endline satisfaction survey show that in case of all the 5 indicators of infrastructural facility at the college students' satisfaction have increase from baseline to endline satisfaction survey. Overall, there is a graduation of 1 Likert scale above from baseline to endline satisfaction survey (average 0.98).

Response from the Employers

Overall satisfaction results show that the mean overall satisfaction is 3.66 out of a 5-point scale. That means, on average, the employers are closed to satisfied with the NU graduates as this value is more closed to 4 (=satisfied) on the Likert scale.

The overall satisfaction level of the employers remains same over the time during the three-satisfaction survey starting from 2021 to 2023, a major proportion of employers are satisfied with quality and skills of employed NU graduates. Majority of the employers believe that the NU graduates are hardworking and willing to learn new things, they are easy to train them up and they do not switch jobs frequently. However, they need to improve their English language proficiency, computer/ICT skill, communication skills, and presentation skills to make them more competent with the current employment situation.

Overall Satisfaction in Three Satisfaction Survey

As mentioned earlier, the satisfaction of the principals regarding institutional characteristics of NU affiliated colleges does not change much during the three-satisfaction survey period. This is basically the general characteristics of the affiliated colleges such as number of departments and teacher, designation of teachers etc. which usually does not vary much overtime.

Table 1: Overall Satisfaction of Principals Overtime

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	3.52 (0.85)	3.63 (1.01)	-0.113 (0.683)	3.59 (0.86)	3.90 (0.77)	3.68 (0.75)	0.23 (0.22)	3.81 (0.76)	3.667 (0.884)	3.276 (0.922)	0.442 ** (0.029)	3.546 (0.858)
Quality of academic infrastructure	2.89 (1.09)	2.89 (0.81)	-0.006 (0.984)	2.95 (1.02)	3.32 (1.04)	2.48 (1.00)	0.83*** (0.00)	2.96 (1.09)	2.867 (1.008)	2.552 (0.948)	0.622 ** (0.012)	2.933 (1.056)
Connectivity through internet	2.26 (0.98)	3.16 (0.83)	-0.9*** (0.003)	2.51 (1.06)	2.95 (1.00)	2.65 (1.08)	0.31 (0.22)	2.82 (1.04)	2.800 (1.126)	2.379 (1.083)	0.360 (0.185)	2.60 (1.138)
Quality of soft-skills development of the students	2.11 (0.93)	2.74 (1.19)	-0.626* (0.052)	2.39 (1.02)	2.85 (1.01)	2.16 (0.93)	0.69** (0.00)	2.56 (1.03)	2.200 (1.095)	2.069 (1.067)	0.148 (0.541)	2.16 (1.013)
Collaboration of the colleges with industries	1.59 (1.01)	1.74 (1.05)	-0.144 (0.64)	1.73 (1.02)	1.71 (0.90)	1.50 (0.82)	0.21 (0.32)	1.62 (0.87)	1.600 (0.932)	1.724 (1.131)	-0.050 (0.834)	1.69 (0.999)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

For overall satisfaction of teacher, changes from base line to end line satisfaction survey shows that among the six indicators of satisfaction, there is a positive change in the satisfaction level of teachers. For teaching and learning facility and quality of soft skill development, the satisfaction level of the teacher does not change much over time.

Table 2: Overall Satisfaction of Teachers Over time

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	3.14 (0.99)	3.23 (1.00)	-0.084 (0.256)	3.28 (0.98)	3.14 (0.98)	2.66 (1.04)	0.48*** (0.00)	2.95 (1.03)	3.14 (1.09)	2.73 (1.13)	0.417*** (0.000)	3.01 (1.12)
Quality of academic infrastructure	2.52 (1.05)	2.70 (1.07)	-0.179 (0.021)	2.80 (1.12)	3.08 (1.08)	2.49 (1.06)	0.58*** (0.00)	2.84 (1.11)	3.15 (1.12)	2.55 (1.11)	0.606*** (0.000)	2.95 (1.15)
Access to ICT facility	2.00 (0.99)	2.20 (1.10)	-0.195 (0.012)	2.18 (1.11)	3.00 (1.20)	2.09 (1.04)	0.90*** (0.00)	2.63 (1.22)	3.19 (1.14)	2.21 (1.18)	0.980** (0.000)	2.86 (1.24)
Connectivity through internet	2.17 (1.00)	2.37 (1.15)	-0.197 (0.012)	2.23 (1.07)	2.60 (1.11)	2.14 (1.09)	0.47*** (0.00)	2.42 (1.12)	2.68 (1.15)	2.09 (1.14)	0.596*** (0.000)	2.48 (1.18)
Quality of soft-skills development of the students	2.05 (0.97)	2.04 (1.05)	0.010 (0.893)	2.14 (1.06)	2.12 (1.06)	1.78 (0.96)	0.34*** (0.00)	1.98 (1.03)	2.09 (1.07)	1.79 (0.98)	0.305*** (0.000)	2.99 (1.05)
Collaboration of the colleges with industries	1.38 (0.78)	1.66 (1.08)	-0.280 (0.000)	1.67 (1.02)	1.82 (1.02)	1.67 (1.00)	0.16** (0.01)	1.76 (1.01)	1.84 (1.08)	1.73 (1.03)	0.103 (0.094)	2.80 (1.06)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

The overall satisfaction of the students from baseline to endline satisfaction survey show that in case of all the 5 indicators of infrastructural facility at the college students' satisfaction have increase from baseline to endline satisfaction survey.

Table 3: Overall Satisfaction of Students Overtime

Variables	Base line				Mid-term				Endline			
	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)	IDG Mean (SD)	Non-IDG Mean (SD)	Difference (p-value)	All sample Mean (SD)
Teaching and learning environment	2.60 (1.27)	2.87 (1.29)	-0.27 (0.000)	2.82 (1.26)	2.73 (0.92)	2.22 (0.92)	0.51*** (0.00)	2.57 (0.95)	2.89 (0.91)	2.32 (0.95)	0.569*** (0.000)	2.71 (0.96)
Quality of academic infrastructure					3.42 (1.31)	3.01 (1.36)	0.42*** (0.00)	3.27 (1.35)	2.48 (1.18)	2.01 (1.09)	0.469*** (0.000)	2.33 (1.17)
Access to ICT facility	1.78 (1.16)	2.16 (1.35)	-0.38 (0.000)	2.13 (1.31)	2.22 (1.12)	1.78 (1.04)	0.44*** (0.00)	2.21 (1.25)	2.58 (1.30)	2.40 (1.29)	0.174*** (0.000)	2.52 (1.30)
Connectivity through internet	4.61 (0.62)	4.53 (0.79)	0.08 (0.022)	4.60 (0.69)	1.79 (1.13)	1.63 (1.02)	0.17*** (0.00)	1.73 (1.09)	2.01 (1.24)	1.89 (1.23)	0.116* (0.013)	1.97 (1.23)
Quality of soft-skills development of the students	1.74 (1.15)	2.04 (1.32)	-0.30 (0.000)	1.94 (1.25)	2.49 (1.29)	2.33 (1.29)	0.15** (0.00)	2.42 (1.29)	2.58 (1.30)	2.40 (1.29)	0.174*** (0.000)	2.52 (1.30)
Collaboration of the colleges with industries	1.94 (1.16)	2.21 (1.27)	-0.27 (0.000)	2.16 (1.23)	2.12 (1.28)	2.08 (1.26)	0.05 (0.31)	2.10 (1.27)	2.32 (1.33)	2.20 (1.30)	0.118* (0.019)	2.28 (1.32)
Teaching skills of the teachers	3.82 (0.95)	3.97 (0.94)	-0.15 (0.001)	3.86 (0.94)	4.00 (0.94)	3.80 (1.07)	0.20*** (0.00)	3.92 (0.99)	3.93 (0.95)	3.71 (1.05)	0.217*** (0.000)	3.86 (0.99)

Note: *, **, and *** indicates statistically significance at 10 percent, 5 percent, and 1 percent level respectively.

It is to be noted that the difference between mid-term to end-line satisfaction survey is only one year and base-line to mid-line satisfaction survey is also only one year. Therefore, there may not be significant changes in terms of the outcome variables. Usually observing the investment effect like IDGs there should be substantial time lag/gap to observe the actual effect of that investment. Usually, the impact will start after 3 to 5 years of the development grants.

Moreover, although selection of teacher and students are random within the department, they are not the same in three survey period. The principals are the same entity in majority of the cases. The Likert scale is a psychological scale used to identify individual preferences and order the responses, which is more individualistic. Therefore, individual preferences may affect the satisfaction variable but applying the law of large numbers this may be balanced. However, the time lag is still in effect.

The low scoring of industry linkage is basically for: (i) the colleges were not fully prepared for this kind of collaboration at current stage, (ii) there is no official preparation for linking industry with the NU curriculum for industry collaboration. The collaboration so far done is ad hoc from

personal reference/ initiatives of some teachers. (iii) Soft skill development some initiatives have been taken from the NU, such as: introduction of short courses. However, according to the teachers it is not up to the level of employers' satisfaction. Therefore, following initiatives can be considered. Such as:

- Enhance the use of ICT in teaching, provide ICT skills training, and upgrade ICT facilities for teachers.
- For soft-skill development digital skill development courses or ICT training courses can be introduced.
- Set up job placement support services and carrier counselling within colleges.
- It is recommended to organize job fairs every year, preferably at the district level, to facilitate industry collaboration.

Findings on Project Effectiveness

In the surveyed colleges, a total of 2746 classrooms were observed, with 70.21% (1928 classrooms) belonging to IDG-recipient colleges and 29.79% (818 classrooms) to non-IDG colleges. Notably, out of the 843 multimedia classrooms in these colleges, 86.01% (725 classrooms) were in IDG-recipient colleges, highlighting a significant emphasis on modernizing facilities through IDG funding. This stark contrast with non-IDG colleges underscores the impact of funding on multimedia infrastructure.

The higher numbers of Bangabandhu corners, Muktijuddho corners, Childcare/daycare corners, Mothers corners, establishment of employment cells, workshops for skill development, and job fairs in IDG-recipient colleges further exemplify the positive outcomes of IDG funding. This suggests that IDG initiatives have successfully contributed to enhancing various aspects of college facilities and opportunities for ensuring better teaching-learning environment, setting them apart from non-IDG colleges in these regards.

Compliance of Social and Environmental Safety Measures, Library Renovation, Purchasing of Books for Library, Renovation/Establishment of Computer Lab, Establishment of Multifunctional ICT Lab, Renovation/Establishment of Science Lab, Provisions for arranging Pure Drinking Water Facilities in the colleges and Modernization of Auditoriums have been in the plans for most of these colleges and the works have been completed successfully. Provisions including Internet/Wi-Fi Network/ICT Corner facilities, Establishment of Networking, and Management Information System are still mostly works in progress for the colleges that had plans for those.

Overall, apart from significant positive changes in the number of enrollments, average attendance rate, average number of participation and average number of passing rates at some years for the students in the IDG recipient colleges in comparison to the non-IDG colleges, there do not seem to have significant differences in case of the students' participation rates, completion rates or pass rates over the years between the two types of colleges. As the changes like increase in attendance rates are easy to locate and is reflected well in the short run, changes like improvement in the completion rate and pass rates may come eventually, and after certain

level of participation and engagement on part of the students, and improvement in teaching-learning environment.

There has been significant increase in the sanctioned teaching posts in the IDG recipient colleges than the non-IDG colleges. Teachers' employment rates over the last 6 years have also significantly increased in the IDG recipient colleges than the non-IDG colleges. The employment rates for other employees at the colleges have also increased though the differences for IDG recipient and non-IDG colleges are not statistically significant. Many training programs have been arranged and 96.23% of the targeted teachers and 91.40% of the targeted employees (Other than teachers) have gained some kind of training through CEDP or other organization. The project has been extended to ensure the proper training of the teachers. About 71.74% of the IDG managers seem to be very satisfied with the outcome of the project, 26.09% seem to be somewhat satisfied and 2.17% are neither satisfied nor dissatisfied with the project activities carried out through the years. According to the IDG managers at the colleges, allocating adequate budget to the colleges, recruiting manpower with proper technical knowledge, providing maintenance supports to the colleges after the ending of the project and regular monitoring are the keys to make the benefits of the project more sustainable and positive.

During the direct verification of students' attendance and utilization of the colleges' facilities, it was seen that all the modernized classrooms, labs, laboratories, libraries and other facilities including the Bangabandhu corners, muktijuddho corners and study zone with ICT facilities in the IDG recipient colleges had significantly positive usage ratio than the non-IDG colleges. The attendance results from the colleges and the direct verification on the day of the survey visits coincides and show significantly positive outcome for the IDG recipient colleges than the non-IDG colleges.

The milestones achieved include procuring goods, renovating infrastructure, and conducting various activities such as training, self-assessment reviews, library automation, and networking. Directly achievable tasks, like recruiting IDG staff at colleges (100%) and purchasing goods with renovations (90%), have been largely completed. The teaching-learning environment at colleges has improved, and training for employees has been organized. Some developmental targets were initiated but proved challenging in this phase. Challenges related to self-assessment reviews, automation, industry partnerships, and connectivity have been considered and partially addressed, with expected success in the future.

Colleges have made significant strides in modernizing teaching-learning equipment and facilities, achieving up to 100% of their targets. Approximately 57.98% of teachers are using smart boards, showing promising progress despite the need for familiarity. Efforts to enhance students' employability and soft skills are positively impacting teaching-learning outcomes. Colleges are actively addressing measures like MIS usage, internet connectivity, Wi-Fi networks, and organizing training for both students and teachers. Initiatives such as MoUs with organizations, internships, and job fairs aim to boost the employment possibilities for NU graduates. Moreover, there were no negative repercussions on the environment from the carrying out of the development activities done through IDG funding.

Conclusion and Recommendation

Project Implementation Status

Timely Implementation: The entire plan of College Education Development Project (CEDP) has been implemented smoothly barring some exceptions. Initially, the project duration was from July, 2016 to June 2021. But, due to the effects of Covid-19, the time has been changed to December 2023. After that, it has been found that the training of the teachers may not be possible this year and hence the timeline of this project has been pushed by another six months (i.e., till June 2024). Some of the major reasons for this delay are:

- Even though the project began in 2016, the PD didn't join until October 2017, which was roughly ten months later. Moreover, manpower and technical support had been appointed in 2018 which caused a slight delay in project's completion date.
- The economic downturn has become a critical issue during the period of Covid-19. Also, the project DPP approval process has become lengthy as a result of it.
- Project progress reports were expected to be submitted every six months interval. Every college submits a report to CEDP regarding this. The CEDP authority again allows the college time to make corrections if there are any errors in the report. It takes a while for the monitoring unit to approve the report after revision which took some more time.
- The whole training at Nottingham University was scheduled to take place, but COVID made it impossible. Thus, teachers will receive local training, per the same module. IDG has therefore extended the time.

Budget wise Implementation: The budgetary provision didn't have any time extension provision. Colleges have however made use of the most of their funding, which has enhanced the institution's overall condition. Infact, CEDP is going to return 4 million (BDT) of the fund.

- Since Covid-19 prevented the development of 14 subject-based content creations for teaching, IDG is due to return the equivalent amount.

Plan wise Implementation: Enhancing the teaching-learning environment and boosting managerial capacity through teachers' training are the project's two primary goals. During the field inspection and preparation of procurement reports, CEDP officials find out numerous achievements to the teaching-learning environment which has been utilized at a maximum rate through strategic or component-wise planning.

Earlier NU affiliated Honors and Masters colleges hardly had any training program. Then from 2014, pedagogical training has been started for the teachers which helps to improve their teaching quality. Subject-based teachers' training was intended to occur outside of the nation, which was new of Bangladesh, which has however been obstructed by Covid-19. In addition, there are a few other problems that impede the project's advancement in normal speed. These are:

- Due to the involvement of various stakeholders in the planning process, the ultimate decision making has been delayed.

- The procurement team's best effort was to bid on the tenders at the lowest cost but due to Covid-19, the price of everything has gone up thus retendering needed in many instances.

Achieving the Objectives

This is the first higher education development initiative in Bangladesh where the beneficiary colleges submit their plans based on their needs, and CEDP allocates funds in line with those requests. There are certain things that work in favor of supporting this kind of project as a development strategy. Below we enlist some major strengths/achievements of this project:

Achievements/Strengths:

- Improved overall teaching and learning environment.
- In-house training for teachers, specifically in the area of ICT, Office Management and Subject-based training which benefited both teachers and students.
- Provided short course delivery under TTP (Teacher Training Practice) includes 2 sessions in 15 days where the teachers are being trained in how to deliver a lecture in a classroom.
- Opportunity to take two years pedagogy training at Nottingham University at government expense due to which teachers will get MA in Education certificate.
- Demand wise college infrastructure development such as ICT lab, Science lab, Smartboards etc.
- Need based facilities such as establishment of mother's corner, separate toilets, vending machines, safe drinking water, hygiene and so on.
- Training for policy makers and personnel so that procurement activities can be done successfully including 120 IDG affiliated colleges.
- Financial transparency and accountability have been improved.
- Strong and dynamic project coordination and leadership have been developed.

Challenges Faced

When running any project that deals with unprecedented work (in this case, the disbursement of such large amounts of funds has been quite new for NU colleges) but systematic planning and distribution of funds, many challenges arise in executing it. The challenges thus identified are given below:

- College authorities had no prior knowledge of the project's work or procurement. To raise awareness of the colleges, many workshops and seminars needed to be planned. Occasionally, despite much coordination and dissemination, very little or no feedback is received. College administrators found it quite difficult to comprehend. They are experts now, though.
- It took a long time to get administrative approval. Teachers could not spare time because they had to teach, take exams, and look at reports at the same time. Consequently, report approval was time consuming and challenging.

- In terms of training, the college authorities did not properly assign which teachers would receive training. Sometimes, teachers have found it difficult as it is totally in English curriculum.
- Administrative challenges included setting up CEDP office, hiring technical/consultant staff, coordinating multiple stakeholders in the decision-making process, changing of Project Director, desk offices etc.

How were the challenges dealt with

Despite a number of obstacles, every member of the CEDP team carried out the project with the highest sincerity and smoothness. Herein lay their timing, synchronization, and tireless work-determination. Here are some of the issues addressed in the implementation process:

- Organized 12 seminars aimed at how to prepare PCRs including 120 colleges of CEDP.
- Another 4 workshops on how to prepare presentations.
- Phone follow-up and coordination with college authorities and other stakeholders from the very beginning to the end of the project.
- S.P.C. Liaison maintenance and 6 workshops had been arranged with 300 principals from the districts of Sylhet, Barishal, Chittagong, Dhaka, Bogura, 3 at national level organized at International Mother Language Institute, Dhaka.
- Teachers of three districts have been trained in early 2023 including Barishal, Chittagong and Rajshahi.
- The remaining funds will be used to provide 5000 teachers in 64 Upazilas with ten days of master training based on the syllabus.

Recommendations

The necessary work and initiatives that could be included in the future encompass a range of actions aimed at enhancing educational infrastructure, student support, and overall quality of education. These initiatives could be included in any such projects in the future as these would provide teaching-learning and job placement support to the students at NU colleges. The recommendations against major findings (including challenges) are presented in the matrix below.

Major Results/Challenges	Recommendations
Fund utilization has been carried out efficiently.	Project of the kind should be continued, and more colleges should be brought under similar projects.
There were, however, some restrictions on where to spend the money (i.e., what to include in the IDPs) which has limited the scope work in some colleges.	The authority can probably think about having some flexibility in fund utilization in the future project depending on the necessity of the colleges. In fact, there should have a thorough needs assessment before implementing any future project of this kind.

Delayed approval process	It has taken more time than initially planned to implement the project. COVID-19 was one of the reasons for this. But delayed approval process and fund disbursement was also partly responsible. One of the main reasons was that the colleges were not trained and hence didn't know initially what to do and how to proceed. This aspect needs to be taken into consideration in the future projects.
The project has however produced fairly good range of outputs including renovated and improved classrooms, libraries, labs and other special facilities like mother's corner, etc. to enhance teaching-learning environment in the colleges.	Similar to the first recommendation, project of the kind should be continued, and more colleges should be brought under similar projects.
More teachers have received training under the project which has contributed to quality of teaching in the IDG recipient colleges.	Teachers training should be continued on a regular basis, and for all colleges as well.
However, there were issues about selection of teachers for training by the principals. Not always the most relevant teachers were sent for training.	There should have a clear guideline and enforcement from higher authority about teacher's selection for the training.
Adverse teacher-student ratio, especially in the non-government colleges.	More teachers should be recruited, especially in the non-government colleges, to maintain standard teacher-student ratio to ensure quality teaching and learning.
Inadequate incentives for the teachers.	Though this is not directly related to CEDP project, this is an important issue to ensure quality teaching. This is the issue that the Ministry of Education should look into. Teachers are suffering from lack of motivation due to this which needs to be addressed,
Evaluation of teachers by the students is missing.	This was also not part of the project, but NU can think about introducing evaluation of teachers by the students to enhance quality teaching.
Enrollment, attendance, completion and employability has increased	This is encouraging, and hence, this should be continued, and also in the other colleges.

among the students and graduates of NU colleges.	
Satisfaction levels, in general, has also increased over the three satisfaction surveys.	Similar to above, this is encouraging, and hence, this should be continued, and also in the other colleges.
However, job fair and industry linkages are still poor.	Colleges should try to establish linkages with the industries and probable employers. They should also organize job fairs on a regular basis. Establishing and maintaining alumni association can also be helpful in this respect. NU can provide guidance and support to the colleges in this respect.
There are some weak areas among the NU students and graduates including language, soft and communication skills.	Colleges should focus on these, and the NU can include these aspects in the curriculum also.
Lack of trained manpower and technical person to run the project	The project was run mainly by the teachers. They were briefly trained how to run the project of this kind including procurement and financial management. This is probably not the best way to do it as main responsibility of the teachers is to teach, not to manage development project. Also, some technologically advanced equipment was also procured, but there are lack of technical person to manage and maintain them. Next project, if any, should take this into consideration also.
Future sustainability (including maintenance of those that have been procured) and exit plan is absent.	This is very important. Colleges do not know what will happen after the project is over. They also don't know how maintain the works and goods they procured and where the maintenance fund will come from. There should have a clear exit plan and guidance for the sustainability of the works and goods procured from the project.
Management of CEDP including monitoring and evaluation has been good and efficient.	Efficient management and M&E system is important for successful implementation of any project. This should be continued in the future projects also. NU should also try to carry out periodic progress tracking, tracer studies, and satisfaction surveys irrespective of any project.

Annex-1.1

List of the Documents

- 1) Baseline Satisfaction Survey (Beneficiary Feedback-1), CEDP.
- 2) Mid-Term Satisfaction Survey (Beneficiary Feedback-2), CEDP.
- 3) Project Appraisal Document of the World Bank for the College Education Development Project (CEDP), May 11, 2016.
- 4) Teacher Training Manual, College Education Development Project (CEDP), 2021.
- 5) Operations Manual for Institutional Development Grant (IDG), College Education Development Project (2nd Edition).
- 6) Survey and Studies (Effectiveness and Situation Assessment of Teacher's Training), CEDP.
- 7) Development Project Proposal (DPP) for College Education Development Project (CEDP), Ministry of Education, June 2016.
- 8) Progress of Implementation, July 2016- December 2022, College Education Development Project (CEDP).
- 9) Tracer Study on Graduates of Tertiary-Level Colleges 2021, CEDP.
- 10) Tracer Study on Graduates of Tertiary-Level Colleges 2023, CEDP.
- 11) DLI-4 Results Verification Report (first report)
- 12) DLI-4 Results Verification Report (second report)
- 13) Quarterly Monitoring Reports
- 14) National Strategic Plan for Higher Education Colleges in Bangladesh:2023-2031

Annex-1.2
Detailed Schedule for Field Visit

Sl.	Name of the Colleges	Visiting Dates
1.	Suhrawardi Govt. College, Pirojpur	17, 18 and 19 September 2023
2.	Jhalokathi Mohila College, Jhalokathi	21, 24 and 25 September 2023
3.	Jhalakathi Govt. College, Jhalakathi	27 Sept, 1 and 2 October 2023
4.	Govt. Barisal College	4, 5 and 8 October 2023
5.	Gournadi Govt. College, Barisal	10, 11 and 12 October 2023
6.	Bandarban Government College	17, 18 and 19 September 2023
7.	Islamia College, Chattogram	21, 24 and 25 September 2023
8.	Government City College,	27 Sept, 1 and 2 October 2023
9.	Chittagong College, Chattogram	4, 5 and 8 October 2023
10.	Patiya Govt. College, Chattogram	10, 11 and 12 October 2023
11.	Cox's Bazar City College	17, 18 and 19 September 2023
12.	Noakhali Govt. Mahila College	21, 24 and 25 September 2023
13.	Noakhali Govt. S. A College	27 Sept, 1 and 2 October 2023
14.	Puran Bazar Degree College, Chandpur	4, 5 and 8 October 2023
15.	Savar College, Dhaka	10, 11 and 12 October 2023
16.	Rangamati Govt. College	17, 18 and 19 September 2023
17.	Govt. Zia Mohila College, Feni	21, 24 and 25 September 2023
18.	Nawab Foyjunnessa Govt College, Cumilla	27 Sept, 1 and 2 October 2023
19.	Cumilla Govt. College	4, 5 and 8 October 2023
20.	Chandina Redwan Ahmed College, Cumilla	10, 11 and 12 October 2023
21.	Govt. Gurudayal College, Kishoregonj	17, 18 and 19 September 2023
22.	Kishoreganj Govt. Mahila College	21, 24 and 25 September 2023
23.	Gazipur Govt. Mahila College	27 Sept, 1 and 2 October 2023
24.	Bhawal Badre Alam Govt. College, Gazipur	4, 5 and 8 October 2023
25.	Dhamarai Govt College, Dhaka	10, 11 and 12 October 2023
26.	Govt. Sreenagar College, Munshiganj	17, 18 and 19 September 2023
27.	Bikrampur Adarsha College, Munshiganj	21, 24 and 25 September 2023

28.	Govt. Safar Ali College, Narayangonj	27 Sept, 1 and 2 October 2023
29.	Narayanganj Mahila College	4, 5 and 8 October 2023
30.	Narayanganj College	10, 11 and 12 October 2023
31.	Satkhira City College	17, 18 and 19 September 2023
32.	Kumira Mahila Degree College, Satkhira	21, 24 and 25 September 2023
33.	Narail Govt. Victoria College	27 Sept, 1 and 2 October 2023
34.	M.M. College, Jessore	4, 5 and 8 October 2023
35.	Jessore Govt. Mahila College	10, 11 and 12 October 2023
36.	Daulatpur Day/ Night College, Khulna	17, 18 and 19 September 2023
37.	Kushtia Govt. College	21, 24 and 25 September 2023
38.	Kushtia Govt. Mahila College	27 Sept, 1 and 2 October 2023
39.	Daulatpur College, Kusthia	4, 5 and 8 October 2023
40.	Meherpur Govt. College	10, 11 and 12 October 2023
41.	Mahmuda Salam Mahila College, Jamalpur	17, 18 and 19 September 2023
42.	Jahanara Latif Mahila College, Jamalpur	21, 24 and 25 September 2023
43.	Nazmul Smriti College, Sherepur	27 Sept, 1 and 2 October 2023
44.	Sherpur Govt. Mahila College	4, 5 and 8 October 2023
45.	Netrakona Govt. College	10, 11 and 12 October 2023
46.	Kazi Shirajul Islam Mahila College, Faridpur	17, 18 and 19 September 2023
47.	Kadirdi College, Faridpur	21, 24 and 25 September 2023
48.	Sakhipur Residential Mahila College, Tangail	27 Sept, 1 and 2 October 2023
49.	Shahid Smriti Govt. College, Mymensingh	4, 5 and 8 October 2023
50.	Gouripur Mahila College, Mymensingh	10, 11 and 12 October 2023
51.	Syed Ahmed College, Bogra	17, 18 and 19 September 2023
52.	Pabna College Day/ Night	21, 24 and 25 September 2023
53.	Shahid Bulbul Govt. College, Pabna	27 Sept, 1 and 2 October 2023
54.	Belkuchi College, Sirajgonj	4, 5 and 8 October 2023
55.	Govt. Akbar Ali College, Sirajgonj	10, 11 and 12 October 2023
56.	Lalit Mohan College, Rajshahi	17, 18 and 19 September 2023
57.	Rajshahi Govt. Mahila College	21, 24 and 25 September 2023
58.	Naoganon Govt College, Naogaon	27 Sept, 1 and 2 October 2023

59.	Gurudaspur Bilchalan Shahid Shamsuzzoha College, Natore	4, 5 and 8 October 2023
60.	Sheikh Fazilatunnesa Muzib Womens College, Natore	10, 11 and 12 October 2023
61.	Uttar Bangla College, Lalmonirhat	17, 18 and 19 September 2023
62.	Lalmonirhat Govt. College	21, 24 and 25 September 2023
63.	Rangpur Govt. College	27 Sept, 1 and 2 October 2023
64.	Nawabganj Govt. College, Chapai Nawabganj	4, 5 and 8 October 2023
65.	Govt. Bangu Bandhu College, Dhaka	10, 11 and 12 October 2023
66.	Sylhet Govt. College	17, 18 and 19 September 2023
67.	Dakshin Surma Govt College, Sylhet	21, 24 and 25 September 2023
68.	Komolganj Gano College, Moulvibazar	27 Sept, 1 and 2 October 2023
69.	Yakub-Tajul Mahila College, Moulvibazar	4, 5 and 8 October 2023
70.	New Model Degree College, Dhaka	10, 11 and 12 October 2023
71.	Govt. K. C. College, Jenaidha	17, 18 and 19 September 2023
72.	Govt. Devendra College, Manikganj	21, 24 and 25 September 2023
73.	Tejgaon College, Dhaka	27 Sept, 1 and 2 October 2023
74.	Mohammadpur Mahila College, Dhaka	4, 5 and 8 October 2023
75.	Shaikh Burhanuddin Post Graduate College, Dhaka	10, 11 and 12 October 2023

Annex Tables for PART-III

Annex Tables from Chapter 3.3

Table 1: Steps taken to increase graduates' employment

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Providing ICT training and certificates	02	11.76	28.57
2	Improving the quality of education	01	5.88	14.29
3	Regular class attendance	01	5.88	14.29
4	Motivational class	01	5.88	14.29
5	Co-curricular activities	01	5.88	14.29
6	Soft skill development	01	5.88	14.29
7	Stay in touch with employers	03	17.65	42.86
8	Arrange participation in seminars	01	5.88	14.29
9	Provide all advice	01	5.88	14.29
10	English education	01	5.88	14.29
11	Alumni data collection	02	11.76	28.57
12	Share experience	01	5.88	14.29
13	Taking measures to create entrepreneurship	01	5.88	14.29
Total		17	100.0	242.86

Table 2: Ways to understand stocks without any official registry

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Each product has a page-wise listing, package and date included	01	50.0	50.0
2	The renovation work is identified by CEDP's logo	01	50.0	50.0
Total		02	100.0	100.0

Table 3: Strengths of the project

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Opportunity to design projects according to your needs	08	6.35	18.18

2	In-house training	04	3.17	9.09
3	Improving classroom quality	13	10.32	29.55
4	Implementation with own manpower	01	0.79	2.27
5	EGP	03	2.38	6.82
6	Transparency of financial transactions	04	3.17	9.09
7	Increase in attendance rate	07	5.56	15.91
8	Managerial capacity development	03	2.38	6.82
9	Improve teaching atmosphere	08	6.35	18.18
10	Account maintain and register of products	01	0.79	2.27
11	Quick decision making and timely completion of tasks	02	1.59	4.55
12	ICT Lab	04	3.17	9.09
13	Development of infrastructure reforms	06	4.76	13.64
14	Increased use of ICT tools	10	7.94	22.73
15	Product quality is guaranteed	02	1.59	4.55
16	Training (teachers and students)	06	4.76	13.64
17	The useful student of tomorrow	03	2.38	6.82
18	Solar system	01	0.79	2.27
19	Accountability	02	1.59	4.55
20	Improving the quality of education	14	11.11	31.82
21	Increasing use of modern libraries	05	3.97	11.36
22	Build own purchasing power	02	1.59	4.55
23	Increase the interest of teachers and students	02	1.59	4.55
24	Skilled manpower generation	02	1.59	4.55
25	PMU team cooperation	01	0.79	2.27
26	Technical development supplies	02	1.59	4.55
27	Identifying the strengths and weaknesses of the college	01	0.79	2.27
28	Taking advantage of the fourth industrial revolution	01	0.79	2.27
29	E-learning	01	0.79	2.27
30	AC creates a comfortable environment	01	0.79	2.27

31	Monitoring and reporting	01	0.79	2.27
32	No central procurement	01	0.79	2.27
33	Standard office rooms for teachers	01	0.79	2.27
34	Attachment of modern scientific instruments	01	0.79	2.27
35	Modern teaching system	01	0.79	2.27
36	Safe drinking water	01	0.79	2.27
Total		126	100.0	286.36
Valid Cases		44		
Missing Cases		03		

Table 4: Weaknesses of the Project

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	There was no scope for infrastructural development	05	4.85	11.63
2	Absence of maintenance fund and increase in college expenses	11	10.68	25.58
3	Indecisiveness in the early stages	03	2.91	6.98
4	Lack of payment for officials and employees	08	7.77	18.60
5	Uncooperative attitude of procurement wing	05	4.85	11.63
6	Absence of technical knowledge	05	4.85	11.63
7	Lack of informative examples	01	0.97	2.33
8	Excessive workload	08	7.77	18.60
9	Lack of proper training	09	8.74	20.93
10	Lack of skilled employees	15	14.56	34.88
11	Delay of central processing	05	4.85	11.63
12	Slow in allocation of funds	03	2.91	6.98
13	Problems in preparation of technical specifications	01	0.97	2.33
14	Less Project funding	04	3.88	9.30
15	Restrictions on purchase of essential goods	01	0.97	2.33
16	Unused AC due to lack of power substation	01	0.97	2.33

17	Shut down during Covid-19	02	1.94	4.65
18	Maximum benefit not guaranteed	02	1.94	4.65
19	Lack of planning	03	2.91	6.98
20	Can't contact the center all the time	01	0.97	2.33
21	Political influence	01	0.97	2.33
22	No deputation	01	0.97	2.33
23	Low budget allocation to training	01	0.97	2.33
24	Carrying out responsibilities both at project and college locations	01	0.97	2.33
25	Delay in self-assessment	01	0.97	2.33
26	Slow implementation of plans	02	1.94	4.56
27	Recruitment of internal staff	01	0.97	2.33
28	Unnecessary waste of money	01	0.97	2.33
29	Not being able to bring all sections under development equally	01	0.97	2.33
Total		103	100.0	239.53
Valid Cases		43		
Missing Cases		04		

Table 5: Challenges of the Project

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	There is no budget allocation for maintenance	11	21.57	36.67
2	Lack of skilled manpower	10	19.61	33.33
3	Electrical hazards	10	19.61	33.33
4	Disruption of class activities during repairs	01	1.96	3.33
5	Provision of accommodation for contractor workers	01	1.96	3.33
6	Security of purchased goods	03	5.88	10.0
7	Vacancy is created when the responsible officer is transferred	02	3.92	6.67
8	If the ongoing activity is stopped, the student will be unsatisfied	02	3.92	6.67

9	Extortion at the local level	01	1.96	3.33
10	Political problems	01	1.96	3.33
11	Lack of tender knowledge	03	5.88	10.0
12	Lack of procurement training	01	1.96	3.33
13	Billing issues	01	1.96	3.33
14	Reduction of seats in classrooms	02	3.92	6.67
15	No new risks have been created	02	3.92	6.67
Total		51	100.0	170.0
Valid Cases		30		
Missing Cases		17		

Table 6: Opportunities created through the project

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Soft-skill development	05	5.32	12.50
2	Increase student attendance	08	8.51	20.00
3	Proficiency in using ICT related technologies	21	22.34	52.50
4	Scientific research opportunities	03	3.19	7.50
5	Students who develop as skilled workers	04	4.26	10.00
6	Employment opportunities are created according to qualifications	07	7.45	17.50
7	Creating a path to becoming a successful entrepreneur	02	2.13	5.00
8	ICT oriented job/career opportunities	05	5.32	12.50
9	Creating smart graduates using smart systems	05	5.32	12.50
10	Being self-reliant	01	1.06	2.50
11	Establishment of digital classroom	01	1.06	2.50
12	Increase the quality of education results	09	9.57	22.50
13	Simple teaching process	03	3.19	7.50
14	Uninterrupted power supply	02	2.13	5.00
15	Improving learning environment	06	6.38	15.00

16	Confidence boost	02	2.13	5.00
17	Increase student-teacher communication	01	1.06	2.50
18	All special book acquisition possibilities are created through automation library	01	1.06	2.50
19	Academic knowledge enhancements	01	1.06	2.50
20	Improved learning environment	02	2.13	5.00
21	Safe water supply and protection from water borne diseases	01	1.06	2.50
22	Career awareness	02	2.13	5.00
23	Build relationships with employers	01	1.06	2.50
24	Practical knowledge for practical skills	01	1.06	2.50
Total		94	100.0	235.00
Valid Cases		40		
Missing Cases		07		

Table 7: Ways to ensure sustainability of the project

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Adequate budget should be allocated	18	19.78	43.90
2	Recruiting manpower with technical knowledge	13	14.29	31.71
3	Maintenance support	13	14.29	31.71
4	Regular monitoring	15	16.48	36.59
5	Pay appropriate remuneration	02	2.20	4.88
6	Freedom to purchase packages	02	2.20	4.88
7	Project expansion	08	8.79	19.51
8	Separate office for CEDP	02	2.20	4.88
9	Regular training	03	3.30	7.32
10	Recruitment of permanent skilled employees	05	5.49	12.20
11	Encouraging use of products for teachers	01	1.10	2.44
12	Delegation of responsibilities to the Planning Committee	02	2.20	4.88
13	Implementation of administrative policies	01	1.10	2.44

14	Complete implementation	01	1.10	2.44
15	Permission to construct new buildings	01	1.10	2.44
16	Paying the Internet	02	2.20	4.88
17	Provide specific policies	01	1.10	2.44
18	It is important to introduce new sections for the use of ICT lab	01	1.10	2.44
Total		91	100.0	221.95
Valid Cases		41		
Missing Cases		06		

Table 8: What could be done differently?

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	Recruitment of experienced manpower at initial stage	08	19.51	25.81
2	There should be provision for infrastructure development	02	4.88	6.45
3	Workshop/training for concerned officials	06	14.63	19.35
4	Activity in decision making	01	2.44	3.23
5	Recruitment of permanent staff	05	12.20	16.13
6	Salary increases for the project concerned	05	12.20	16.13
7	Establishment of Regional Coordination Centre	02	4.88	6.45
8	Funding all colleges	01	2.44	3.23
9	Monitoring	02	4.88	6.45
10	Centrally checking the tender process	01	2.44	3.23
11	Procurement through EGP from the beginning	01	2.44	3.23
12	Exclusion of any Less System works	01	2.44	3.23
13	Execution of work through central procurement	01	2.44	3.23
14	Transportation system	01	2.44	3.23
15	Determining the lowest rate of cost estimate in EGP	01	2.44	3.23

16	Coordination among all members of the IDG team	01	2.44	3.23
17	It is important to provide smartboard facilities to all departments	01	2.44	3.23
18	Extending the duration of the project and keeping the work going	01	2.44	3.23
Total		41	100.0	132.26
Valid Cases		31		
Missing Cases		16		

Table 9: Suggestions for similar/any such future projects

Sl.	Statement	Frequency	Percent of Responses	Percent of Cases
1	More caution in preparation of IDP	03	6.38	7.89
2	Training arrangements for all concerned	08	17.02	21.05
3	Recruitment of experienced manpower	05	10.64	13.16
4	Arrangement of self-assessment by the student	01	2.13	2.63
5	Nationalizing the college would be better	01	2.13	2.63
6	Need more projects like CEDP	14	29.79	36.84
7	Realistic decisions by reviewing needs at field level	02	4.26	5.26
8	Along with renovations, construction work is essential	01	2.13	2.63
9	Building new infrastructure	02	4.26	5.26
10	Research assistance	01	2.13	2.63
11	Improving the classroom environment	01	2.13	2.63
12	Implementation of decisions by workshops	01	2.13	2.63
13	Adequate funding allocation	01	2.13	2.63
14	Student-wise budget allocation	01	2.13	2.63
15	Bringing all colleges under the scheme	03	6.38	7.89
16	Undertaking internships	01	2.13	2.63
17	Allotment of neglected colleges on priority basis	01	2.13	2.63

Total	47	100.0	123.68
Valid Cases	38		
Missing Cases	09		

Annex Tables from Chapter 3.4

Table 1: Number of Classrooms, Subjects and Courses in the Colleges

Indicators	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges
Average Number of Classrooms (Out of 8)	8	7	7
Average Number of Subjects	7	5	6
Average Number of Courses	7	7	7

Table 2: Frequency Distribution of Subjects

Subject	IDG-Recipient Colleges		Non-IDG Colleges		All College	
	N	%	N	%	N	%
Bangla	29	10.0	20	13.8	49	11.3
Political science	30	10.3	19	13.1	49	11.3
History	9	3.1	1	0.7	10	2.3
Home economics	0	0.0	2	1.4	2	0.5
Islamic history & culture	14	4.8	5	3.5	19	4.4
Economics	23	7.9	14	9.7	37	8.5
Philosophy	10	3.5	3	2.1	13	3.0
Sociology	10	3.5	6	4.1	16	3.7
Soil science	0	0.0	2	1.4	2	0.5
Social work	14	4.8	6	4.1	20	4.6
Management	31	10.7	16	11.0	47	10.8
Accounting	25	8.6	20	13.8	45	10.3
Marketing	6	2.1	3	2.1	9	2.1
Finance and banking	2	0.7	2	1.4	4	0.9
Botany	12	4.1	3	2.1	15	3.5
Zoology	11	3.8	4	2.8	15	3.5
Math	11	3.8	2	1.4	13	3.0

Chemistry	9	3.1	1	0.7	10	2.3
Physics	8	2.8	2	1.4	10	2.3
Geography	4	1.4	2	1.4	6	1.4
CSE	1	0.3	0	0.0	1	0.2
English	22	7.6	9	6.2	31	7.1
Psychology	3	1.0	3	2.1	6	1.4
Islamic studies	2	0.7	0	0.0	2	0.5
Biochemistry & molecular science	2	0.7	0	0.0	2	0.5
Environmental science	1	0.3	0	0.0	1	0.2
Anthropology	1	0.3	0	0.0	1	0.2
Total	290	100.0	145	100.0	435	100.0

Table 3: Frequency Distribution of Courses

Sl. No.	Course Names from Different Subjects	Frequency	Percent of responses	Percent of cases
1	Accounting	3	0.6	4.11
2	Accounting information system	3	0.6	4.11
3	Management accounting	8	1.61	10.96
4	Principle of accounting	10	2.01	13.7
5	Advance accounting	8	1.61	10.96
6	Advanced reading and writing	1	0.2	1.37
7	Advertising	1	0.2	1.37
8	Agriculture economy	2	0.4	2.74
9	Apekkhik totto and kosology	1	0.2	1.37
10	Audit & management	3	0.6	4.11
11	History of ottoman	1	0.2	1.37
12	Atomic physics	1	0.2	1.37
13	Abstract algebra	1	0.2	1.37
14	Bangla golpo	9	1.81	12.33
15	Bangla sahitter history	10	2.01	13.7
16	Bangla golpo	1	0.2	1.37
17	Bangla kobita	11	2.21	15.07
18	Bangla language and society	1	0.2	1.37
19	Bangla lok sahitto	2	0.4	2.74
20	Bangla moulik culture	1	0.2	1.37
21	Bangla rommo history	4	0.8	5.48
22	Bangla uponnash	7	1.41	9.59
23	Bangla vasar etihis	2	0.4	2.74
24	Bangladesh and bangalir History	12	2.41	16.44

25	Bangladesh ayin pronoyon er proker	1	0.2	1.37
26	Bangladesh bishoyaboly	1	0.2	1.37
27	Bangladesh politics and Constitution	3	0.6	4.11
28	Bangladesh and bangalir History	2	0.4	2.74
29	Bank management	1	0.2	1.37
30	Basic immunology	1	0.2	1.37
31	Basic joibo rosayon	1	0.2	1.37
32	Basic management	1	0.2	1.37
33	Fundamental of mathmatics	7	1.41	9.59
34	Basic topics on inter. Politic	1	0.2	1.37
35	Bastik economics	5	1	6.85
36	Bastubiggan and poribeshbiggan	1	0.2	1.37
37	Bazarjatkoron nitimala	1	0.2	1.37
38	Bcs	1	0.2	1.37
39	Bebshaik porichity	1	0.2	1.37
40	Bangla drama-2	2	0.4	2.74
41	Biborton	1	0.2	1.37
42	Biborton and prottonobidda	1	0.2	1.37
43	Biborton pranibiggan	1	0.2	1.37
44	Biproty oporadh science	1	0.2	1.37
45	Bishwo sahitto	2	0.4	2.74
46	Boideshik govt.	1	0.2	1.37
47	Borjo management	1	0.2	1.37
48	Botany plant pathology	1	0.2	1.37
49	British bharot songbidhan	1	0.2	1.37
50	Business communication	1	0.2	1.37
51	Business management	1	0.2	1.37
52	Business math	4	0.8	5.48
53	Business statistics	5	1	6.85
54	Calculus-2	2	0.4	2.74
55	Chemistry-1	3	0.6	4.11
56	Classical muslim philosphers	1	0.2	1.37
57	Classical social thought	2	0.4	2.74
58	Compiler & design	1	0.2	1.37
59	Compulsury english	2	0.4	2.74
60	Constitution development in bd	1	0.2	1.37
61	Cost accounting	3	0.6	4.11
62	Cultural vugul	1	0.2	1.37
63	Dairy firm 7 fisheris	1	0.2	1.37
64	Development of economics	1	0.2	1.37
65	Development psychology	1	0.2	1.37
66	Dhoni biggan and vasa totto	1	0.2	1.37
67	Dhrupody social science	1	0.2	1.37
68	Digital marketing	2	0.4	2.74

69	Discrete mathematics	1	0.2	1.37
70	Dolio rajnity	1	0.2	1.37
71	Dorshon somosshaboly	3	0.6	4.11
72	Ecology	1	0.2	1.37
73	Economic banijjor rokkhon	1	0.2	1.37
74	Economic development	1	0.2	1.37
75	Economic geography	2	0.4	2.74
76	Economic planning	1	0.2	1.37
77	Economic prani biggan	1	0.2	1.37
78	Introduction to prose	1	0.2	1.37
79	Economics of bd	1	0.2	1.37
80	Electronics-1	1	0.2	1.37
81	Elements of sociology	1	0.2	1.37
82	Elizabeth & jacobian drama	3	0.6	4.11
83	English poetry	9	1.81	12.33
84	English reading skill	6	1.2	8.22
85	Entomology	1	0.2	1.37
86	Environment development	1	0.2	1.37
87	Environmental biology	1	0.2	1.37
88	Europe etihias	3	0.6	4.11
89	Taxonomy	1	0.2	1.37
90	Finance	11	2.21	15.07
91	Food and nutretion science	1	0.2	1.37
92	Foreign relations of Bangladesh	1	0.2	1.37
93	Fundamental economics	2	0.4	2.74
94	Ganitik economic	4	0.8	5.48
95	General monobiggan	1	0.2	1.37
96	Genetics	1	0.2	1.37
97	Govt & politics of south asia	1	0.2	1.37
98	History of english	2	0.4	2.74
99	Muslims history	11	2.21	15.07
100	History of world civilization	1	0.2	1.37
101	Household physics	1	0.2	1.37
102	History of south asia	5	1	6.85
103	HRM	3	0.6	4.11
104	Human research	1	0.2	1.37
105	Hydrology and river morphology	1	0.2	1.37
106	Indian philosophy-atheistic science	1	0.2	1.37
107	Industrial chemistery	1	0.2	1.37
108	Infect management	1	0.2	1.37
109	Information to statistics	1	0.2	1.37
110	Insurance and risk management	1	0.2	1.37
111	Intermediate microeconomics	6	1.2	8.22
112	Intermediate macroeconomics	8	1.61	10.96

113	International business	2	0.4	2.74
114	International economics	2	0.4	2.74
115	International politics	8	1.61	10.96
116	Introduction to economics	2	0.4	2.74
117	Introduction to poetry	1	0.2	1.37
118	Introduction of management	3	0.6	4.11
119	Introduction of social work	3	0.6	4.11
120	Introduction to business	1	0.2	1.37
121	Introduction to english	1	0.2	1.37
122	Introduction to zoology	1	0.2	1.37
123	Introduction to statistics	3	0.6	4.11
124	Introductory soil-1	1	0.2	1.37
125	Islami ortho bebostha	1	0.2	1.37
126	Islamic doa	1	0.2	1.37
127	Islamic history	2	0.4	2.74
128	Karjo bebosthapon	1	0.2	1.37
129	Language	1	0.2	1.37
130	Legal environment of business	1	0.2	1.37
131	Literature	1	0.2	1.37
132	Literary criticism	2	0.4	2.74
133	Lok proshashon	5	1	6.85
134	Magnetism	1	0.2	1.37
135	Principle of management	5	1	6.85
136	Managerial accounting	1	0.2	1.37
137	Marketing	3	0.6	4.11
138	Marketing principles	5	1	6.85
139	Markxio dorshan	1	0.2	1.37
140	Mathematical economics	2	0.4	2.74
141	Mati o joibo vugul	1	0.2	1.37
142	MBA	1	0.2	1.37
143	Mechanics	1	0.2	1.37
144	Micro biology	3	0.6	4.11
145	Micro biology19-20	1	0.2	1.37
146	Modern philosophical classic	2	0.4	2.74
147	Modern political analysis	3	0.6	4.11
148	Molecular	1	0.2	1.37
149	Moulik joibo rosayon	2	0.4	2.74
150	Moulik porisongkhan	1	0.2	1.37
151	Mritika-1	1	0.2	1.37
152	Muslim dhorshon	1	0.2	1.37
153	Mycology	1	0.2	1.37
154	Nagor somaj biggan	1	0.2	1.37
155	Nineteen century nobel	2	0.4	2.74
156	Nitibidda	1	0.2	1.37

157	Ongshidaritto somonbay manage	1	0.2	1.37
158	Operation management	2	0.4	2.74
159	Oporadh o somaj	1	0.2	1.37
160	Other culture	1	0.2	1.37
161	Para sitelogy	1	0.2	1.37
162	Paromanobik podharto science	1	0.2	1.37
163	Partial differntial equation	1	0.2	1.37
164	Paschatter rastro chinta	6	1.2	8.22
165	Paschatto dorshoner history	1	0.2	1.37
166	Paschotte shahitto	1	0.2	1.37
167	Pesant society	1	0.2	1.37
168	Physical chemestry	2	0.4	2.74
169	Plant physiology	1	0.2	1.37
170	Plant bredeny	4	0.8	5.48
171	Political agenda and solutions	1	0.2	1.37
172	Political economics	1	0.2	1.37
173	Political institution	4	0.8	5.48
174	Political society	1	0.2	1.37
175	Politics and development law	2	0.4	2.74
176	Politics in middle east asia	1	0.2	1.37
177	Popuation and health economics	3	0.6	4.11
178	Population and development ofw	2	0.4	2.74
179	Population issues principle	1	0.2	1.37
180	Porfessional english	1	0.2	1.37
181	Praccher rastrodata	2	0.4	2.74
182	Pranibidda porichiti	2	0.4	2.74
183	Praromvik somaj biggan	1	0.2	1.37
184	Principle of economics	1	0.2	1.37
185	Principleof nation english	1	0.2	1.37
186	Project management	2	0.4	2.74
187	Prokritik vugul porichity	1	0.2	1.37
188	Protiki jukti bidda	2	0.4	2.74
189	Public finance	1	0.2	1.37
190	Quantum-mehcanies	1	0.2	1.37
191	Real analysis	2	0.4	2.74
192	Recearch methodology	2	0.4	2.74
193	Recent rastro chinta	1	0.2	1.37
194	Regional geography	1	0.2	1.37
195	Research and statistics	1	0.2	1.37
196	Restoratiopn and century ficti	1	0.2	1.37
197	Ruptotto roshtatto olongkar	2	0.4	2.74
198	Rural sociology	1	0.2	1.37
199	Sadhin bangladesh	4	0.8	5.48
200	Samaj kormo porichity	4	0.8	5.48

201	Samajik gobeshona statistics	1	0.2	1.37
202	Samajik history and bishwa sov	1	0.2	1.37
203	Samajik kormo development	3	0.6	4.11
204	Samajik osomota	2	0.4	2.74
205	Samajik poriborton	1	0.2	1.37
206	Samajik somossa	4	0.8	5.48
207	Sangodhonic achoron	2	0.4	2.74
208	Selective inorganic	1	0.2	1.37
209	Seneori novial	1	0.2	1.37
210	Shahitto somalochona	1	0.2	1.37
211	Shanty and songorsho	1	0.2	1.37
212	Shilpo uddokto	1	0.2	1.37
213	Sikkha tutto	1	0.2	1.37
214	Social history and philosophy	1	0.2	1.37
215	Social pychology	1	0.2	1.37
216	Social science	1	0.2	1.37
217	Society and culture of banglad	1	0.2	1.37
218	Soibal science	3	0.6	4.11
219	Somokalin bisshe muslim songkh	1	0.2	1.37
220	Somosamoshik somaj tattik	1	0.2	1.37
221	South east asia's economy	1	0.2	1.37
222	Statistics and research	1	0.2	1.37
223	Statistics in psychology	1	0.2	1.37
224	Steriod chemistry	1	0.2	1.37
225	Studies on bangladesh economic	1	0.2	1.37
226	Supply chain management	1	0.2	1.37
227	Tap and goti bidda	1	0.2	1.37
228	Tap o bikiron	1	0.2	1.37
229	Tazation in bd	1	0.2	1.37
230	Texonomy of engiosperm	1	0.2	1.37
231	Tharmodynamics	1	0.2	1.37
232	Uchchotro production expenditure	1	0.2	1.37
233	Uman physiology	1	0.2	1.37
234	Urban economics	1	0.2	1.37
235	Varotio muslim administration	1	0.2	1.37
236	Vasha moulikota dharon	1	0.2	1.37
237	Vashaer lipikabbo	1	0.2	1.37
238	Victorian	1	0.2	1.37
239	Victorian poetry	1	0.2	1.37
240	Western literature	2	0.4	2.74
241	Women in politics and develop	1	0.2	1.37
242	Working capital management	1	0.2	1.37
243	Fortran-2	1	0.2	1.37
244	Grameen and sohor somosty	2	0.4	2.74

	Development			
245	Hayar trikopoceans	1	0.2	1.37
	Total	498	100	682.19

Table 4: Average No. of Students Visiting Science Labs

Type of Science Labs	Average No. of Students Visiting Science Labs				
	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Physics	11.73	6.90	9.84	4.837	0.461
Chemistry	13.69	5.59	10.51	8.103	0.202
Botany	2.07	3.24	2.53	-1.175	0.486
Zoology	3.60	2.62	3.22	0.979	0.654
Others	0.73	3.79	1.93	-3.06	0.19
Total	31.82	22.14	28.03	9.684	0.458

Table 5: Total No. of Students Visiting Science Labs

Type of Science Labs	Total No. of Students Visiting Science Labs		
	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges
Physics	528	200	728
Chemistry	616	162	778
Botany	93	94	187
Zoology	162	76	238
Others	33	110	143
Total	1432	642	2074

Table 6: Average Numbers of Science Labs Visited

Type of Science Labs	Average No. of Labs Visited				
	IDG-Recipient Colleges	Non-IDG Colleges	All Colleges	Difference	P-value
Physics	0.44	0.28	0.38	0.169	0.148

Chemistry	0.58	0.31	0.47	0.267*	0.033
Botany	0.16	0.21	0.18	-0.051	0.577
Zoology	0.29	0.17	0.24	0.116	0.26
Others	0.11	0.21	0.15	-0.096	0.311
Total	1.58	1.17	1.42	0.405*	0.047

Annex 5.1:

Effectiveness of the Project: Evidence from the DLI-4 Verification Results of the Project (CEDP)

Table 1: Status of fund utilization

College type	Proportion used (%)	
	2022	2023
Government college	-	78.5%
Non-government college	-	71.8%
Total	26.67%	77.3%

Table 1 shows the status of fund utilization in both year 2022 and 2023. In 2022, 26.67% fund was used by colleges which has risen to 77.3% in 2023.

Table 2: Physical verification results from all colleges

Type of works and goods	Proportion of renovated/purchased	
	2022	2023
Renovation of class rooms	67.92	97.6
Renovation of office room	58.21	100
Renovation of washroom	54.29	97.2
Renovation of department Teacher's room	83.08	84.5
Renovation of conference room	75.00	100
Renovation of auditorium	66.67	100
Renovation of seminar library	61.26	97.0
Drinking water facility	90.00	99.8
Generator	0.00	100
Fire extinguisher	0.00	100
Renovation of science lab	48.78	100
Renovation of computer lab	47.62	100
Renovation of central library	68.22	100

Table -2 provides information on various renovation and procurement components. In 2022, most improvements (90%) were done in drinking water facility (90%) followed by renovation of department Teacher’s room (83.08%), renovation of conference room (75%), renovation of central library (68.22%), renovation of class rooms (67.92%), renovation of auditorium (66.67%), renovation of seminar library (61.26%), renovation of office room (58.21%), renovation of washroom (54.29%), renovation of science lab (48.78%) and renovation of computer lab (47.62%). But this scenario was different in 2023. Most improvements (100%) were done in renovation of office room, renovation of conference room, renovation of auditorium, renovation of science lab, renovation of computer lab, renovation of central library, improvement of generator and fire extinguisher. Then 99.8% improvements were done in drinking water facility followed by almost 97% improvement were in renovation of classroom, washroom, seminar library and 84.5% improvement were in department teacher’s room.

Table 3: Achievement and progress based on performance indicator

Indicators	Target fulfillment status	
	2022	2023
Students’ attendance (classroom)	0.56	89.04
Use of multimedia/smart board	-	77.23
Internet/ WiFi connectivity	-	36.32
Students’ attendance (Libraries)	5.83	81.21
Students’ access to the ICT lab	0.62	74.93
Improved teachers’ capacity		86.70
Sessions conducted using digital content	0.34	63.06
Developed college automation/MIS	0.07	17.72
Internship in the industry	-	30.00
Students’ access to science LAB	-	91.06
Self-assessment report	0.01	46.24
Increase students’ participation in online class	-	57.89

Increase students' participation in the job fair	-	79.69
Increased teachers' interest for taking class with multimedia	-	93.42
Increased teachers' interest for taking class with Smart board	-	90.00
Improved teaching and learning capacity	-	100.00
MOU signed for exchange program with other organization	-	0.00

Table 4: Fund utilization against DLI target (2023)

Reference to DLI	DLI target	Actual average utilization	Evidence used by the study team	Remarks
DLI-4 Year 6(a)	On average 65% of the total allocated budget of the competitive funding is utilized in accordance with the operation manual	77.3%	<ul style="list-style-type: none"> ▪ Operations manual ▪ IDPs ▪ FMPs ▪ FMRs ▪ Study team's own verification with the colleges 	Fully achieved

Table 5: Summary (2023)

Reference	Key verification areas	Status/Remarks
DLI-4 Year 6(a)	Fund utilization	Fully achieved
	FM reporting	Fully complied
	Compliance of fund utilization according to the IDG operational manual	Fully complied
	Environmental and social safeguard issues	Fully complied

Table 6: Internet/WiFi network/ ICT corner

Indicators	Percentage of colleges	
	2022	2023
Internet/WiFi network/ ICT corner	33.3	86.2
Properly working internet/WiFi network/ ICT corner	46.7	50.0
Computer networking system has been established through IDG	-	2.8
Establishment of computer networking system through IDG is under progress	-	72.2
MI system has been established through IDG	1.8	2.8
Establishment of MI system through IDG under progress	-	50.0

In 2022, 33.3% colleges had internet/WiFi network/ ICT corner and 46.7% of them worked properly while colleges with internet/WiFi network/ ICT corner increased to 86.2% in 2023 and 50% of them work properly.s

Table 7: Achievement and progress on activity milestones

Milestones	Achievement/Progress (%)
Works completed	96.3
Goods produced	94.1
Training conducted	81.7
Network and connectivity	24.4
Establishment of MIS (in progress)	0.00
Self-assessment	31.1
Upgradation and automation of central library	79
Job fair (Just 1 college planned for it but could not make it)	0.00
Establishment of electronic power sub station	50.00

Table 8: Achievement and progress based on performance indicators

Indicators	Initial value (as per IDP)	Target value by completion (as per IDP)	Current value (as of 30 June 2023)	Target fulfilment status	Remark
Students' attendance (classroom)	41.17	78.2	69.63	89.04	On track
Use of multimedia/smart board	11.79	79.5	61.4	77.23	On track
Internet/ WiFi connectivity	8.96	71.2	25.86	36.32	Need attention
Students' attendance (Libraries)	28.15	65.26	53	81.21	On track
Students' access to the ICT lab	14	67	50.2	74.93	On track
Improved teachers' capacity	18.1	82.96	71.93	86.70	On track
Developed college automation/MIS	4.28	49.37	8.75	17.72	Need attention
Internship in the industry	0.25	12.5	3.75	30.00	Need attention
Students' access to science LAB	24.14	80	72.85	91.06	On track
Self-assessment report	0.3	62.72	29	46.24	Need attention
Increase students' participation in online class	6.66	63.33	36.66	57.89	Not applicable now
Increase students'	6.66	53.33	42.5	79.69	On track

participation in the job fair					
Increased teachers' interest for taking class with multimedia	10.83	63.33	59.16	93.42	On track
Increased teachers' interest for taking class with Smart board	5	50	45	90.00	On track
Improved teaching and learning capacity	70	90	90	100.00	On track
MOU signed for exchange program with other organization	0	2	0	0.00	Need attention

Annex 5.2:

Effectiveness of the Project: Evidence from the Project (CEDP) Monitoring Reports

Introduction:

The commitment of the Bangladesh government to prioritize education is evident through initiatives like the College Education Development Project (CEDP), supported by the World Bank and executed by the University Grants Commission (UGC) and National University (NU). This project underscores the nation's recognition of tertiary education as a cornerstone for transforming its human resources into valuable human capital.

The collaboration with the World Bank signifies international endorsement and assistance for Bangladesh's endeavors to enhance tertiary education. By involving key institutions such as the UGC and NU, the government is adopting a collaborative approach, harnessing the collective expertise and resources of these organizations for effective project implementation.

In summary, initiatives like the CEDP exemplify Bangladesh's unwavering dedication to advancing tertiary education. Through strategic planning, quality enhancement, and inclusive measures, the nation is actively contributing to the sustainable development of its education sector.

The project provides support to eligible government and non-government colleges through three-year Institutional Development Plans (IDPs), facilitated by Institutional Development Grants (IDGs). The focus areas outlined in the IDPs include:

1. Enhancing the teaching-learning environment in participating colleges through the upgrade of basic facilities and internet connectivity.
2. Developing the soft skills of students in connection with the job market.
3. Improving the market relevance of college education by fostering collaboration with industries and employers.
4. Strengthening the management capacity of colleges and upgrading their fiduciary systems.

To date, 13 reports have been generated, detailing the project's progress and accomplishments. This 14th Semi-annual report evaluates the successes and challenges faced by the colleges that received IDGs in implementing their IDPs. The report comprises an executive summary, 11 chapters, 7 annexes, and 2 attachments. These chapters delve into the implementation status of project activities, providing insights into the achieved development objectives thus far.

Achievements:

- ✓ **Development of a strategic plan for college sub-sector:**

The SHED is supposed to prepare a 15 year Plan of action for the education sector including enrollment projections, quality assurance mechanism, access and equity strategies, policies for teacher deployment and professional development. A draft investment plan has been prepared for further transformation into a development project plan based on the strategic plan's plans reform actions.

✓ **Improvement of the teacher management system:**

Government has completed recruitment of 2700 vacant posts of college teachers in the government colleges as proposed by DPP. By December 2018, Public Service Commission (PSC) completed appointment of 3500 teachers gradually through BCS examinations. The progress of filling teacher vacancies in non-government colleges is improving too.

✓ **Improving the teacher learning environment in colleges:**

As per DPP provision, CEDP has sponsored selected number of 120 government and non-government National University affiliated colleges to address the challenges of institutional development and build their capacity for providing high quality relevant higher education. The amount of IDGs provided to all 120 colleges is 73.78% of the contacted amount. A total of 4,300 teachers and staff members have undergone training in areas such as 'Basic ICT' (4,300 participants), 'Office Management Procedure' (2,650 participants), and e-GP (236 participants).

✓ **Internet Connectivity and campus networking:**

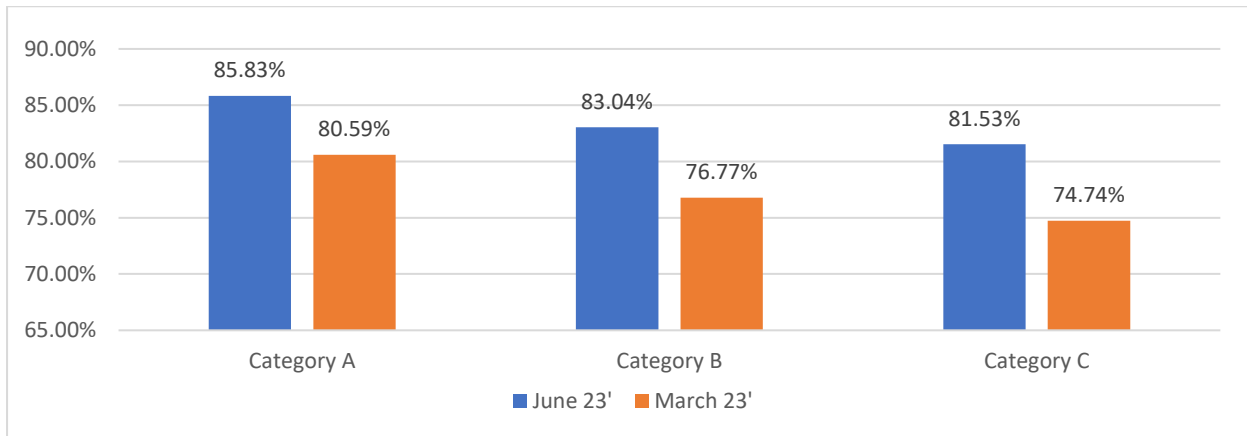
Internet connectivity activities in 118 colleges out of 120 is going on in partnership between national university and BdREN. Connectivity progress reports reveal that overall progress of connectivity is 43. 110 colleges have published tenders, 100 colleges issued NOA, 94 colleges signed contracts, and devices have been delivered to 50 colleges. It is necessary to mention that the duration of the sub-projects of the IDG awarded colleges has been increased till December 23', which is they met the target to be completed by December successfully. As of June 30th 2023, the colleges benefiting from Institutional Development Grants (IDGs) have made strides, achieving 84.53% in physical progress.

✓ **Institutional Self-Assessment:**

The project has played a pivotal role in addressing backlogs and expediting the recruitment of teachers to ensure that government colleges have the necessary teaching expertise. It has also bolstered the progress of filling teacher vacancies in non-government colleges. Numerous workshops and meetings on various facets of Institutional Self-Assessment (ISA) have been conducted at both the college and regional levels, including 38 face-to-face workshops, 12 online workshops, and 11 online meetings. As of August 20, 2023, more than 5,700 teachers and managers have undergone training.

The following bar chart demonstrates gradual increase in the physical progress from the previous reporting period-

Figure 2: Category Wise Physical Progress of IDG implementation in March & June 23

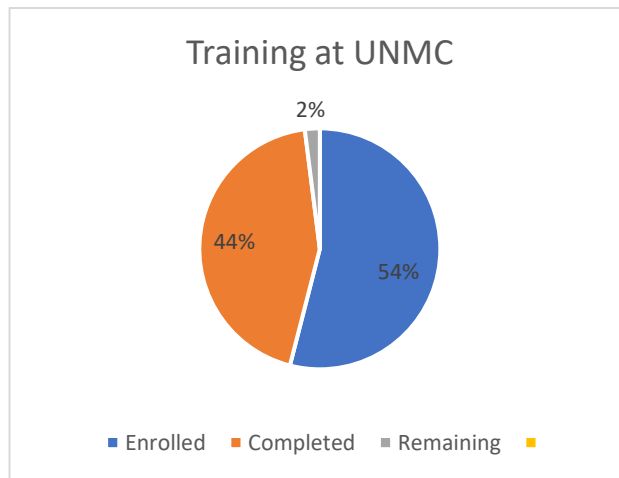


Source: IDG unit, CEDP

✓ **Strengthening Teaching and management capacity in colleges:**

4 types of training programs are organized by University of Nottingham Malaysia Campus (UNMC). 54% have been enrolled, 44% have completed and 2% of the teachers in Bangladesh are engaged in it. Figure below depicts it beautifully.

Figure 3: Percentage of teachers engaged at UNMC training



✓ **Project Management and communication:**

This component asserts project management, including establishment of a project Management Unit (PMU). Currently PMU is functioning with 20 officers, 14 consultants, 11 PMU support staff and 10 outsourcing support staff.

✓ **Fund Utilization Management:**

The total financial progress 73.78%. The overall advancement of the College Education Development Project (CEDP) amounts to Taka 59,993.055 lakh, equivalent to 57.69% of the total project cost of Taka 104,000.00 lakh till September 2023.

✓ **Environmental and social safeguard:**

CEDP prepared Environmental and Social Impact Management Plans (ESIMPs) for all IDG awarded 122 colleges to manage the environment and social safeguard issues.

✓ **Governance and Accountability Action Plan(GAAP) implementation:**

To achieve the objectives of CEDP successfully, Governance and Accountability Action Plan (GAAP) was developed and regularly monitored for smooth implementation of the project activities.

✓ **Progress of the sub-component Monitoring and Evaluation:**

Through 2023, project officials and consultants of M and E unit visited 112 colleges to monitor sub project activities and submitted the monitoring reports to the project authority.

✓ **Results Framework:**

The count of students benefiting from the program rose from 2.88 million in 2021 to 4.74 million in 2022. There has been a satisfaction level increase of over 5% among students and approximately 4.5% among teachers which successfully met the target of achieving 2.57% and 2.42% respectively. The number of female beneficiaries witnessed a notable surge of 50.37%. Key achievements encompass advancements in knowledge, skills, teaching and learning methodologies, language proficiency, and the integration of technologies in education.

✓ **Management Capacity:**

80 colleges strengthened their management capacity out of 120 colleges. Female beneficiaries increased by 50.37%. About 124 workshops have been organized and 596 teachers are trained which include training on procurement, e-GP, regional workshops on PMIS, self-assessment, PCR writing etc. The DLI claim is also satisfactory. Additionally, there has been progress in the development of local trainers. Notably, colleges have employed both OTM and RFQ methods for the procurement of goods and works.

✓ **Progress in renovation and refurbishment:**

As of October 2023, US\$ 70 million (76%) have been achieved out of total DLR of 92 million, with 69 million successfully achieved. Colleges have acquired 4,832 physical facilities through renovation and refurbishment activities, procured 40,106 electrical and electronic equipment, and obtained 93,865 pieces of furniture and fixtures.

Source: Monitoring and Evaluation Unit PMU, CEDP

Challenges/Limitations:

- COVID 19 syndrome disrupted the regular classes and long term class gap demotivated the students to attend colleges
- Due to lack of experience, the colleges faced difficulties in handling procurements and financial related issues.
- Delay in central procurement, devaluation of BDT against dollar and global economic depression slowed down the implementation of IDPs.

- Dearth of qualified bidders hindered the performance of timely delivery of the products according to specifications.
- Members of IDGMT are overloaded by the overwork and cannot perform properly.
- Insufficient number of members in IDGMT in some colleges and low incentives demotivate them.
- With limited manpower, it is difficult to manage suppliers.
- Dearth of technical expertise in the colleges.
- Poor communication causes procrastination of files for approval through RFQ.
- Untimely fund release, App revision, dearth of knowledge on e-GP, over billing value in the e-GP system cause the delay in many cases.
- The colleges are not well equipped to run the soft skill training.

Recommendations:

- The equipment and goods procured by the colleges should be maintained properly
- The colleges may generate revenue by giving training to the interested people on computer in exchange of a particular fee. This will help maintain the ICT equipment
- A monitoring team may be formed in the colleges for supervision and maintenance of the equipment.
- Ownership of the facilities created by CEDP should be taken by the colleges so that awareness of the colleges should be grown by the colleges.
- Coordination between CEDP and the sub-project management team should be strengthened for smooth completion of IDP activities.
- The training programs should be further invigorated especially on PPR procurement, e-GP, ICT and related issues.
- The ongoing training programs organized by CEDP should be introduced.
- Transferring certain networking and internet connectivity responsibilities from centralized procurement to individual colleges.
- Enhancing the recruitment and management processes for teachers in both government and non-government sectors to promote system-level governance and improve quality.
- Improving the teaching skills of college teachers.
- Priority efforts should be given to complete all procurements in consultation with CEDP
- The overload of the IDGMT should be lessened so that they can execute the IDP activities by dedicating more time in implementation of IDPs.
- Fostering a culture of English language learning in colleges.
- The colleges should deploy more manpower and focal point should be given sufficient incentives by the college.

Annex 5.3:

Effectiveness of the Project: Extract from the National Strategic Plan for Higher Education Colleges in Bangladesh: 2023-2031

Introduction:

The National Strategic Plan for Higher Education Colleges in Bangladesh is a venture aimed at enhancing higher education within the colleges affiliated with the National University. This plan includes initiatives covering six key thematic areas:

1. Vision, size, shape, and scope.
2. Access and equity.
3. Quality and relevance.
4. Management of Colleges.
5. Financing Colleges.
6. Advancing Science, Technology, and ICT in education.

Based on the findings of situation analyses of five thematic areas the strategic plan sets the following goals-

- 1) Equity in access to higher education in colleges
- 2) Improved performance of higher education in college graduates in terms of knowledge, skills and employability
- 3) Improved management structure endowed with adequate administrative and support staffs
- 4) Increased opportunity for resource mobilization by the colleges and more allocation of government resources
- 5) More graduates in science and technology disciplines along with increased use of ICT

In this context, SHED, DSHE, and DIA are tasked with formulating policies, executing policies, and overseeing financial management practices in non-government colleges.

Key Considerations for strategic planning:

- **Implementation of National Education Policy (NEP) 2010 and strategic Plan of higher education: 2018-2030.**
Although the government has been working and implementing some programs, many policy recommendations are yet to be implemented.
- **There is no supply side constraints of higher education:**
Around 60000 seats were available altogether in the public and national universities which is the only key strength of higher education.
- **Higher Education in colleges is at the stage of massification:**
The estimated enrollment in ratio is in between 15-50% and so it can be classified as mass higher education. Expert committee believes achieving quality education is challenging in this mass system.

- **Average size of non-government colleges is small:**
Steps should be taken by the government to make them enlisted for financial support under “Monthly Payment Order” program
- **Affiliation of new general colleges will be limited:**
Despite increased pressure on the demand for higher education, expert opinion is not to increase general education as it harms upon the quality of education.
- **Average years of schooling have increased among the age of 25 years and above:**
It was found that country with higher level of average years of schooling achieves higher per capita income

Key cross cutting strategies:

- Placing colleges under the framework of the Bangladesh Accreditation Council (BAC) is recommended. By extending coverage to the affiliated colleges, BAC can engage itself with the management of quality of higher education.
- Adequate government investment in colleges should be ensured. NEP 2010 has recommended more investment in higher education colleges to overcome the current problem of the colleges.
- Increasing attainability regarding financial management in colleges is important. The affiliating university authority should supervise activities related to financial management practiced in colleges as per NU’s provisions.
- Maintaining a small, effective, and functional governing body is recommended. NU must reconstitute the GB for each non-government college consisting of 10 members instead of 15 including 2 female members.
- Introducing innovations in training opportunities is essential. The ongoing training programs for college teachers offered by NU shall continue and expanded to regional centers in due course
- Implementing an innovative promotion policy for teachers is recommended. A change in the policy such as revised promotion policy – where completing PhD or publishing research will add points and expedite promotion.
- Increasing the role of non-government teacher registration and certification authority is important. A revised NTRCA Act mandating NTRCA with an increased role in recruiting teachers for teaching at Bachelor or master’s level as well as appointing principals is highly desirable
- Offering innovative and alternative new courses aligned with the needs of the job market is recommended. The affiliating university (NU) should work on delivering short courses: diploma and post graduate certificate degree programs.
- Encouraging collaboration and resource sharing among colleges is important. For instance, large colleges may allow students from small colleges to access their lab and library facilities.
- Providing open educational resources (OER) for all is recommended. Students at the higher education colleges should have access to OER free of charge.
- Implementing technology-enabled learning platforms for education delivery is crucial. The affiliated university (NU) should introduce a blended system of both online and face-to-face teaching-learning process.

Objectives and Strategies:

Objective 1: Increased enrollment and degree completion of academic eligible and socially disadvantaged students

Strategies:

1.1) Financial Support:

Undertaking financial support programs for female, physically challenged, and students of ethnic origins is important.

1.2) Favorable environment:

Creating a favorable environment for female and physically challenged students is recommended.

Objective 2: Increased enrollment in science and technology related degree programs

Strategies:

2.1) Capacity development:

Undertake capacity development of colleges offering degree programs in science and technology

Objective 3: Increased enrollment of meritorious and eligible students from rural areas in honors and masters level

Strategies:

3.1) Motivational Initiatives:

Adopting motivational initiatives for students from rural areas is crucial. For example, arranging financial assistance/ scholarship programs.

Objective 4: Increased resource allocation to resource poor high performing colleges

Strategies:

4.1) Revising DSHE organogram:

Revising the DSHE organogram and strengthening DSHE's capacity in resource planning and resource management is recommended.

4.2) Development projects:

Implementing dedicated development projects for resource-poor colleges is essential.

Objective 5: Separated management of higher education and higher secondary education

Strategies:

5.1) Enforcing rules and regulations:

Preparing and enforcing rules and regulations for higher education is recommended. For example; drafting an act like Private University Act 2010, revising NU regulations, Revising Education Boards' Regulation.

Objective 6: Increased number of teachers with doctoral degree and research publications

Strategies:

6.1) Adequate Funds:

Allocating adequate funds for doctoral study and research is essential.

6.2) Promotion policy:

Establishing a performance-based promotion policy is recommended. Like as, revisiting government regulations for promotion of B.C.S cadre officials, ensuring proactive role of NU in promoting research and research publication in colleges.

Objective 7: Increased number of colleges with improved teaching learning environment

Strategies:

7.1) Prepare and execute effective monitoring and supervision plans

7.2) Ensure policy supports for adequate investments to make teaching learning environment conducive to quality education

7.3) Adherence to NU reference books:

Strict adherence to the NU reference book is crucial. This strategy aims at overcoming the problem of using non-peer reviewed books written by local authors and published by local publishers as textbook or reference books instead of the NU recommended books.

7.4) Develop functional relationships among BAC, NU, DSHE and colleges

Objective 8: Increased number of trained teachers

Strategies:

8.1) Increase teachers and graduates:

Number of trained teachers and good quality graduates should be increased through different curriculums such as introducing continuous professional development in training institutions like NAEM, BPATC, NU, DU etc. and knowledge creation and sharing about skills demand in the job market.

Objective 9: Improved and innovative Performance Evaluation System

Strategies:

9.1) Develop and implement innovative mechanism for question paper setting

Objective 10: Increased number of good quality graduates

Strategies:

10.1) Increase teachers and graduates:

Number of trained teachers and good quality graduates should be increased through different curriculums such as introducing continuous professional development in training institutions like NAEM, BPATC, NU, DU etc. and knowledge creation and sharing about skills demand in the job market.

10.2) Education industry collaboration for graduate internship

Objective 11: Dual study programs consisting of academic and apprenticeship in selected disciplines of Science, Technology, Commerce and Business

Strategies:

11.1) Revised academic degree programs offered by NU

11.2) Regulatory framework to support dual academic degree programs

Objective 12: Strengthened coordination between NU DSHE

Strategies:

12.1) Develop policy for systematic coordination between NU DSHE

Objective 13: Organogram developed and operationalized for colleges

Strategies:

13.1) Develop organizational structure

13.2) Develop policy

Objective 14: Functional Board of Directors and Board of studies in National University

Strategies:

14.1) Board of Directors and Studies:

Engaging board of directors and board of studies as per provision of the national university act through establishing a monitoring mechanism to monitor the activities of both the boards.

Objective 15: Improved Legal instrument to support affiliation of colleges

Strategies:

15.1) Formulate and execute a national policy for affiliation of colleges

Objective 16: Transparency and accountability of the governing body institutionalized

Strategies:

16.1) Rules and regulations for GB members:

Developing rules and regulations clarifying the roles of the GB members is recommended. Preparing detailed terms of reference or scope of works for GB members and assigning responsibilities to them strictly following the financial management can be some ways for developing it.

16.2) Revised NU regulations for GB for reconstitution of GB to include members with adequate academic qualifications

Objective 17: Increased amount of government allocation for government colleges

Strategies:

17.1) Policy advocacy for increased share of government education budget

17.2) Capacity development in budget preparation and management

Objective 18: Increased opportunity for colleges to be self-reliant financially

Strategies:

18.1) Supportive Policy for income contingent fee

18.2) Supportive policy regarding resource mobilization from internal and external sources by government colleges

Objective 19: Reduced out of pocket expenditure of households to finance higher education of their children

Strategies:

19.1) The out of pocket expenditure of households should be reduced in order to increase financing in higher education by accessing to low interest bearing student loan, reducing dependency on private coaching etc.

19.2) Access to off-campus online model of teaching and learning

19.3) Reduced dependency on private coaching

19.4) Access to low interest bearing student loan

Objective 20: Improved system of funding for non-government higher education colleges

Strategies:

20.1) Endowment Fund for non-government higher education colleges

20.2) Enrollment based funding for higher education colleges

Objective 21: Increased enrollment in Science and technology discipline

Strategies:

21.1) Financial support for needy students enrolled in science and technology disciplines

21.2) Development of college capacity in offering degree programs in science and technology

21.3) Enhancement of scope to study science and technology related degree programs in higher education colleges

Objective 22: Improved Gender and regional equity in enrollment in science and technology related disciplines

Strategies:

22.1) Targeted financial supports for disadvantaged students

22.2) Prioritizing affiliation of degree programs in colleges located in disadvantaged divisions

Objective 23: Enhanced teaching and learning opportunities through blended learning

Strategies:

23.1) Encouraging colleges to utilize their technology resources for blended teaching

23.2) Opportunities for online and in-person learning for students

Objective 24: Increased use of ICT in delivering education

Strategies:

24.1) Enhancement of skills of the teachers in using ICT as a tool for teaching-learning

24.2) Development of online resources

24.3) Internet Connectivity:

Establishing sustainable campus network and internet connectivity by engaging BdREN to expand its operations to colleges across the country.

Annex-6.1

Questionnaires and Checklists



Bangladesh Institute of Development Studies (BIDS)
E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)
Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey

[Disclaimers: এই প্রস্তুপত্রের মাধ্যমে সংগৃহীত তথ্য শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে। এখানে কোন ব্যক্তি বা কলেজের নাম কোন অবস্থাতেই গবেষকদের বাইরে অন্য কোথাও বা অন্য কারো কাছে প্রকাশ করা হবে না।]

Questionnaire for Principal/IDG Manager (College Related)

		College Code: Project=1, Control=2	
উত্তরদাতার পরিচয়			
১	তথ্য সরবরাহকারীর নাম (IDG Manager/Principal):		
২	কলেজের নাম:		
৩	পদবী:		
৪	ফোন নম্বর:		
৫	ই-মেইল:		

General Information		
১.১	শিক্ষা প্রতিষ্ঠানের ধরন: [কোড: ১= সরকারি কলেজ, ২= বেসরকারি কলেজ]	
১.২	শিক্ষার্থীর ধরন: [কোড: ১=ছেলেদের জন্য, ২=মেয়েদের জন্য, ৩=সহশিক্ষা একত্রে, ৪=সহশিক্ষা আলাদা]	
১.৩	Total number of students in the college:	
১.৪	Total number of female students in the college:	

1. Year-wise total number of enrolled students (last five years) by Department

Name of the Department:

Year	Honor's 4 th Year			Master's Final Year		
	Total enrollment capacity	Total students enrolled	Total female students enrolled	Total enrollment capacity	Total students enrolled	Total female students enrolled
2023						
2022						
2021						
2020						
2019						
2018						

2. Year-wise average attendance of students in the class (last five years) by Department

Name of the Department:

Year	Average attendance of students: Honor's 4 th Year (Approximately)	Average attendance of students: Master's Final Year (Approximately)
2023		
2022		
2021		
2020		
2019		
2018		

3. Year-wise pass rates of the students who appeared in the final exam (last five years) by Department

Name of the Department:

3.a Please fill up this table for the department's 4th year honor's students

Year	Honor's 4 th Year					
	Total 4 th year enrollment	Total students that participated in the final exam	Total students that passed the final exam	Average CGPA obtained by the students (Number of Students)		
				CGPA below 2.00	Between 2.00-2.99	CGPA 3.00 and above
2023						
2022						
2021						
2020						
2019						
2018						

3.b Please fill up this table for the department's master's final year students

Year	Master's Final Year					
	Total final year enrollment	Total students that participated in the final exam	Total students that passed the final exam	Average CGPA obtained by the students (Number of Students)		
				CGPA 3.00 and above	Between 2.00-2.99	CGPA below 2.00
2023						
2022						
2021						
2020						
2019						

2018						
------	--	--	--	--	--	--

4. Year-wise total number of teachers posted in the college

Year	Total number of approved posts in the college	Total number of teachers posted	
		Male	Female
2023			
2022			
2021			
2020			
2019			
2018			

5.A Year-wise total number of teachers received training while in the college (in-house)

Year	Total number of teachers received in-house training only under IDP (For IDG recipient colleges only)		Total number of teachers received in-house training other than those received under IDP (For all colleges)		Target number of the teachers to be provided with training under IDP within college campus based on latest approved IDP (Only for IDG recipient colleges)
	Male	Female	Male	Female	
2023					
2022					
2021					
2020					
2019					
2018					

5.B Year-wise total number of teachers received training organized by CEDP central and other organizations

Year	Total number of teachers received training organized by CEDP central only		Total number of teachers received training organized by other organizations	
	Male	Female	Male	Female
2023				
2022				
2021				
2020				
2019				
2018				

6. Year-wise total number of officers and other staff posted in the college

Year	Total number of approved posts in the college (officer and other staff)		Total number of officer and other staff posted in the college	
	Male	Female	Male	Female
2023				
2022				
2021				
2020				
2019				
2018				

7. Year-wise total number of officers and other staff received training while in the college (in-house)

Year	Total number of officers and other staff received in-house training only under IDP	Total number of officers and other staff received in-house training other than	Target number of the officers and other staff to be provided with training under IDP within college

	(For IDG recipient colleges only)		those received under IDP (For all colleges)		campus based on latest approved IDP (Only for IDG recipient colleges)
	Male	Female	Male	Female	
2023					
2022					
2021					
2020					
2019					
2018					

8. Attendance and participation of students in modernized classrooms and other facilities

Sl. No.	Name of the modernized classes/facilities (Please specify the classrooms/facilities with name and facility type)	Total capacity (seating capacity)	Average number of students that attend the class/use the facility in any normal day	Has the classroom/facility been modernized/improved under IDP (yes=1, no=2)
1.	Modernized classroom 1:			
2.	Modernized classroom 2:			
3.	Modernized classroom 3:			
4.	Modernized classroom 4:			
5.	Improved/Enriched central library (if any)			

6.	Improved/Enriched departmental seminar library (any one, please specify):			
7.	ICT Lab (if any):			
8.	Science lab-1 (specify):			
9.	Science lab-2 (specify):			
10.	Job fair (if any, specify):			
11.	Other-1 (specify):			
12.	Other-2 (specify):			
13.	Other-3 (specify):			

9. Details of Major Development Activities Carried out in the College over the Last Five Years (For IDG Awarded Colleges under CEDP)

Sl. No.	Major Activities (By Package) carried out by IDG under CEDP	Proposed Timeline	Current Status/ Progress So Far 1=Completed 2=Ongoing 3=Not completed	Has the task been completed within the proposed time? (Yes=1, No=2, on-going=3)	Reasons for delay/not completing the task on time	Total estimated cost (in Tk.)
1.						
2.						
3.						

4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
20.						

10. Details of Major Development Activities Carried out in the College over the Last Five Years (Other than IDG-CEDP)

Sl. No.	Major Activities carried out (other than IDG-CEDP)	Timeline	Sources of Funding (Agency/ Person)	Current Status/ Progress So Far 1=Completed 2=Ongoing 3=Not completed	Has the task been completed within the proposed time? (Yes=1, No=2, On-going=3)	Reasons for delay/not completing the task on time	Total estimated cost (in Tk.)
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
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13.							

14.							
15.							
16.							
17.							
18.							
19.							
20.							

11. কিছু নির্বাচিত সূচকের ভিত্তিতে এ পর্যন্ত অর্জিত অগ্রগতির বিবরণ (প্রযোজ্য ক্ষেত্রে)

মক নং	বিবরণ	উত্তর
১.	কলেজে মোট শ্রেণিকক্ষের সংখ্যা	
২.	মোট মাল্টিমিডিয়া/Smartboard যুক্ত ক্লাসরুমের সংখ্যা	
৩.	উপ-প্রকল্পের আওতায় কতটি ক্লাসরুমের সংস্কার কার্য সম্পন্ন হয়েছে?	
৪.	উপ-প্রকল্পের আওতায় ক্লাসরুমের জন্য কতটি মাল্টিমিডিয়া ক্রয় করা হয়েছে?	
৫.	উপ-প্রকল্পের আওতায় ক্লাসরুমের জন্য কতটি Smartboard ক্রয় করা হয়েছে?	
৬.	উপ-প্রকল্পের আওতায় কতটি ইন-হাউজ প্রশিক্ষণ পরিচালনার লক্ষ্যমাত্রা ছিল?	৮.১ ICT
		৮.২ Management
		৮.৩ অন্যান্য
৭.	উপ-প্রকল্পের আওতায় কতটি ইন-হাউজ প্রশিক্ষণ সম্পন্ন হয়েছে?	৯.১ ICT
		৯.২ Management
		৯.৩ অন্যান্য
৮.	উপ-প্রকল্পের আওতায় অনুষ্ঠিত আধুনিক শিক্ষণ পদ্ধতি বিষয়ক প্রশিক্ষণে অংশগ্রহণকারী শিক্ষক ও কর্মচারী সংখ্যা	
৯.	শিক্ষকগণের শতকরা কত ভাগ ডিজিটাল সামগ্রী ব্যবহার করে পাঠদান করছেন?	

মক নং	বিবরণ	উত্তর
১০.	ডিজিটাল সুবিধা দ্বারা পরিচালিত সেশন সংখ্যার শতকরা হার কত?	
১১.	উপ-প্রকল্পের আওতায় কলেজ লাইব্রেরির জন্য কোন বই ক্রয় করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১২.	হ্যাঁ হলে মোট কতটি বই ক্রয় করা হয়েছে?	
১৩.	উপ-প্রকল্পের আওতায় কোন স্টাডি জোন (with ICT facilities) প্রতিষ্ঠা করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১৪.	উপ-প্রকল্পের আওতায় লাইব্রেরীতে কোন সংস্কার কাজ করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১৫.	উপ-প্রকল্পের আওতায় স্ব-মূল্যায়ন পর্যালোচনা (self-assessment review) পরিচালনা করা হয়েছে কি? (কপি সংগ্রহ করুন) [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১৬.	যদি হ্যাঁ হয় তবে স্ব-মূল্যায়ন পর্যালোচনা (self-assessment review) থেকে প্রাপ্ত সুপারিশসমূহ প্রতিপালন করা হচ্ছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১৭.	যদি না হয় তবে এর প্রধান কারণ কি উল্লেখ করুন:	
১৮.	উপ-প্রকল্পের আওতায় কম্পিউটার ল্যাব স্থাপন/সংস্কার করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
১৯.	উত্তর হ্যাঁ হলে, উপ-প্রকল্পের আওতায় কম্পিউটার ল্যাবে কতটি কম্পিউটার স্থাপন করা হয়েছে?	
২০.	অন্য কোন Purpose এ কম্পিউটার কেনা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
২১.	হ্যাঁ হলে, কতটি কম্পিউটার কেনা হয়েছে?	
২২.	উপ-প্রকল্পের আওতায় স্থাপিত কম্পিউটার ল্যাবে শিক্ষার্থীদের ব্যবহার উপযোগী কতটি কম্পিউটার রয়েছে?	
২৩.	ক্যাম্পাসে শিক্ষার্থীদের কম্পিউটার ল্যাব ব্যবহারের প্রবণতা বৃদ্ধি পেয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়]	
২৪.	উপ-প্রকল্পের আওতায় কলেজে বহুমুখী ICT ল্যাব (Multifunctional ICT Lab) প্রতিষ্ঠা করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রয়োজ্য নয়, 4=প্রক্রিয়াধীন]	

মিক নং	বিবরণ	উত্তর
২৫.	উপ-প্রকল্পের আওতায় কোন বিদ্যমান সায়েন্স ল্যাব সংস্কার করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়, 4=প্রক্রিয়াধীন]	
২৬.	হ্যাঁ হলে, কয়টি?	
২৭.	বিজ্ঞান ল্যাব ব্যবহারের প্রবণতা বৃদ্ধি পেয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
২৮.	উপ-প্রকল্পের আওতায় কলেজে অগ্নি নির্বাপনের জন্য Fire Extinguisher স্থাপন করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
২৯.	উপ-প্রকল্পের আওতায় ক্যাম্পাসে ইন্টারনেট নেটওয়ার্ক/ওয়াইফাই নেটওয়ার্ক/ আইসিটি কর্নার স্থাপন করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়, 4=প্রক্রিয়াধীন]	
৩০.	ক্যাম্পাসে ইন্টারনেট নেটওয়ার্ক/ ওয়াইফাই নেটওয়ার্ক/ আইসিটি কর্নার সচল অবস্থায় আছে কি? [1=হ্যাঁ, 2=না]	
৩১.	উপ-প্রকল্পের আওতায় কলেজে উপ-প্রকল্পের আওতায় Computer Networking Establish করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়, 4=প্রক্রিয়াধীন]	
৩২.	উপ-প্রকল্পের আওতায় ম্যানেজমেন্ট ইনফরমেশন সিস্টেম (MIS) প্রতিষ্ঠা করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=জানিনা, 4=প্রযোজ্য নয়, 5=প্রক্রিয়াধীন]	
৩৩.	শিক্ষার্থীদের ক্যাম্পাস নেটওয়ার্কে ইন্টারনেট ডেটার ব্যবহার বৃদ্ধি পেয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৩৪.	কলেজে কি বঙ্গবন্ধু কর্নার আছে? [1=হ্যাঁ, 2=না]	
৩৫.	এটি কি IDG supported উপ-প্রকল্পের আওতায় প্রতিষ্ঠা করা হয়েছে? [1=হ্যাঁ, 2=না, ৩=প্রক্রিয়াধীন, ৪=প্রযোজ্য নয়]	
৩৬.	কলেজে কি মুক্তিযুদ্ধ কর্নার আছে? [1=হ্যাঁ, 2=না]	
৩৭.	এটি কি IDG supported উপ-প্রকল্পের আওতায় প্রতিষ্ঠা করা হয়েছে? [1=হ্যাঁ, 2=না, ৩=প্রক্রিয়াধীন, ৪=প্রযোজ্য নয়]	
৩৮.	কলেজে কি Childcare/Daycare কর্নার আছে? [1=হ্যাঁ, 2=না]	

মক নং	বিবরণ	উত্তর
৩৯.	এটি কি IDG supported উপ-প্রকল্পের আওতায় প্রতিষ্ঠা করা হয়েছে? [1=হ্যাঁ, 2=না, ৩=প্রক্রিয়াধীন, ৪=প্রযোজ্য নয়]	
৪০.	কলেজে কি Mothers কর্নার আছে? [1=হ্যাঁ, 2=না]	
৪১.	এটি কি IDG supported উপ-প্রকল্পের আওতায় প্রতিষ্ঠা করা হয়েছে? [1=হ্যাঁ, 2=না, ৩=প্রক্রিয়াধীন, ৪=প্রযোজ্য নয়]	
৪২.	শিক্ষার্থীদের কর্মসংস্থান সৃষ্টির জন্য কর্মসংস্থান সেল (employment cell) গঠন করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৪৩.	সম্ভাব্য নিয়োগকর্তাদের জন্য কোন কর্মশালা পরিচালনা করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৪৪.	সম্ভাব্য নিয়োগকর্তাদের জন্য উপ-প্রকল্পের শুরু থেকে বর্তমান পর্যন্ত মোট কতটি কর্মশালা পরিচালনা করা হয়েছে?	
৪৫.	কলেজ থেকে পাশ করা গ্রাজুয়েটদের নিয়ে কোন ট্রেসার স্টাডি পরিচালনা করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৪৬.	গ্রাজুয়েটদের কর্মসংস্থানের হার বৃদ্ধির জন্য কোন পদক্ষেপ নেওয়া হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৪৭.	হ্যাঁ হলে, কি কি পদক্ষেপ নেয়া হয়েছে?	
৪৮.	IDP'র ফরমেট অনুযায়ী পরিবেশগত এবং সামাজিক সুরক্ষা কমপ্লায়েন্স মেনে চলা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়] <u>যদি হ্যাঁ হয়, পরিবেশগত এবং সামাজিক সুরক্ষা কমপ্লায়েন্স বিষয়ক অনুমোদিত ডকুমেন্টটি ওয়েবসাইট থেকে ডাউনলোড করে প্রদান করুন।</u>	
৪৯.	উপ-প্রকল্পের আওতায় অডিটোরিয়াম আধুনিকীকরণ করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	
৫০.	উপ-প্রকল্পের আওতায় বিদ্যুত সুবিধা নিশ্চিতকরণের জন্য পাওয়ার জেনারেটর স্থাপন করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়]	

মক নং	বিবরণ	উত্তর
৫১.	উপ-প্রকল্পের আওতায় নিরাপদ খাবার পানি সুবিধা বৃদ্ধি করা হয়েছে কি? [1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়, 4=প্রক্রিয়াধীন]	
৫২.	উপ-প্রকল্পের ক্রয় পরিকল্পনা কতটা বাস্তব সম্মত এবং Need Based ছিল? [কোড: 1=পুরোপুরি; 2= মোটামুটি, 3=আংশিক, 4= তেমন একটি নয়, 5=একদমই নয়]	
৫৩.	উপ-প্রকল্পের কাজের গুণগত মান সম্পর্কে আপনার সন্তুষ্টির মাত্রা [কোড: 1=খুবই সন্তোষজনক; 2= মোটামুটি সন্তোষজনক; 3= সন্তোষজনক বা অসন্তোষজনক কোনটিই নয়; 4= তেমন সন্তোষজনক নয়, 5= একদমই সন্তোষজনক নয়]	
৫৪.	উপ-প্রকল্পটি এর উদ্দেশ্য অর্জনে কতটুকু সফল হয়েছে বলে আপনি মনে করেন? [কোড: 1=খুবই সফল; 2= মোটামুটি সফল; 3= সফল বা ব্যর্থ কোনটিই নয়; 4= তেমন একটা সফল নয়, 5= একদমই সফল নয়]	
৫৫.	উপ-প্রকল্পের আওতায় যে সকল সংস্কার কাজ/দ্রব্য-সামগ্রী ক্রয় করা হয়েছে তা কোন Stock-register এ লিপিবদ্ধ করা আছে কি? (কপি সংগ্রহ করুন) [1=সব লিপিবদ্ধ করা আছে, 2=আংশিক লিপিবদ্ধ আছে, 3=লিপিবদ্ধ করা নেই]	
৫৬.	যদি Stock-register পুরোপুরিভাবে Maintain করা না হয়, তবে কিভাবে সংস্কার কাজ এবং ক্রয়কৃত দ্রব্য-সামগ্রীর তথ্য সংরক্ষণ করা হয়?	

উপ-প্রকল্পের সবলতা ও দুর্বলতা সংক্রান্ত তথ্যাদি	
৫৭.	উপ-প্রকল্পের তিনটি ভালো দিক উল্লেখ করুন: ১. ২. ৩.
৫৮.	উপ-প্রকল্পের তিনটি দুর্বলদিক উল্লেখ করুন: ১. ২. ৩.
৫৯.	উপ-প্রকল্পের বাস্তবায়নের ফলে কলেজে কোন ধরণের নতুন ঝুঁকি বা সমস্যা তৈরি হয়ে থাকলে তা উল্লেখ করুন:

	<p>১.</p> <p>২.</p> <p>৩.</p>
৬০.	<p>উপ-প্রকল্পটি বাস্তবায়িত হওয়ার ফলে ছাত্র-ছাত্রীদের জন্য কোন কোন ক্ষেত্রে নতুন সম্ভাবনা তৈরি হতে পারে বলে আপনি মনে করেন?</p> <p>১.</p> <p>২.</p> <p>৩.</p>
৬১.	<p>উপ-প্রকল্পটি টেকসই ও কার্যকরী রাখার জন্য আপনার মতামত দিন:</p> <p>১.</p> <p>২.</p> <p>৩.</p>
৬২.	<p>How the entire project (CEDP) could have been implemented differently/in a better way?</p>
৬৩.	<p>What would be your suggestion if the Government would like to have the next phase of CEDP or any other project of this kind for improving the teaching-learning environment in the in tertiary level colleges?</p>

12. পরিবেশ সুরক্ষা বিষয়ক প্রশ্ন

ক্রমিক নং	বিবরণ	উত্তর 1=হ্যাঁ, 2=না, 3=প্রযোজ্য নয়
১.	উপ-প্রকল্পের আওতায় যে কাজগুলো করা হয়েছে তার সবগুলো কি কলেজের ভিতর সম্পন্ন হয়েছিলো?	
২.	সংস্কার চলাকালীন সময়ে কাজগুলো কি একাডেমিক কার্যক্রম ব্যাহত করেছিল?	
৩.	ভূগর্ভস্থ পানিতে আর্সেনিক, ম্যাঙ্গানিজ বা আয়রনের উপস্থিতি আছে কি?	
৪.	উপ-প্রকল্পের অধীনে সংস্কার কাজের কারণে কলেজ প্রাঙ্গণে কি কোনো প্রাকৃতিক জলাশয় ভরাট করা হয়েছিল?	
৫.	উপ-প্রকল্প গ্রহণের আগে কি কলেজ প্রাঙ্গণে/আশে পাশে কোন ড্রেনেজ কনজেশন বা জলাবদ্ধতা ছিল?	
৬.	উপ-প্রকল্প বাস্তবায়নের সময় কি কলেজ প্রাঙ্গণে/আশে পাশে কোন ড্রেনেজ কনজেশন বা জলাবদ্ধতা ছিল?	
৭.	বর্তমানে কি কলেজ প্রাঙ্গণে/আশে পাশে কোন ড্রেনেজ কনজেশন বা জলাবদ্ধতা আছে?	
৮.	নির্মাণ কাজ কি উচ্চ শব্দ সৃষ্টি করেছিল?	
৯.	উপ-প্রকল্পটি এলাকার চারপাশে ধুলো সমস্যা তৈরি করেছিল কি?	
১০.	এটা কি সাময়িকভাবে পানি সরবরাহ ও স্যানিটেশন ব্যবস্থা বন্ধ করে দিয়েছিল?	
১১.	কোনো রেফ্রিজারেশন/এয়ার কন্ডিশনার ইউনিট এবং টিউব লাইট/সিএফএল বাল্ব কি অপসারণ/বাতিল করতে হয়েছিল?	
১২.	কোন তরল বর্জ্য, বা তরল (তেল সহ) আছে এমন কোন আইটেম কি পুনঃব্যবহার, রিসাইকেল বা নিষ্পত্তির জন্য বাহিরে পাঠানোর প্রয়োজন হয়েছিল?	
১৩.	কোন অ্যাসবেস্টস ধারণকারী বিল্ডিং উপকরণ কি অপসারণ/বাতিল করা হয়েছিল?	
১৪.	সীসা-মিশ্রিত পেইন্ট দিয়ে প্রলেপ করা হয়েছে এমন কোনো নির্মাণ সামগ্রী কি সরানো/বাতিল করা হয়েছিল?	
১৫.	সীসা, রৌপ্য বা ক্রোম আছে এমন কোন নির্মাণ সামগ্রী কি সরানো/বাতিল করা হয়েছিল?	
১৬.	পারদ-মিশ্রিত পদার্থ বহনকারী কোনো ডিভাইস (সুইচ, গেজ, থার্মোস্ট্যাট) কি অপসারণ/বাতিল করা হয়েছিল?	
১৭.	স্থাপিত কোন জেনারেটর বা অন্যকোন গ্রাউন্ড স্টোরেজ ট্যাঙ্ক (GST) কি সরানো হয়েছিল?	
১৮.	সংস্কার কাজ কি পরিবেশ ও প্রতিবেশের উপর কোন পরোক্ষ প্রভাব ফেলেছিল?	

IDG Manager এর স্বাক্ষর			
তারিখ	দিন	মাস	বছর



Bangladesh Institute of Development Studies (BIDS)

E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207

and

College Education Development Project (CEDP)



Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey

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Students' Attendance/Participation Form

Name of the College:

Code:

Attendance & Participation of Students in the Modernized Classrooms and Other Facilities

Sl. No.	Description	Response
1.	<u>Class-1:</u>	
	Subject name:	
	Course name:	
	Session:	
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom	
	Total number of the students in the class	M:
Students attended in the class on the day of visit	M:	F:
2.	<u>Class-2:</u>	
	Subject name:	
	Course name:	
	Session:	

Sl. No.	Description	Response	
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom		
	Total number of the students in the class	M:	F:
	Students attended in the class on the day of visit	M:	F:
3.	<u>Class-3:</u>		
	Subject name:		
	Course name:		
	Session:		
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom		
	Total number of the students in the class	M:	F:
	Students attended in the class on the day of visit	M:	F:
4.	<u>Class-4:</u>		
	Subject name:		
	Course name:		
	Session:		
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom		

Sl. No.	Description		Response	
	Total number of the students in the class	M:	F:	
	Students attended in the class on the day of visit	M:	F:	
5.	<u>Class-5:</u>			
	Subject name:			
	Course name:			
	Session:			
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom			
	Total number of the students in the class	M:	F:	
Students attended in the class on the day of visit	M:	F:		
6.	<u>Class-6:</u>			
	Subject name:			
	Course name:			
	Session:			
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom			
	Total number of the students in the class	M:	F:	
Students attended in the class on the day of visit	M:	F:		

Sl. No.	Description	Response		
7.	<u>Class-7:</u>			
	Subject name:			
	Course name:			
	Session:			
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom			
	Total number of the students in the class	M:	F:	
Students attended in the class on the day of visit	M:	F:		
8.	<u>Class-8:</u>			
	Subject name:			
	Course name:			
	Session:			
	Type of the classroom Code: 1=Renovated with Smart Board, 2=Renovated with Multimedia Projector, 3=Renovated Classrooms but without Smart Board or Multimedia Projector, 4=Traditional/Old Classroom			
	Total number of the students in the class	M:	F:	
Students attended in the class on the day of visit	M:	F:		
9.	<u>Library-1:</u> Central Library			
	Type of the library Code: 1=Modernized, 2=Traditional, 3=None			

Sl. No.	Description	Response
	Total Capacity of Students (that can be seated at a time)	
	Students studying in the library on the day of the visit (Visits should be made between 11 am – 01 pm)	
10.	<u>Library-2: Departmental Seminar Library</u>	
	Type of the library Code: 1=Modernized, 2=Traditional, 3=None	
	Name of the Department:	
	Total Capacity of Students (that can be seated at a time)	
	Students studying in the library on the day of the visit (Visits should be made between 11 am – 01 pm)	
11.	<u>ICT Lab:</u>	
	Type of the Lab Code: 1=Modernized, 2=Traditional, None=3	
	Total Capacity of Students (that can use the lab at a time)	
	Students using the lab on the day of the visit (Visits should be made between 11 am – 01 pm)	
12.	<u>Science Lab-1:</u>	
	Type of the Lab Code: 1=Modernized, 2=Traditional, 3=None	
	Subject Code: 1=Physics, 2=Chemistry, 3=Botany, 4=Zoology, 5=Others (specify):	
	Total Capacity of Students (that can use the lab at a time)	
	Students using the lab on the day of the visit (<u>Visit the Lab when Lab class is running</u>)	
13.	<u>Science Lab-2:</u>	

Sl. No.	Description	Response
	Type of the Lab Code: 1=Modernized, 2=Traditional, 3=None	
	Subject Code: 1=Physics, 2=Chemistry, 3=Botany, 4=Zoology, 5=Others (specify):	
	Total Capacity of Students (that can use the lab at a time)	
	Students using the lab on the day of the visit (<u>Visit the Lab when Lab class is running</u>)	
14.	<u>Bangabandhu Corner (Yes=1, No=2)</u>	
	Type of the facility (Describe major features):	
	Total Capacity of People (that can use the facility at a time)	
	Students/Teachers using the facility on the day of the visit (Visits should be made between 11 am – 01 pm)	
15.	<u>Muktijuddho/Liberation War Corner (Yes=1, No=2)</u>	
	Type of the facility (Describe major features):	
	Total Capacity of People (that can use the facility at a time)	
	Students/Teachers using the facility on the day of the visit (Visits should be made between 11 am – 01 pm)	
16.	<u>Study Zone with ICT Facilities (Yes=1, No=2)</u>	
	Type of the facility (Describe major features)	
	Total Capacity of Students (that can use the facility at a time)	
	Students using the facility on the day of the visit (Visits should be made between 11 am – 01 pm)	
17.	<u>Other Facilities-1 (Specify):</u>	
	Type of the facility (Describe major features):	

Sl. No.	Description	Response
	Total Capacity of Students (that can use the facility at a time)	
	Students using the facility on the day of the visit: (Visits should be made between 11 am – 01 pm)	
18.	<u>Other Facilities-2 (Specify):</u>	
	Type of the facility (Describe major features):	
	Total Capacity of Students (that can use the facility at a time)	
	Students using the facility on the day of the visit: (Visits should be made between 11 am – 01 pm)	

তথ্য সংগ্রহকারীর নাম:	স্বাক্ষর:
মোবাইল নম্বর:	তারিখ:



Bangladesh Institute of Development Studies (BIDS)
E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)
Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey

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College Level Information on Activity Milestones and Performance Indicators

(For IDG Recipient Colleges only)

Name of the College:

Code:

1. Achievement and Progress on Activity Milestones

Please collect the information based on the following table:

Sl. No.	Milestones (critical activities) (According to the latest approved IDP)	Weight (Out of 100)	Achievement/Progress (As of 30 June 2023)

Sl. No.	Milestones (critical activities) (According to the latest approved IDP)	Weight (Out of 100)	Achievement/Progress (As of 30 June 2023)

2. Achievement and Progress based on Performance Indicators

Please collect the information based on the following table:

Sl. No.	Indicators (According the latest approved IDP)	Initial value (As per IDP)	Target value by completion (as per IDP)	Current value (as of 30 June 2023)

Sl. No.	Indicators (According the latest approved IDP)	Initial value (As per IDP)	Target value by completion (as per IDP)	Current value (as of 30 June 2023)

Name of the IDG Focal Person:

Position:

Signature

Date:



Bangladesh Institute of Development Studies (BIDS)
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Questionnaire for Current Student

Section A1: Information of the Data Processing Team (To be filled up by the enumerators)

Question no.	Designation	Name	ID	Signature	Date
A1.01	Data Collector				
A1.02	Field Supervisor				
A1.03	Data Entry Officer				

Section A2: Respondent's Institutional Information (To be filled up by the enumerators)

Question no.	Question	Answer	Code
A2.01	Division		
A2.02	District		
A2.03	Name of the College		
A2.04	NU College Registration Number		
A2.05	Type of Management (Code)		1= Government
			2= Non-government
A2.06	Type of College (Code)		1= Program
			2= Control
A2.07	College IDG Category (Code)		A/B/C
A2.08	Name of the Department		

A2.09	Type of the Group/ Faculty		1= Science, 2= Arts, 3= Business, 4=Social Science
A2.10	Starting time of the interview		
A2.11	Ending time of the interview		

Section B: Respondent's Personal Information

(Please write down the answer/use the tick marks where applicable. Please write the digits in English).

Question no.	Question	Answer	
B.01	Name of the Student		
B.02	Gender	1	Male
		2	Female
B.03	Age (in complete years)		
B.04	Email Address (if you have any)		
B.05	Contact Number		
B.06	Admission session		
B.07	Examination system of the college	1	Yearly
		2	Semester-wise (2 exams per year)
B.08	Which year/ semester are you currently enrolled in?	1	3 rd year
		2	4 th year
		3	Masters
B.09	Did you complete your Honours from the same college (applicable for Masters' students only)	1	Yes
		2	No
B.10	Last GPA/CGPA (up to last academic year)	GPA	
		Out of 4	

Section C: Previous Education Information

(Please write down the answer/use the tick marks where applicable)

Question no.	Question	Answer	
C.01	What was the type of your higher secondary degree?	1	HSC
		2	HSC (Vocational)
		3	HSC (Open)
		4	Alim
		5	Diploma
		6	A Level
		7	Others (specify)
C.02	In which stream have you obtained your higher secondary degree?	1	Humanities
		2	Science
		3	Business Studies/ Commerce
		4	Others (please specify)
C.03	What was your GPA in the higher secondary examination?	GPA	
		Out of 5	
C.04	What was the type of your secondary degree?	1	SSC
		2	SSC (Vocational)
		3	SSC (Open)
		4	Dakhil
		5	O Level
		6	Others (specify)
C.05	In which stream have you obtained your secondary education degree?	1	Humanities
		2	Science
		3	Business Studies/ Commerce
		4	Others (specify)
C.06	What was your GPA at the secondary level?	GPA	
		Out of 5	

Section D1: Academic Facilities of the NU Affiliated Colleges

(If not applicable please write 999)

Question no.	Question	Answer	Hour/ Minutes
D1.01	How many courses did you take last year?		
D1.02	How many classes are held in a week?		
D1.03	How many classes have you attended (last week)?		

D1.04	What is the duration of each class? (Please write the answer in minutes)		
D1.05	How many hours per week do you spend in the library? (Please write the answer in hours)		
D1.06	How many hours per week do you spend in the laboratory? (Please write the answer in hours)		
D1.07	How many hours per week do you spend in the computer lab? (Please write the answer in hours)		
D1.08	How many days per semester do you spend on fieldwork? (Please write the answer in days)		
D1.09	How many minutes do you spend over the internet daily?		
D1.10	How many minutes do you spend over the internet daily for study purposes?		
D1.11	For how many courses did you have to prepare assignments during last academic year?		
D1.12	How many presentations did you have to give last academic year?		
D1.13	How many term papers did you have to submit last academic year?		
D1.14	How many workshops/seminars have you attended last academic year?		
D1.15	How many guest lecturers were invited to your department last academic year?		

D2. Please write down the answer/ use the tick mark where applicable.

Question no.	Question	Answer	
D2.01	Are classes held regularly in your department?	1	Yes
		2	No
D2.02	Do teachers teach at the scheduled time of the class?	1	Yes
		2	No
D2.03	Are handouts provided during the lecture?	1	Yes
		2	No
D2.04	Are problem-solving exercises regularly practiced in the class?	1	Yes
		2	No
D2.05	Do teachers provide consultation time after classes?	1	Yes
		2	No
D2.06	Are you aware of any online courses happening? (Specific college or others)	1	Yes
		2	No

D2.07	If D2.06 is Yes, then have you ever taken/ registered/ completed any of the courses?	1	Yes
		2	No
D2.08	Does student politics hamper the progress of study?	1	Yes
		2	No
D2.09	Do you have any experience of submitting assignments online?	1	Yes
		2	No

D3. Please indicate the importance level to improve the academic facilities of your department/ college. Also please state your current level of satisfaction of the existing facilities.

Question no.	Statements	Importance Scale	Satisfaction Scale
		1= Not important 2= Somewhat important 3= Neither important nor unimportant 4= Important 5=Very important	1= Not satisfied 2= Somewhat satisfied 3= Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied
D3.01	Ability of teachers to clearly explain difficult and complex concepts in the classroom		
D3.02	Teachers' overall competency and up-to-date knowledge related to the subject matter		
D3.03	Availability of teachers after class hours for consultation		
D3.04	Maintenance of the course syllabus accordingly (Course lecture schedule is provided at the beginning of the program and covered fully)		
D3.05	Completion of the course/curriculum/syllabus within specific time		
D3.06	Learning outcomes of the course is provided with the syllabus		
D3.07	Opportunities for teaching evaluation by the students		
D3.08	The overall quality of the course materials (Reference books, journals, handouts etc.)		
D3.09	The amount of practical work (if applicable) in laboratories and workshops in the courses		
D3.10	Involvement in group work		

D3.11	The overall balance between theory and practice/experiment in your department		
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D4. Please indicate the importance level to improve the infrastructural condition of your college. Also please state your current level of satisfaction of the existing condition.

Question no.	Statements	Importance Scale	Satisfaction Scale
		1= Not important 2= Somewhat important 3= Neither important nor unimportant 4= Important 5=Very important	1= Not satisfied 2= Somewhat satisfied 3= Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied
D4.01	Availability of multimedia equipped/ projector installed classrooms in your department		
D4.02	Use of multimedia by the teachers for teaching in your department		
D4.03	Adequacy of classrooms in your department		
D4.04	Improvement of the current condition of the equipment* in your classroom		
D4.05	Condition of the equipment* in the libraries/ seminar libraries		
D4.06	Adequacy of books and journals in the libraries		
D4.07	Improvement of the current condition* of computers in the computer lab		
D4.08	Sufficiency of computers in the computer lab		
D4.09	Quality of science lab (adequacy and availability of instruments, raw materials, etc.)		
D4.10	Availability of pure drinking water in college campus		
D4.11	Common room facility for students		
D4.12	Opportunity to participate in extra-curricular activities		
D4.13	Adequacy of washroom facilities	Male	
		Female	
D4.14	Improvement of the current condition of the washrooms		
D4.15	Hygiene & cleanliness of the washrooms		

D4.16	Overall cleanliness of the college		
D4.17	Uninterrupted power supply during class time		
D4.18	Overall safety & security condition of the college campus		

*By equipment we mean the condition of the chairs, tables, benches, etc.

Section E: Soft Skills and Industry Linkage

E1. Please indicate the importance level of the development of the soft skills and linkages with the industry. Also please indicate the current level of your satisfaction.

Question no.	Statements	Importance Scale	Satisfaction Scale
		1= Not important 2= Somewhat important 3= Neither important nor unimportant 4= Important 5=Very important	1= Not satisfied 2= Somewhat satisfied 3= Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied
E1.01	Support for job placement/ internships for the students by the college		
E1.02	Availability of counselling services for job search		
E1.03	Curriculum are designed in accordance with industry demand		
E1.04	Provision of inviting experts from outside of the department/college to introduce students with the available opportunities in the industries of relevant sectors		
E1.05	Organizing job fairs by the college		
E1.06	Opportunities to develop ICT skills necessary to step into the industry/ get jobs		
E1.07	Opportunities to develop presentation skills		
E1.08	Opportunities to develop language proficiency to communicate better in the workplace		
E1.09	Opportunities to improve English language proficiency (writing and speaking)		
E1.10	Opportunities to get introduced with the		

	updated equipment and facilities used in the industry		
E1.11	Opportunities to visit industries to gather practical knowledge		
E1.12	College maintaining work related track record of the ex-students		

E2. Please indicate the importance level of the following skills needed for job and indicate your skill level.

Question no.	Statements	Importance Scale	Satisfaction Scale
		1= Not important 2= Somewhat important 3= Neither important nor unimportant 4= Important 5=Very important	1= Not satisfied 2= Somewhat satisfied 3= Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied
E2.01	Knowledge of contemporary issues in relevant sector		
E2.02	Willingness to learn new things		
E2.03	Understanding and taking direction for work assignments		
E2.04	Leadership skills		
E2.05	Critical thinking and analytical skills		
E2.06	Ability to work under pressure		
E2.07	Time management		
E2.08	Basic computer skill		
E2.09	Adaptability under any circumstances		
E2.10	Creativity		
E2.11	Teamwork		
E2.12	Communication Skill		

F. Please indicate the importance level for the improvement of the internet connectivity in your college. Also please indicate the current level of satisfaction of the internet connectivity.

		Importance Scale	Satisfaction Scale
		1= Not important	1= Not satisfied

Question no.	Statements	2= Somewhat important 3= Neither important nor unimportant 4= Important 5=Very important	2= Somewhat satisfied 3= Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied
F.01	Availability of broadband connection in campus		
F.02	Availability of Wi-Fi connection in campus		
F.03	Quality of internet connection		
F.04	Access to internet for study purpose		
F.05	Use of internet by the teachers to enrich their knowledge		
F.06	Use of internet by teachers and students to communicate with each other		

G. National University Provided Services

(Please write down the answer/ use the tick mark where appropriate)

Question no.	Question	Code	Answer
G.01	Your current level of satisfaction on NU provided course curriculum	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
G.02	Do you think there is necessity to develop/ update the course curriculum provided by NU?	1	Yes
		2	No
G.03	Your current level of satisfaction on the time duration to complete the syllabus	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
G.04	Your level of satisfaction on the time duration of the exam time	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
G.05	Your level of satisfaction on the time taken to publish the result after the examination	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied

		4	Satisfied
		5	Very satisfied
G.06	Have you ever visited the NU websites?	1	Yes
		2	No
G.07	If G.06 is Yes, then for what purpose?		
G.08	How many times have you used the NU provided online services during the last 12 months?		
G.09	What are those services? [Multiple answer acceptable]	1.
		2.
		3.
G.10	Your level of satisfaction on the NU website provided services	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
G.11	What other services do you expect from the NU website?	1.
		2.
		3.

Section H: Family Background

We are aware that the following information are personal and sensitive, but we ensure you that this information will be kept strictly confidential and will be used only for research purpose.

(Please write down the answer/ use tick mark where applicable)

Question no.	Question	Code	Description of Codes
H.01	Father/ principal guardian's profession (For a better understanding of the code feel free to take help from the data collector in the class)	1	Managers (high officials & lawmakers, administrative & commercial manager)
		2	Professionals (science & engineering professionals, health & education professionals)
		3	Technicians and associate professionals (science & engineering associate professionals, health associate professionals)
		4	Clerical support workers (general & keyboard clerk, customer service clerk)
		5	Service and sales workers (sales staff, security service staff)
		6	Skilled agricultural, forestry and fishery worker

			(farmer, fisherman, hunter, gatherer)
		7	Craft and related trade workers (metal, machineries, and related workers)
		8	Plant and machine operators, assemblers
		9	Elementary occupation (cleaners and helpers, agricultural, forestry & fishery workers)
		10	Retired
		11	Self-employed
		12	Others (please specify)
H.02	Mother's occupation	1	Housewife
		2	Managers (high officials & lawmakers, administrative & commercial manager)
		3	Professionals (science & engineering professionals, health & education professionals)
		4	Technicians and associate professionals (science & engineering associate professionals, health associate professionals)
		5	Clerical support workers (general & keyboard clerk, customer service clerk)
		6	Service and sales workers (sales staff, security service staff)
		7	Skilled agricultural, forestry and fishery worker (farmer, fisherman, hunter, gatherer)
		8	Craft and related trade workers (metal, machineries, and related workers)
		9	Plant and machine operators, assemblers
		10	Elementary occupation (cleaners and helpers, agricultural, forestry & fishery workers)
		11	Retired
		12	Self-employed
		13	Others (please specify)
H.03	Monthly family income (Father, mother & other family members)	1	Less than Tk. 10,000
		2	Tk. 10,000- 20,000
		3	Tk. 20,000 – 30,000
		4	Tk. 30,000- 40,000
		5	Tk. 40,000- 50,000

		6	Tk. 50,000 – 60,000
		7	More than Tk. 60,000
H.04	Father's education/Main guardian's education <i>(Highest level completed)</i>	1	No institutional education
		2	Primary education
		3	Secondary or equivalent
		4	Higher secondary or equivalent
		5	Bachelor or equivalent
		6	Masters or equivalent
		7	MPhil/ PhD
		8	Others (please specify)
H.05	Mother's education <i>(Highest level completed)</i>	1	No institutional education
		2	Primary education
		3	Secondary or equivalent
		4	Higher secondary or equivalent
		5	Bachelor or equivalent
		6	Masters or equivalent
		7	MPhil/ PhD
		8	Others (please specify)
H.06	Number of family members		
H.07	Number of earning family members		
H.08	Number of dependents		
H.09	Number of siblings studying		
H.10	Where do you currently reside?	1	College hostel
		2	Mess
		3	At relative's house
		4	At own house
		5	Others (please specify)
H.11	Are you involved in any income generating activities?	1	Yes
		2	No
H.12		1	

	If H.11 is Yes, which job are you involved in (Mention top 3 involvements)?	2	
		3	
H.13	If H.11 is Yes, then what is the type of the job?	1	Full-time
		2	Part-time
		3	Self-employed
H.14	Your monthly income from the above stated work	1	Less than Tk. 10,000
		2	Tk. 10,000- 20,000
		3	Tk. 20,000 – 30,000
		4	Tk. 30,000- 40,000
		5	Tk. 40,000- 50,000
		6	Tk. 50,000 – 60,000
		7	More than Tk. 60,000

Section I: Overall Satisfaction]

Question no.	Please indicate your overall level of satisfaction for the following statements	Level of Satisfaction	
		1= Not satisfied 2= Somewhat satisfied 3=Neither satisfied nor dissatisfied 4= Satisfied 5= Very satisfied	
I.01	Teaching/learning environment	Classroom	
		Libraries	
		Laboratories	
		Seminar libraries	
		Other facilities	
I.02	Access to ICT facilities (e.g., computer room)	Computer room	
		Quality of internet access	
I.03	Teaching skills of the teachers		
I.04	Opportunities to develop soft		

	skills		
I.05	Linkages with industry & employers		
I.06	Teaching/learning curriculum		

Thank you very much once again for your kind participation in End Line Satisfaction Survey for College Education Development Project-2023



Bangladesh Institute of Development Studies (BIDS)
E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)
Secondary and Higher Education Division, Ministry of Education
Project Effectiveness including Endline Satisfaction Survey

[Disclaimers: এই প্রশ্নপত্রের মাধ্যমে সংগৃহীত তথ্য শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে। এখানে কোন ব্যক্তি বা কলেজের নাম কোন অবস্থাতেই গবেষকদের বাইরে অন্য কোথাও বা অন্য কারো কাছে প্রকাশ করা হবে না।]

Questionnaire for the Teachers

Section A1: Information of the Data Processing Team (To be filled up by the Data Collector)

Question no.	Designation	Name	ID	Signature	Date
A1.01	Field Investigator				
A1.02	Field Supervisor				
A1.03	Data Entry Operator				

Section A2: Respondent's Institutional Identification (To be filled up by the enumerators)

Question no.	Item	Answer	Code
A2.01	Division		
A2.02	District		
A2.03	Name of the College		
A2.04	NU College Registration Number		
A2.05	Type of Management		1=Government 2=Non-government
A2.06	College Category (Code)		A/ B/ C
A2.07	Name of the Department		
A2.08	Type of the Department		1=Science, 2=Humanities, 3=Business,

Question no.	Item	Answer	Code
			4=Social Science
A2.09	Starting time of the interview	Hour:	Minute:

*Individual feedback is required. Please provide your own opinion without being influenced by the opinion of others.

Section B: General Information

(Please write down the answer/use tick mark on the applicable answer. Please write the digits in English)

Question no.	Question	Answer	
B.01	Name of the respondent		
B.02	Age of the respondent (in years)		
B.03	Gender	1	Male
		2	Female
B.04	Highest degree achieved	1	Ph.D.
		2	M.Phil.
		3	Masters
		4	Bachelor
B.05	Type of appointment	1	Full-time
		2	Part-time
		3	Appointed on course contract
B.06	Academic positions/ranks	1	Professor
		2	Associate professor
		3	Assistant professor
		4	Lecturer
		5	Demonstrator
		6	Others (please mention)
B.07	Years of overall teaching experience at the graduate level		

Question no.	Question	Answer	
B.08	Total years of teaching experience at the present college		
B.09	Years of teaching after PhD (if applicable)		
B.10	How many courses do you have to take per semester/year? (number)	1st year	
		2nd year	
		3rd year	
		4th year	
B.11	How many classes do you have to take per week? (number)	HSC	
		Bachelor	
		Masters	
B.12	Number of in-service trainings received		
B.13	Mobile/Phone Number		
B.14	Email ID (if available)		

Section C: Existing Facilities in the College

(Use the tick mark on the applicable answer)

Question no.	Question	Code	Answer
C.01	Do you follow the academic calendar provided by the National University?	1	Yes
		2	No
C.02	Whether this calendar is distributed among the students before the start of the academic year/semester?	1	Yes
		2	No
C.03	How often the National University improve or update syllabus and course curriculums?	1	Once in every 3 months
		2	Once in every 6 months
		3	Once in a year
		4	Others (specify)_____
C.04		1	Yes

Question no.	Question	Code	Answer
	Whether there are opportunities for the teachers to participate in course curriculum and syllabus development	2	No
C.05	How often your department arranges academic meetings?	1	In every month
		2	Once in every 3 months
		3	Once in every 6 months
		4	Once in a year
C.06	Is there any procedure for evaluation of teaching by the students?	1	Yes
		2	No
C.07	Do senior teachers monitor the class of junior teachers for the betterment of their lectures or course curriculum?	1	Yes
		2	No
C.08	Is there scope for innovation in evaluation methods in examination for the students?	1	Yes
		2	No
C.09	Does the college have good communication with other institutions in your subject area?	1	Yes
		2	No
C.10	Are you involved in research works?	1	Yes
		2	No
C.11	How much important is it to do research to get promotion?	1	Not important at all
		2	Somewhat important
		3	Neither important nor unimportant
		4	Important
		5	Very important
C.12	Does your college/NU provide grant for research work?	1	Yes
		2	No
C.13a	Have you ever applied for any research grant?	1	Yes
		2	No
C.13b	Have you availed of any research grant?	1	Yes
		2	No

Question no.	Question	Code	Answer
C.14	If C.13=Yes, mention the source(s)	1. 2. 3. 4. 5.	
C.15	Does the institution have any fund for co-curriculum activities for students which are organized by faculty members?	1	Yes
		2	No
C.16	Is there provision of providing study leave for teachers?	1	Yes
		2	No
C.17	How often you use multimedia for delivering lectures?	1	Never
		2	Very few times
		3	Sometimes
		4	Frequently
		5	Always
C.18	Do you provide time to the students for academic discussion/counselling after class?	1	Yes
		2	No
C.19	If yes, how many hours a week?	1	Less than 1 hour
		2	1-2 hours
		3	3-5 hours
		4	5-7 hours
		5	More than 7 hours
C.20	How many students come to you last week for academic discussion/counselling after class? (average)		

Section D1: Please specify the current level of satisfaction and the level of importance in terms of teaching and learning environment in your college.

Question no.	Statements	<u>Importance Scale</u>		<u>Satisfaction Scale</u>						
		1= Not important	2= Somewhat important	3= Neither important nor unimportant	4=Important	5=Very important	1=Not satisfied	2=Somewhat satisfied	3=Neither satisfied nor dissatisfied	4=Satisfied
D1.01	Physical condition of classrooms*									
D1.02	Adequacy of classrooms									
D1.03	Existence of multimedia equipped classrooms									
D1.04	Use of multimedia and other modernclassroom facilities for teaching									
D1.05	Delivering lectures using PPT slides									
D1.06	Physical condition of exam halls*									
D1.07	Adequacy of exam halls									
D1.08	Condition of computer labs*									
D1.09	Adequacy of computer in computer labs									
D1.10	Condition of libraries/ seminar*									
D1.11	Availability of books and journals in the library									
D1.12	Washroom facilities for teachers	Male								
		Female								
D1.13	Students' attendance in class									

Section D2: Please indicate the level of satisfaction and importance about the internet connectivity in your college.

Question no.		Statements	<u>Importance Scale</u>		<u>Satisfaction Scale</u>								
			1= Not important	2= Somewhat important	3=Neither important nor unimportant	4=Important	5=Very important	1=Not satisfied	2=Somewhat satisfied	3=Neither satisfied nor dissatisfied	4=Satisfied	5=Very satisfied	
D2.01		Availability of broadband											

		connection in campus		
D2.02		Availability of Wi-Fi connection in campus		
D2.03		Quality of internet connection and speed		
D2.04		Access to the internet for teacher		
D2.05		Use of internet by teachers to prepare class lectures and update knowledge		
D2.06		Use of internet to communicate with students		

Section D3: Please indicate the level of importance and current level of satisfaction about industry linkage and developing soft skills of the students.

Question no.	Statements	<u>Importance Scale</u>	<u>Satisfaction Scale</u>
		1= Not important 2= Somewhat important 3=Neither important nor unimportant 4=Important 5=Very important	1=Not satisfied 2=Somewhat satisfied 3=Neither satisfied nor dissatisfied 4=Satisfied 5=very satisfied
D3.01	Support for job placement/ internships for students by the college		
D3.02	Career guidance services for students by the college		
D3.03	Provision of inviting specialists to introduce students with the available opportunities in the industries of relevant sectors		

D3.04	Organizing job fairs by the college		
D3.05	Curriculum are designed in accordance with industry standards		
D3.06	Students are provided with basic ICT skills necessary to step into the industry/ get jobs		
D3.07	Inclusion of presentation in the courses to develop presentation skill of students		
D3.08	Mandatory language courses for all students to improve language proficiency		
D3.09	Students are introduced with the updated equipment and facilities used in the industry		
D3.10	Students are taken to industries to broaden their practical knowledge		
D3.11	College maintaining work related track record of the ex-students		

Section D4: Please indicate the level of importance and current level of satisfaction about academic environment of the college.

Question no.	Statements	Importance Scale 1= Not important 2= Somewhat important 3=Neither important nor unimportant 4=Important 5=Very important	Satisfaction Scale 1=Not satisfied 2=Somewhat satisfied 3=Neither satisfied nor dissatisfied 4=Satisfied 5=very satisfied
D4.01	Opportunities for study leave		
D4.02	College providing training for teachers and arranging workshops		
D4.03	College providing pedagogical training for teachers		

D4.04	College providing foundation/ on the job trainings to the newly recruited teachers		
D4.05	Opportunities to participate in seminars/workshops/conferences		
D4.06	Opportunities for subject base training for teachers		
D4.07	Incentives/benefits provided for faculty development training		
D4.08	Transparency of the opportunities to participate in faculty development trainings		
D4.09	Institution encourages teachers to do research		
D4.10	Institutions have facilities for teachers to research		
D4.11	Salaries and other incentives* paid to the teachers for teaching and doing other administrative tasks in the college		

*Incentives indicate cash payment or other financial benefits for carrying out any tasks in the colleges other than teaching. For example, paying them for doing administrative work or any other work in the college.

Section E: Mention the percentage of time you spend in the following activities weekly.

(Note that the sum of E.01 to E.05 makes 100)

Question no.	Time Allocation	Percentage
E.01	Working time devoted to teaching students and preparing for classes	
E.02	Working time devoted to check copies and assignments of students	
E.03	Working time devoted to administrative and exam related tasks	
E.04	Working time devoted to research related works	
E.05	Working time devoted to self-development activities	

Section F: Overall Satisfaction

Question no.	Question		<u>Level of Satisfaction</u> 1=Not Satisfied, 2=Somewhat satisfied, 3=Neither satisfied nor dissatisfied, 4=Satisfied, 5=Very satisfied
	What is the level of your overall satisfaction in terms of the following criteria?		
F.01	Teaching-Learning facilities/ Academic Infrastructure	Teaching-learning facilities	
		Academic infrastructure	
F.02	Connectivity through internet	Computer room	
		Quality of internet connection	
F.03	Status of collaborative relationship between the college and the industry for soft skills development and employment of students	Quality of soft skills development opportunities for students	
		Collaboration of the industrial establishment with the college for providing employment	

Section G: What type of improvement or help do you need for your department /college? If you have any comments and or suggestions, please write them down below.

G.01	For College
1.	
2.	
3.	
G.02	For Department
1.	
2.	
3.	

Section H: Perception/Information about IDP Sub-Project

Sl. No.	Question	Answer (code)
H.1	Were you involved in the process of the IDP Preparation?	

	Code: Yes=1, No=2	
H.2	If yes, what were your role in the process?	
H.3	If no, do you think being involved in the process would have helped the overall procedure? Code: Yes=1, No=2	
H.4	If yes, how would it have helped the procedure?	
H.5	If no, why do you think that it would not have helped in any way?	
H.6	How satisfied are you with the execution of IDP sub-project ? Code: 1=Not satisfied at all 2=Somewhat satisfied 3=Neither satisfied nor dissatisfied 4=Satisfied 5=Very satisfied	
H.7	Do you have any suggestions for better execution of the sub-project or any other project similar to this?	

I.	Interview Ending time hour minutes
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**Thank you very much for your kind participation in the End Line Satisfaction Survey
for College Education Development Project-2023**



Bangladesh Institute of Development Studies (BIDS)

E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)

Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey

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Questionnaire for the Principal

Section A1: Information of the Data Processing Team (To be filled up by the Survey Supervisor)

Question no.	Designation	Name	ID	Signature	Date
A1.01	Field Investigator				
A1.02	Field Supervisor				
A1.03	Data Entry Officer				

Section A2: Respondent's Institutional Identification (To be filled up by the Survey Supervisor)

Question no.	Question	Answer	Code
A2.01	Division		
A2.02	District		
A2.03	Name of the College		
A2.04	NU College Registration Number		
A2.05	Type of Management		1=Government 2=Non-government
A2.06	Type of College		1= Program 2= Control
A2.07	College IDG Category (Code)		A/ B/ C
A2.08	Do you have any master's program?		1=Yes 2=No
A2.09	Starting time of the interview		

Section B1: Institution Specific Information (Applicable for Honors and Master's Program only)

[Please write down the specific answer in the assigned blank space]

Question no.	Question	Answer	
B1.01	Year of establishment of the college		
B1.02	Year of starting Hons. program		
B1.03	Total number of departments in the college	Bachelors	
		Masters	
B1.04	Total number of science subjects offered	Bachelors	
		Masters	
B1.05	Total number of teachers in the college	Male	
		Female	
B1.06	Total number of full-time teachers in the college	Male	
		Female	
B1.07	Number of teachers holding Ph.D. degree	Male	
		Female	
B1.08	Number of professors in the college	Approved posts	
		Currently working	

Question no.	Question	Answer		
B1.09	Number of associate professors in the college	Approved posts		
		Currently working		
B1.10	Number of MPO enlisted teachers (Applicable for non-govt. colleges only)	Male		
		Female		
B1.11	Number of assistant professors in the college (Honours and Masters)	Approved posts		
		Currently working		
B1.12	Number of lecturers in the college	Approved posts		
		Currently working		
B1.13	Number of demonstrators in the college	Approved posts		
		Currently working		
B1.14	Total number of students in the college (Honors)	Number	Number	
			Male	
			Female	
B1.15	Total number of students in the college (Masters)	Number	Number	
			Male	
			Female	
B1.16	How many students got admitted last year? (Honours and Masters)	Number	Number	
			Male	
			Female	
B1.17	How many students graduated from your institution last year?	Number	Number	
			Male	
			Female	

B1.18	How many students complete post-graduation from your institution last year?	Number	Number	
			Male	
			Female	
B1.19	Internal examination system of the college	Yearly	1	
		Dual semester	2	
		Trimester	3	

Section B2: Facilities in the College

(Please specify the answer or use tick mark where applicable)

Question no.	Question	Answer	
B2.01	Total number of classrooms in the college		
B2.02	Number of multimedia equipped classrooms		
B2.03	Number of laboratories in the college		
B2.04	Number of computer labs in the college		
B2.05	Is there any internet facility in your college?	1	Yes
		2	No
B2.06	Is it a single campus college?	1	Yes
		2	No
B2.07	Does the college have a Central Library?	1	Yes
		2	No
B2.08	Does the college have open space/ field?	1	Yes
		2	No
B2.09	Is there any accommodation facility for teachers?	1	Yes
		2	No
B2.10	Is there any transport facility for teachers?	1	Yes
		2	No
B2.11	Is there any transport facility for students?	1	Yes
		2	No
B2.12	Does your college provide full hostel accommodation for students?	1	Yes
		2	No
B2.13	If B2.11 is 'no', does college provide partial hostel accommodation for students?	1	Yes
		2	No
B2.14	Presence of Alumni association of students in college?	1	Yes
		2	No
B2.15	Do you have any room allotted for the alumni association?	1	Yes
		2	No
B2.16	Do you have any student union in this college?	1	Yes
		2	No
B2.17		1	Yes

	Do you have any kind of special facilities for disabled students?	2	No
B2.18	If B2.17= Yes , what kind of facilities do you have for them (mention top 3)?	1. _____ 2. _____ 3. _____	
B2.19	Do you have any mother's corner in this college?	1	Yes
		2	No
B2.20	Do you have any kind of first aid/ primary medical facilities in this college?	1	Yes
		2	No
B2.21	Do you have any treatment/counselling facilities to address mental health issues in this college?	1	Yes
		2	No

Section B3: Teaching Environment in the College

(Please write down the answer or use tick mark where applicable)

Question no.	Question	Answer	
B3.01	Are the teachers assessed by the students?	1	Yes
		2	No
B3.02	Are the new teachers assessed by the senior teachers?	1	Yes
		2	No
B3.03	Is there regular meeting of academic council?	1	Yes
		2	No
B3.04	How many times on average a meeting is held per academic year/semester?		
B3.05	How many teachers have received pedagogical trainings during the last 12 months? (Subject based or others)	In Bangladesh	
		In abroad	
B3.06	How many teachers have received pedagogical trainings during the last 5 years? (Subject based or others)	In Bangladesh	
		In abroad	
B3.07	Does your college provide pedagogical trainings for newly recruited teachers?	1	Yes
		2	No
B3.08	Does your college provide on the job/foundation trainings to the newly recruited teachers?	1	Yes
		2	No
B3.09	Is pedagogical training a criterion for teachers to get promotion?	1	Yes
		2	No

B3.10	How many teachers received NU subject-based training during the last 12 months? (Number)	
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Section C1: Perception of Adequacy of Facilities [Please circle the code]

Question no.	Question	Code	Description of the code	Current number
C1.01	Do you think your college has adequate classrooms?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.02	Do you think your college has adequate exam halls?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.03	Do you think your college has adequate seminar/meeting rooms for teachers?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.04	Do you think your college has adequate washrooms/toilets for teachers?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.05	Do you think your college has adequate separate washrooms/toilets for female teachers?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.06	Do you think your college has adequate common rooms for students?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.07	Do you think your college has adequate washrooms/toilets for students?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	

Question no.	Question	Code	Description of the code	Current number
C1.08	Do you think your college has adequate separate washrooms/toilets for female students?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.09	Do you think your college has adequate laboratories and necessary instruments for laboratories?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.10	Do you think your college has adequate IT facilities (Computers, internet connection etc.)?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.11	Do you think your college has adequate Library facilities (books, e-library,journals, etc.)?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.12	Do you think your college has adequate training facilities for teachers?	1	Not adequate at all	
		2	Somewhat adequate	
		3	Neither adequate nor inadequate	
		4	Adequate	
		5	More than adequate	
C1.13	How often is the curriculum updated by National University?	1	Never	
		2	Once every ten years	
		3	Once every five years	
		4	Once every two years	
		5	Once every year	
C1.14	How long does it take to publish internal result after the examination is held?	1	Within 1 month	
		2	Within 3 months	
		3	Within 6 months	
		4	Within 1 year	
		5	More than a year	

Section C2: Perception on the Scope of Development of Students & Teachers

(Please write down the answers from the following questions and use tick mark where applicable)

Question no.	Question	Code	Answer
C2.01	Is there any activity which involves the development of students' soft skills (communication, presentation, etc.)?	1	Yes
		2	No
C2.02	Is research work for teachers considered a criterion for promotion?	1	Yes
		2	No
C2.03	Is research / thesis mandatory for students?	1	Yes
		2	No
C2.04	Does your teachers supervise students' thesis work?	1	Yes
		2	No
C2.05	Do you feel the necessity to open new departments?	1	Yes
		2	No
C2.06	If yes, please specify which departments? (Multiple answer possible)	1	
		2	
		3	

Section C3: Connectivity through Internet

(Please indicate the level of importance on the internet connectivity in your college and please state the current level of satisfaction regarding the internet facilities)

Question no.	Indicators	Importance Scale	Satisfaction Scale
		1=Not important 2=Somewhat important 3=Neither important nor unimportant 4=Important 5=Very important	1=Not satisfied 2=Somewhat satisfied 3=Neither satisfied nor dissatisfied 4=Satisfied 5=Very satisfied
C3.01	Availability of broadband connection in campus		
C3.02	Availability of Wi-Fi in campus		
C3.03	Quality and speed of internet connection		
C3.04	Access to internet for teachers		
C3.05	Access to internet for students		

C3.06	Use of internet by teachers to prepare class lectures and update knowledge		
C3.07	Use of internet by teachers to communicate with students		

Section D: Employment Facilities for Students

(Please write down the answers from the following questions and use tick mark where applicable)

Question no.	Question	Code	Description of the code
D.01	Does your college have any collaboration with industry for job placement for students?	1	Yes
		2	No
D.02	If yes, in which form?	1	Internships
		2	Job fairs
		3	Formal MoU with employers
		4	Academic reference
		5	Others (Please specify)
D.03	Your level of satisfaction regarding student's academic results?	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
D.04	Your level of satisfaction regarding the students' job market performance?	1	Not satisfied
		2	Somewhat satisfied
		3	Neither satisfied nor dissatisfied
		4	Satisfied
		5	Very satisfied
D.05	Do you have any alumni association?	1	Yes
		2	No

Section E1: Information about Institutional Development Grant (IDG) affiliated with College Education Development Project

(Please use tick mark where appropriate)

Question no.	Question	Code	Description of the code
E1.01	Have you participated in the first round of workshop conducted by CEDP?	1	Yes
		2	No
E1.02	Have you participated in the second round of workshop conducted by CEDP?	1	Yes
		2	No
E1.03	How important do you think providing grant is, in terms of improving college education quality?	1	Not important
		2	Somewhat important
		3	Neither important nor unimportant
		4	Important
		5	Very important

Section E2: This table should be only filled by the principals of those colleges, who did not receive Institutional Development Grant (IDG) under College Education Development Program.

Question no.	Question	Code	Description of the code
E2.01	Is Your college informed about the Institutional Development Grant (IDG) provided by CEDP?	1	Yes
		2	No
E2.02	Many workshops were organized before the application process of IDG facility started. Did you know about those?	1	Yes
		2	No
E2.03	If E2.02 is yes, how did you learn about these workshops?	1	From Newspaper Advertisement
		2	From the website of CEDP
		3	By directly contacting with the project office
		4	From the authority of other colleges
		5	Others (please specify)

E2.04	Did your college apply for Institutional Development Grant (IDG) facility?	1	Yes
		2	No
E2.05	If E2.04 is no, then why didn't you?	1	Could not prepare the proposal letter in given time
		2	Application process seemed complicated
		3	Your college does not need any grant at this moment
		4	Applied for grant in other organization/project
		5	The college is currently being developed by other organization/projects
		6	Others (Please specify)
E2.06	If the project asks for more applications in the future, do you plan to apply for it?	1	Yes
		2	No

Section F: Overall Satisfaction

What is the level of your overall satisfaction in terms of the following criteria?		<u>Level of Satisfaction</u> 1=Not satisfied 2=Somewhat satisfied 3=Neither satisfied nor dissatisfied 4=Satisfied 5=Very satisfied
F.01	Teaching-learning environment of the college	
F.02	The infrastructure of the college	
F.03	Connectivity through internet in the college	
F.04	Development of students' soft skills	
F.05	College's linkage with industry for students' job placement	

Section G: If you have any comments and or suggestions in the above context, please write them down below.

1.

2.
3.
4.
5.

Section H: Interview End Time	
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<p>Name of the Principal of the College:</p> <p>Mobile No:</p> <p>E-mail Address (If any):</p> <p>Signature of the Principal of the College:</p> <p>Date:</p>
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Thank you very much once again for your kind participation in the End-line Satisfaction Survey for the College Education Development Project (CEDP)-2023!



Bangladesh Institute of Development Studies (BIDS)
E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)
Secondary and Higher Education Division, Ministry of Education
Project Effectiveness including Endline Satisfaction Survey

[Disclaimers: এই প্রশ্নপত্রের মাধ্যমে সংগৃহীত তথ্য শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে। এখানে কোন ব্যক্তি বা কলেজের নাম কোন অবস্থাতেই গবেষকদের বাইরে অন্য কোথাও বা অন্য কারো কাছে প্রকাশ করা হবে না।]

Employer Survey Questionnaire

Section A1: Information of the Data Processing Team (To be filled up by the Data Collector)

Question no.	Designation	Name	ID	Signature	Date
A1.01	Data Collector				
A1.02	Field Supervisor				
A1.03	Data Entry Officer				

Section A2: Date and Time of Interview (To be filled up by the Data Collector)

Question no.	Question	Date of Interview		
		Day	Month	Year
A2.01	Date of Interview			
A2.02	Starting time of the Interview			

Section B: General Information of Organization

(Please write down the answer/circle the number of the code, where appropriate)

Question no.	Question	Answer
B.01	Name of the Organization	
B.02	Address	
B.03	Year of Establishment	
B.04	Respondent's Name	
B.05	Mobile/Phone Number	
B.06	Email ID	

Question no.	Question	Answer	
B.07	Respondent's Designation	1	Institution Head
		2	Department Head
		3	Branch Head
		4	Project Director/Manager
		5	Human Resource Officer
		6	Others (Please Mention)
B.08	Type of Management	1	Government Organization
		2	Private Organization
		3	Semi-Government Organization
		4	Multinational Organization
		5	Trust/Foundation/NGO
		6	Others (Please Mention)
B.09	Total number of employees recruited in last 12 months	Male	
		Female	
B.10	Total number of NU college graduates' employees recruited in last 12 months	Male	
		Female	

B.11 Employment Status in the Organization

Year	Total number of Employees		Total number of Employees that Graduated from NU	
	Male	Female	Male	Female
2023				
2022				
2021				
2020				
2019				

Section C1: Recruitment Criteria

(Please rank the importance of the qualities which your organization perceive as essential when recruiting using a scale of 1 to 10)

Question no.	Skills/Criteria	Scale
		1 \longleftrightarrow 10 1=Not Important, 10=Very Important
C1.01	Institutional degree	
C1.02	Additional vocational training/ technical diploma/ technical degree/certificates/professional certificate	
C1.03	Academic CGPA	
C1.04	Previous work experience	
C1.05	Personal attributes (smartness/ promptness/ flexibility)	
C1.06	Basic and written communication skills	
C1.07	Competent user of computer	
C1.08	Personal networking	
C1.09	Professional reference	
C1.10	Academic reference	

C2. How frequently your organization use each of the following in the recruitment process?



		<u>Scale</u>	
Question no.	Question	Answer	
D1	Does your organization have special interest in hiring national university graduates?	1	Yes, we are especially interested in them 5=Highly used
C2.01	Advertisement in national dailies	2	No, we don't have any special interest
C2.02	Internet advertising (job site)		We recruit based on qualification after analysing the candidates
C2.03	Employer's personal networks		(university/college does not get any predominance in this case)
C2.04	Job fair	3	
C2.05	Formal MoU with academic institutions		
C2.06	Internship		
C2.07	Others (please specify)		

Section D: Recruitment of NU College Graduate

D2. What are the unique opportunities, skills and abilities of NU graduates which make them more employable?

(Multiple answers acceptable)

Question no.	Skills and Abilities	Tick Mark
D2.01	NU college graduates are skilful and knowledgeable	
D2.02	They possess recommendable soft skills	
D2.03	Hardworking and willing to learn new things	
D2.04	Easy to train up	
D2.05	Innovative	
D2.06	Team worker (working in a team while maintaining mutual relations)	
D2.07	They do not switch jobs frequently	
D2.08	Willing to work with lower salary	
D2.09	Others (please specify) _____	

Question no.	Skills	Importance Scale	Satisfaction Scale
		 1 10 1=Not Important 10=Very Important	 1 10 1=Very Dissatisfied 10=Very Satisfied
D3.15	Verbal communication (in Bengali)		
D3.16	English language proficiency		
D3.17	Basic computer skill (e.g., word-processing, spreadsheets, relevant ICT skills etc.)		
D3.18	Advanced computer skill (e.g., databases, programming)		
D3.19	Time management		

D4. Based on the experience of working with them please rate which aspects of NU graduates need improvements (Multiple answers acceptable)

Question no.	Skills and Abilities	Tick Mark
D4.01	Communication skill	
D4.02	Presentation skill	
D4.03	Group work activity	
D4.04	Problem solving skill	
D4.05	Technical knowledge	
D4.06	English language proficiency	
D4.07	Computer/ ICT skill	
D4.08	Others (please specify)	

Section E: How satisfied are you with the overall job performance of employees who graduated from national university?

(If no NU graduate has been recruited in the last 12 months, write 999)

Are you satisfied with the overall skills and knowledge levels of the NU college graduates that your organization have hired in the last 12 months?	1	Not satisfied
	2	Somewhat satisfied
	3	Neither satisfied nor dissatisfied
	4	Satisfied
	5	Very satisfied

Section F: Please give your suggestion and advice to college authority for the betterment of the NU college graduates that will make them more employable/compatible in the work force

1	
2	
3	
4	
5	

G: Interview End Time

Interview End Time	
Signature of the Employer:	
Date:	

Thank you very much once again for your kind participation in the End-line Satisfaction Survey for the College Education Development Project (CEDP)-2023!



Bangladesh Institute of Development Studies (BIDS)
E-17, Agargaon, Shere-e-Bangla Nagar, Dhaka-1207



and

College Education Development Project (CEDP)
Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey
Some Broad General Checklist Questions for Students' FGDs

1. Have you heard about the CEDP project? If so, what is this project about?
2. Was there any activity carried out in your college under the CEDP projects? If so, what are those activities?
3. Do you have any modernized/improved classrooms with multi-media/smartboard in your college? Do you have access to these classrooms?
4. Do you think that the quality of teaching has improved due to the improvement or introduction of multimedia/smartboard in the classrooms? Please explain.
5. Do you think that class attendance has increased due to the improvement or introduction of multimedia/smartboard in the classrooms? Please explain.
6. What are the advantages of modernized classrooms with multimedia or smartboard?
7. Do you have any modernized library in your college?
8. Do you think that use of the library has increased due to the introduction of improved facility in the library?
9. What are the advantages of modernized/improved library in the college?
10. Do you have any modernized ICT lab in your college?
11. Do you think that use of ICT lab has increased due to modernization or introduction of Wi-Fi facility in the ICT lab?
12. What are the advantages of a modernized ICT lab?
13. Do you think that the students' attention to learning has increased in the college due to its modernization? If so, please give reasons with examples.
14. Do you think that the students' learning outcomes (results) have improved due to the modernization of the facilities in the college? If so, please give reasons with examples.
15. What is current employability status of your college graduates compared to the situation five year ago? Has it increased, decreased or remained at the same level? Why?
16. What should be the priority areas of improvement in your college in order to improve learning environment in your college so that the students are more attracted to learning and do better in exams as well as job market? Please explain.

FGD Participants



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Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey

Some Broad General Checklist Questions for Teachers' FGDs

1. What do you know about the CEDP project?
2. Was there any activity carried out in your college under the CEDP projects? If so, what are those activities?
3. According to your opinion, which ones among the tasks carried out through CEDP funding have been the most useful and why? Please explain the justifications in detail.
4. Do you have any modernized/improved classrooms with multi-media/smartboard in your college? Do you use these classrooms for delivering lectures?
5. Do you think that the quality of teaching has improved due to the improvement or introduction of multimedia/smartboard in the classrooms? Please explain.
6. Do you think that class attendance has increased due to the improvement or introduction of multimedia/smartboard in the classrooms? Please explain.
7. What are the advantages of modernized classrooms with multimedia or smartboard?
8. Do you have any modernized library in your college?
9. Do you think that use of the library has increased due to the introduction of improved facility in the library?
10. What are the advantages of modernized/improved library in the college?
11. Do you have any modernized ICT lab in your college?
12. Do you think that use of ICT lab has increased due to modernization or introduction of Wi-Fi facility in the ICT lab?
13. What are the advantages of a modernized ICT lab?
14. Do you think that the students' attention to learning has increased in the college due to its modernization? If so, please give reasons with examples.
15. Do you think that the students' learning outcomes (results) have improved due to the modernization of the facilities in the college? If so, please give reasons with examples.

16. What is current employability status of your college graduates compared to the situation five year ago? Has it increased, decreased or remained at the same level? Why?
17. Do you think that the activities that have been done with funds from IDG would improve the employability of NU graduates in the future? Please explain, why?
18. What should be the priority areas of improvement in your college in order to improve learning environment in your college so that the students are more attracted to learning and do better in exams as well as job market in the future? Please explain.
19. What are the positive aspects of IDP sub-project?
20. What are the weaknesses/challenges of this project?
21. How this could have been done differently?
22. What should be the priorities in the next phase of CEDP (if any), or any future project of similar kind for the development of college education?

FGD Participants

Sl. No.	Name	Identity	Signature

তথ্য সংগ্রহকারীর নাম:	স্বাক্ষর:
মোবাইল নম্বর:	তারিখ:



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Secondary and Higher Education Division, Ministry of Education

Project Effectiveness including Endline Satisfaction Survey
Some Broad General Checklist Questions for KIIs

1. What were the major objectives of the project?
2. Please tell us about the major/important activities carried out by CEDP?
3. To what extent do you think the activities were carried out as per the plan of the project? Please explain in detail.
4. What were the challenges it faced? Please explain.
5. To what extent do you think the project has achieved its desired objectives? Please explain in detail with examples.
6. From your point of view, what do you think were the most important contributions of the project in developing the tertiary level college education in the country? Please explain with examples.
7. What didn't go well, if any? Please explain.
8. What is your opinion about performance of the personnel involved in the execution of the project. Please explain in detail.
9. What were the major strengths of the project and why? Give details please.
10. What opportunities has the project created for the NU students and graduates? Please explain.
11. What were the major weaknesses of the project? Give details please.
12. How do you think the project could have been implemented differently?
13. Do you think that the quality of teaching has improved in the colleges? Please give reasons with examples.
14. Do you think that the students' learning outcomes (results) have improved due to the improvement of teaching-learning environment in the college? Please give reasons with examples.
15. What were the Lessons learned from this project?
16. What should be the priorities (in terms of both the content and way of implementation) in the next phase of CEDP (if any), or any future project of similar kind for the development of college education?

Name of the Interviewee:	
Designation:	
Organization:	
Phone:	
E-mail:	

Name of the Interviewer:	
Signature:	
Date:	