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Quality education and institutional facilities: A comparative study between students and teachers opinion at NU-affiliated colleges of Bangladesh

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ABSTRACT

This study explores perceived disparities between students and faculty regarding education quality and facilities in National University-affiliated colleges in Bangladesh. The study uses constructivist theory, expectancy-value theory, and stakeholder theory to investigate how these groups perceive various aspects of educational quality, such as academic facilities, curricula, and institutional support. Using a self-administered questionnaire given to 223 students and 124 academicians, the study identified significant difference in attitudes, particularly regarding the quality of academic facilities, the relevance of courses, and the efficacy of teacher-student relationships. The results indicate that although institutions connected with NU have made significant progress in enhancing infrastructure and educational achievements, there is still a discrepancy between the expectations of students and teachers, which may impede educational efficacy. The study highlights the importance of implementing specific institutional changes and making policy decisions based on solid evidence to bring these perspectives into alignment. This will eventually improve the quality of education and increase the employability of graduates. This research enhances the field of sociology of education, and management by emphasizing the significance of considering various viewpoints from stakeholders to promote a more efficient and inclusive educational setting in Bangladesh.

1. Introduction

Quality education is crucial for individual and social development, encompassing instructional techniques, curriculum relevance, academic facilities, institutional support, and teacher-student relationships (Kincade et al., 2020; Sancar et al., 2021). UNESCO (2015) emphasizes that a high-quality education equips students with the necessary information, skills, values, and attitudes for societal contribution and academic success (as cited in Shava (2020)). In a line with this point of view, we designed this study to understand how student-teacher perceive the quality of education associated with existing facilities offered by institutions in a reference with the National University (NU)

in Bangladesh, hoping to contribute to sociology of education and management discipline, and understanding what drives a standard of education in Bangladesh NU affiliated colleges.

In Bangladesh, the colleges that are affiliated with NU have a significant impact on the opportunities that students and society will face in the future (Sohel & Mojumder, 2021). Relationships between teachers and students, enough funding, and relevant curricula are the components of an effective educational system (Hajovsky et al., 2020). Nevertheless, divergent viewpoints continue (Chowdhury et al., 2020). The rising enrollment in higher education institutions can be attributed, in large part, to institutes that are associated with NU (Chowdhury et al., 2020). However, in terms of academic quality, funding, and facilities,

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these colleges often lag behind public universities in Bangladesh (Chowdhury et al., 2020; Kono et al., 2018). In such circumstances, several scholars have argued (Chowdhury et al., 2020; Titumir, 2021) that to maintain its position as a top university, NU must work to eliminate these disparities.

Over the past few years, Bangladesh's NU-affiliated institutions have advanced significantly in terms of both academic quality and infrastructure (Titumir, 2021). For instances, improved instruction and challenging material helped 88.43 % of 1st year undergraduates pass in 2024 (NU, 2024b). Several institutions have been recognized for their contributions to higher education due to students' exceptional performance in national and international contests and university entrance exams (Chowdhury et al., 2020; Kono et al., 2018). Some colleges have added modern research spaces, classrooms, and libraries to give students access to advanced learning tools (Shah, 2021). Many schools emphasize extracurricular activities to promote student health and career readiness (Alam et al., 2014). These colleges are presently top tier in the National University, reflecting Bangladesh's innovative and superior education trend (Shah, 2021; Titumir, 2021). They emphasize comprehensive education and technology-enhanced learning.

Such development suggests that Bangladesh has lately shifted its higher education system from rote learning to real-world skills (Shah, 2021). However, this transition requires a closer look at curriculum, upskilling, and institutional support (Kono et al., 2018). Even after considerable improvements in NU-affiliated universities' infrastructure, students and instructors still approach their education differently (Alam et al., 2014; Kono et al., 2018). This may result in unmet expectations, discontent, and a decline in the efficacy of educational initiatives (Alam et al., 2014). This is important for understanding how educators and students view education (Malm, 2020), the suitability of academic and library spaces, the usefulness and applicability of the current curriculum, institutional support, teacher-student relationships (Sancar et al., 2021), and how well graduates are equipped with professional skills to handle this (Alam et al., 2024).

Moreover, the teacher-student connection is crucial for engagement, learning outcomes, and educational satisfaction (Alam et al., 2024). This study explores how Bangladeshi student-teachers perceive NU-affiliated colleges and provides insights for policymakers, instructors, administrators, researchers, and other stakeholders. By identifying perspective gaps between students and instructors, the findings aim to enhance instruction quality, support services, and employability, contributing to societal benefits. Additionally, the study promotes evidence-based decisions and institutional reforms to improve education outcomes and advance socioeconomic growth (Nakata et al., 2018). In alignment with these aims, the study is guided by the following specific objectives.

1. Assess how students and teachers perceive quality education in NU-affiliated colleges in Bangladesh.
2. Compare perceptions of academic facilities, library support, and institutional infrastructure between students and teachers.
3. Evaluate stakeholder (students' and teachers') opinions on curriculum relevance and assessment systems.
4. Analyze differences in the perceived scope and institutional support for upskilling programs.
5. Examine teacher-student relationship dynamics and their influence on academic experience.
6. Investigate the gap in perceptions regarding students' acquisition of professional skills for future employability.

2. Theoretical framing, literature review, and hypothesis development

In order to understand how students and teachers perceive institutional facilities and educational quality, this study integrates constructivist theory (Lindqvist & Forsberg, 2023; Waite-Stupiansky, 2022), expectancy-value theory (Wang et al., 2023), and stakeholder theory

(Freeman, 2023). Although expectancy-value theory concentrates on how attitudes and behaviors are influenced by expectations of success and the value put on educational results (Eccles & Wigfield, 2024; Wang et al., 2023), constructivist theory emphasizes how individual experiences and relationships with the educational environment create these beliefs (Lindqvist & Forsberg, 2023). In addition, stakeholder theory highlights the necessity of considering the demands and interests of educational stakeholders including teachers, administrators, students, and policymakers when creating institutional policies to increase educational quality and efficacy (Freeman, 2023). This means that instructional tactics, curricular relevance, and institutional support affect how instructors and students see education quality.

Moreover, variations in these perspectives might point out areas that need to be improved to bring educational methods into compliance with its beneficiaries' expectations and values (Yilmaz & Temizkan, 2022). According to the concept, educational institutions should interact with instructors and students to better understand their expectations and experiences (Kono et al., 2018). They may then devise methods to improve curriculum, education, resource allocation, and institutional support (Kincade et al., 2020). Tailor-made efforts can lessen educational disparity by increasing resource availability and fulfilling individual needs (Rahnuma, 2020b). Adding gender, socioeconomic position, and educational technology to the theoretical framework could improve institutional effectiveness and education (Alam et al., 2024). Innovations can help build high-quality education that meets everyone's changing needs (Rahnuma, 2020b; Yilmaz & Temizkan, 2022). The following sub-section highlighted the detail conceptual understanding and the study hypothesis in the light of those theories.

2.1. Constructivist theory vs quality education and academic environment

Constructivist theory, founded by Jean Piaget and Lev Vygotsky (Waite-Stupiansky, 2022), posits that environment and personal experiences shape knowledge. People develop their worldview through active, contextualized learning (Lindqvist & Forsberg, 2023). Students and teachers form educational quality perceptions based on classroom experiences, teaching methods, and academic atmosphere (Schweder & Raufelder, 2024). Curriculum relevance and effectiveness depend on student and instructor expectations and experiences. Schooling can shape views (Lindqvist & Forsberg, 2023). Constructivist theory says individual experiences affect educational quality (Lindqvist & Forsberg, 2023; Waite-Stupiansky, 2022). For instance, Hajovsky et al. (2020) pointed out that although teachers could place more emphasis on academic rigor and theoretical understanding, students usually prefer employability and practical abilities. Likewise, Malm (2020) stated teachers are more preoccupied with academic excellence and credibility than students are with employability results. Following these perspectives we can hypothesized.

H1. There is a difference in the perceived response of students and teachers to "What is quality education?"

In these regards, often scholars have shown that students and teachers often have different perceptions of what constitutes quality education (Lindqvist & Forsberg, 2023). As they meet the varied requirements of their students, institutions with NU affiliations play a vital role in Bangladeshi education and information sharing (Chowdhury et al., 2022). Often perceptions and demands for high-quality education vary (Shah, 2021). Better teacher-student relationships, academic facilities, and institutional support services may improve education and socioeconomic advancement (Tleuken et al., 2022). In Bangladesh, NU colleges may have a different curriculum since students may choose more difficult and industry-relevant courses and teachers may stress basic skills and knowledge (Chowdhury et al., 2020). This gap between labor market needs and educational attainment may render students less employable in the future. Based on such context we can hypothesized.

H2. There is a difference in the perceived response of students and teachers to the available academic facilities in NU-affiliated colleges.

Constructivist theory, further, places a strong emphasis on the role that institutional spaces like labs and libraries have in influencing students' pleasure and educational experiences (Lindqvist & Forsberg, 2023). Studies demonstrate that an institution's physical environment affects student achievement (Rashid et al., 2023; Schweder & Raufelder, 2024). Educators and students disagree on these resources' applicability and efficiency (Schweder & Raufelder, 2024; Tleuken et al., 2022). Teaching staff are more concerned than students about resource shortages when it comes to upkeep, curricular relevance, and specialist equipment (Tleuken et al., 2022). Well-stocked labs and libraries boost student achievement and satisfaction (Schweder & Raufelder, 2024). At this point, connecting to the SERVQUAL model, when used in educational contexts, identifies gaps between expected and perceived services, influencing stakeholder satisfaction. Based on such context we can hypothesized.

H3. There is a difference in the perceived response of students and teachers to the available library facilities in the NU-affiliated colleges.

H4. There is a difference in the perceived response of students and teachers to the existing curriculum of the NU-affiliated colleges.

2.2. Expectancy-value theory vs upskill development

Expectancy-Value Theory, developed by Jacquelynne Eccles, suggests that individuals' attitudes and behaviors are shaped by their expectations of success and the value they assign to it (Eccles & Wigfield, 2024). Widely applied to understand motivation in educational contexts, the theory emphasizes the influence of students' and teachers' expectations regarding knowledge, skill development, and career readiness on their perceptions of quality education (Eccles & Wigfield, 2024; Wang et al., 2023). The efficacy of upskill programs depends on their perceived value and likelihood of success (Schnettler et al., 2020). While instructors focus on academic competency, students prioritize hands-on learning opportunities, making upskill programs essential for bridging the gap between academic knowledge and workforce preparation (Chowdhury et al., 2022; Schnettler et al., 2020).

Early researchers (Chowdhury et al., 2020; Nakata et al., 2018) argued that understanding these expectations could identify discrepancies in perceptions of educational quality, enabling the creation of interventions that align educational practices with the values of both groups, thereby improving satisfaction. These perceptions are influenced by personal expectations, cultural context, and education (Wang et al., 2023). For instance, Yilmaz and Temizkan (2022) demonstrated that students' cultural backgrounds shape their expectations of education quality, impacting their engagement and satisfaction. Similarly, Schnettler et al. (2020) emphasized that, as per the Expectancy-Value Theory, students' motivation and perceptions are influenced by their expectations of success and the value they place on academic outcomes (Eccles & Wigfield, 2024). However, due to limited scientific evidence, further research is necessary to examine the scope of upskill programs in NU-affiliated colleges. Accordingly, we hypothesize ...

H5. There is a difference in the perceived response of students and teachers to the available scope of upskill programs in NU-affiliated colleges.

H6. There is a difference in the perceived response of students and teachers to the available institutional support and facilities for the upskill programs in NU-affiliated colleges.

2.3. Stakeholder theory vs stakeholder relationship

Stakeholder Theory, developed by R. Edward Freeman, highlights the need to consider the interests of all stakeholders, including students,

teachers, administrators, and policymakers, to enhance success (Freeman, 2023). Understanding student and instructor perceptions of institutional support and facilities helps identify disparities that impact educational outcomes (Freeman, 2023). Addressing these disparities through effective communication and stakeholder involvement can improve institutional efficacy and educational quality (Rahnuma, 2020a). Sancar et al. (2021) found that while instructors prioritize administrative duties and professional development, students emphasize hands-on learning, revealing a disconnect in Bangladeshi institutions. Teacher-student connections enhance learning and well-being, but differing priorities often create perception gaps (Sancar et al., 2021; Chowdhury et al., 2022). Resolving these conflicts through inclusive policymaking ensures institutional effectiveness and supports interventions, policy creation, and future research (Rahnuma, 2020a; Sohel & Mojumder, 2021). Based on these discussions, this study proposes hypotheses to guide policymakers in the absence of rigorous research.

H7. There is a difference in the perceived response of students and teachers to the teacher-student relationship of the NU affiliated colleges in NU-affiliated colleges.

Earlier research found that Bangladesh's higher education system faces a growing student population, inadequate facilities, and limited finances (Alam et al., 2014). NU colleges commonly need quality control and resource assistance (Alam et al., 2014). To promote academic standards, faculty development, institutional governance, and curriculum design, the University Grants Commission (UGC) maintains quality assurance initiatives (Rahnuma, 2020a). Maintaining these gains requires ongoing observation and stakeholder interaction (Ghaffar & Abrizah, 2017). Scholars (Buys et al., 2022; Ghaffar & Abrizah, 2017) stressed the need of understanding professors' and students' views on professional skill development at NU-affiliated colleges. Creative teaching methods, industry-standard curriculum, and institutional support are needed to prepare students for professional roles (Buys et al., 2022). To improve educational results and student achievement, evidence-based practices based on varied educational environments should be informed by future research that examines these attitudes (Kono et al., 2018; Rahnuma, 2020a). Thus, we assumed that.

H8. There is a difference in the perceived response of students and teachers to students acquiring sufficient professional skills from NU-affiliated colleges.

3. Methodology

The National University of Bangladesh, a public establishment, was founded in 1992, making it 32 years old. Situated in Gazipur, Bangladesh, precisely at coordinates 23.9499°N, 90.3808°E, this university caters to a substantial number of students and is among the world's largest institutions in terms of enrollment. The university's academic structure is bolstered by a vast network of associated colleges, amounting to a total of 2297 (NU, 2024a). The university has a substantial academic workforce of 159,375, which consists of faculty members from its associated institutions. Additionally, it is overseen by 1051 administrative staff members (NU, 2024a). The total student population of National University is 2,089,909. This includes 1,755,256 undergraduates, 334,653 postgraduates, 184 PhD candidates, and 7048 students participating in other programs (NU, 2024a). The university's extensive influence and capability render it a crucial institution in the higher education domain of Bangladesh.

In an effort to ascertain the student and teacher perspectives on the quality of academic facilities and education, we have randomly distributed a close-ended self-administered questionnaire (SAQ) (Rashid et al., 2023) to 500 undergraduate and graduate students and 200 teachers who are affiliated with a variety of national university-affiliated colleges in Bangladesh between June 2023 and May

2024, both online and in person. The questionnaire was structured into six segments, each corresponding to specific hypotheses derived from the theoretical framework. These segments covered (1) perceptions of quality education, (2) academic and library facilities, (3) curriculum and assessment, (4) institutional support and upskilling opportunities, (5) teacher-student relationships, and (6) professional skill development. The items were adapted from existing validated instruments and relevant literature, with minor contextual modifications. Sample questions can be provided upon request.

We have received a total of 243 questionnaires from students and 137 questionnaires from teachers. After a thorough review, we were able to file 223 student questionnaires and 124 teacher questionnaires for final data analysis. We have considered students as participants who had finished at least one year of the academic year and faculty members who had served at least three years of their professional career in their academic environment. To depict an overall scenario regardless of location and structure, we didn't identify any specific area or colleges. This approach has helped us to avoid bias and capture expert opinion from the respondents.

Table 1 displays demographic information for a sample of 223 students and 124 teachers. Over 25 years old, the bulk of students make up 61.7 % of the total. In contrast, teachers are more evenly spread throughout different age groups, with the greatest proportions being 12.7 % aged 41–45 years and 16.1 % aged over 46 years. Regarding gender, the proportion of female students is larger (37.5 %) than that of male students (26.8 %), although among professors, males are more prevalent (25.6 %) than females (10.1 %). Neither group includes any respondents who identify as the third gender.

We demonstrate how emerging nations like Bangladesh can adopt this new society through appropriate governmental measures. A pilot study with 50 randomly selected volunteers tested the research approach using an initial questionnaire developed in English and translated into Bengali, the native language. For final data collection, only the Bengali version was used for respondent convenience. The questionnaire showed high internal consistency (above 0.7) and strong face validity, confirmed by expert review. Statistical analyses were conducted using SPSS (Version 21). Descriptive statistics were used to summarize demographic information. To examine differences in perceptions between students and teachers, independent samples t-tests were applied to continuous variables, and chi-square tests were used for categorical responses. Significance was determined at $p < 0.05$, with effect sizes reported where appropriate to indicate practical significance. Assumptions of normality and variance equality were considered; Welch's t-test was used in cases where variances were unequal. All analyses were designed to test the eight hypotheses derived from the theoretical framework. All participants were informed of the purpose of the study and participated voluntarily. The survey was anonymous, and no personally identifiable information was collected. In accordance with

Table 1
Descriptive information of the respondents.

		Student		Teacher	
		N =	Percentage	N =	Percentage
		223		124	
Age of the Respondent	>25	214	61.7	0	0.0
	26–30	9	2.6	1	0.3
	31–35	0	0.0	15	4.3
	36–40	0	0.0	8	2.3
	41–45	0	0.0	44	12.7
	46<	0	0.0	56	16.1
	<i>Sub-Total</i>	223	64.3	124	35.7
Sex of the Respondent	Male	93	26.8	89	25.6
	Female	130	37.5	35	10.1
	Third Gender	0	0.0	0	0.0
	<i>Sub-Total</i>	223	64.3	124	35.7

(Source: Author produces, 2023–2024)

standard academic practice for non-interventional educational research in Bangladesh, formal ethics committee approval was not required.

4. Results

4.1. Perceptions on quality education and academic environment

The study shows that opinions about what constitutes a high-quality education differ for both students and teachers. According to Fig. 1, quality education is perceived as improving intellectual ability by 7.2 % of students and 9.7 % of teachers, enhancing ethical and moral responsibility by 6.7 % of students and 15.3 % of manpower creators, growing sufficient professional skill by 15.7 % of teachers, and creating sufficient professional skill by 4.8 % of manpower creators. Students and instructors differ noticeably, too, with 60.1 % of students and 63.7 % of teachers naming every choice, while just 1.3 % of students believe that none of the alternatives define a high-quality education. Moreover, the decision tree analysis yields a Chi-square value of 13.277 with 5 degrees of freedom ($df = 5$) and an adjusted p-value of 0.021. The differences that have been noticed are statistically significant since the p-value (0.021) is smaller than the standard significance level of 0.05.

Following the second hypothesis, significant disparities are found in a number of metrics when analyzing how instructors and students view the academic resources that are offered in institutions that are linked with NU (Table 2). The mean scores for different amenities between 223 pupils and 124 instructors were compared using a T-test. The perceptions regarding adequate classroom information ($t = 3.602$, $p = 0.000$), space for learning ($t = 3.549$, $p = 0.000$), air conditioning ($t = -3.684$, $p = 0.000$), multimedia accessibility ($t = -5.135$, $p = 0.000$), IT support ($t = -6.527$, $p = 0.000$), fresh drinking water ($t = -5.560$, $p = 0.000$), hygienic toilet facilities ($t = -8.028$, $p = 0.000$), availability of TSC/caféteria ($t = -2.148$, $p = 0.033$), staff residential facilities ($t = 3.288$, $p = 0.001$), quality assurance programs ($t = -3.176$, $p = 0.002$), having full professor-ranked teachers ($t = 8.090$, $p = 0.000$), and publishing scientific publications ($t = -2.508$, $p = 0.013$) were all significantly different. However, perceptions of the accessibility of contemporary chairs and desks ($t = -0.531$, $p = 0.596$), dorm amenities ($t = 0.479$, $p = 0.633$), and organizational email and website information ($t = -0.687$, $p = 0.493$) did not show any significant differences, though. According to the findings, instructors, and students have noticeably diverse opinions about several academic facility-related issues. These differences may be due to differing institutional agendas and experiences.

When professors and students compare the views of the existing library facilities in colleges connected with NU, the analysis of T indicates notable disparities in a number of important domains. With regard to the availability of computer lab research software ($t = -3.478$, $p = 0.001$), free high-speed internet access ($t = -3.029$, $p = 0.003$), access to scientific journals ($t = -4.289$, $p = 0.000$), and the sufficiency of library space ($t = -2.830$, $p = 0.005$), teachers had a more positive perception than students (Table 2). The results of this study imply that instructors are happier with these features of the library's infrastructure. On the other hand, there was agreement among students and instructors on the characteristics that constitute acceptable library facilities ($t = -0.095$, $p = 0.924$) and necessary study materials ($t = -0.196$, $p = 0.845$) (Table 2). To bring student satisfaction closer to teacher perspectives, this discrepancy points out areas that may require attention.

The study analyzes instructors' and students' opinions on various curricular and assessment components in institutions linked with NU, following hypothesis 4 (Table 3). Significant differences were seen in several parameters, including the belief that students' opinions are taken into consideration during curriculum creation ($t = 3.978$, $p < 0.001$) and that the curriculum should be updated every three years ($t = 4.733$, $p < 0.001$), concerning instructors (Table 3). Furthermore, compared to instructors, students believe that attendance regulations are more strictly enforced ($t = 4.667$, $p < 0.001$), and they participate

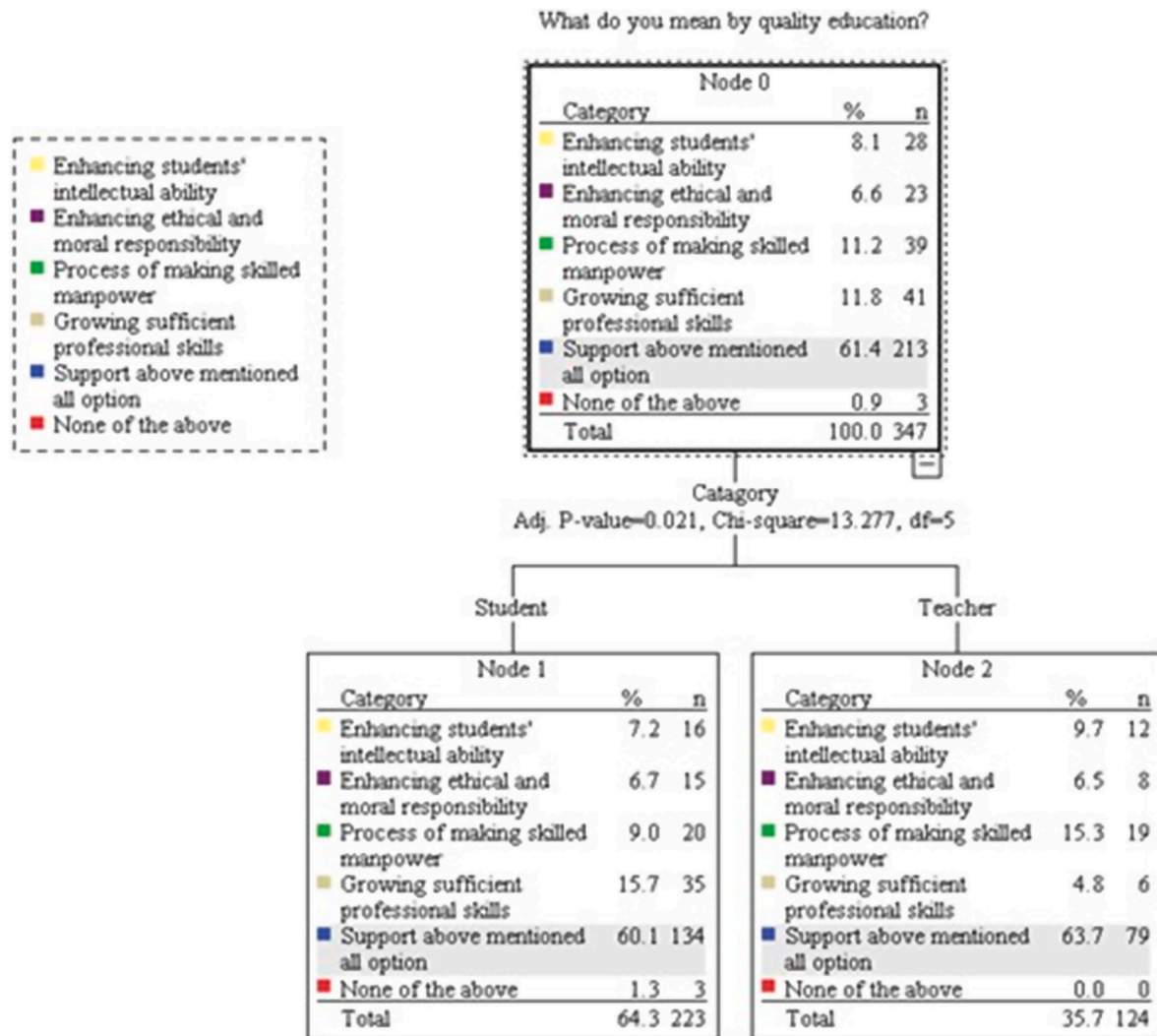


Fig. 1. respondents' opinion on quality education.

more in teacher evaluations ($t = 4.984, p < 0.001$). Furthermore, according to Table 2, students believe the existing assessment system justifies them more than professors do ($t = 4.179, p < 0.001$). Regarding the necessity of changing the current curriculum and assessment method, no noteworthy differences were found between students and instructors ($t = -1.629, p = 0.104$). Overall, the results point to areas where students' and instructors' opinions overlap and divide, indicating possible topics for curriculum development and assessment process improvement.

4.2. Perceptions on scope of upskill programs

The survey looked at how instructors and students felt about institutional support and upskilling initiatives at colleges connected to NU (Table 4). Notable variations were observed in multiple domains: students expressed lower levels of satisfaction than teachers regarding the availability of features for overseas conferences and seminars ($t = -3.229, p = 0.001$), cultural clubs ($t = -5.573, p < 0.001$), and learning associations ($t = -2.369, p = 0.018$). Additionally, students stated that their involvement in extracurricular activities was lower ($t = -5.390, p < 0.001$). Still, they thought that their professors supported these activities more ($t = -5.321, p < 0.001$), and they indicated that their peers were more involved in cultural clubs ($t = -3.697, p < 0.001$). In comparison to teachers, students felt that the institution supported them more strongly against harassment ($t = 3.031, p = 0.003$) and offered

better incentives for instructors' accomplishments ($t = 5.309, p < 0.001$). Perceptions of professional counseling for students ($t = 1.721, p = 0.086$) and rewards for students' accomplishments ($t = 1.266, p = 0.206$) did not, however, show any discernible differences between students and teachers.

In general, the results show significant differences in the perceptions of instructors and students regarding the availability and support of institutional resources and upskill programs. When it comes to things like cultural events and student development groups, students often feel they need more access to certain chances and resources than instructors. These disparities show where there is room for development in terms of improving student involvement and co-curricular activity satisfaction, but they also indicate areas where the institution is regarded to be supportive in terms of preventing harassment and recognizing instructors' accomplishments. By addressing these differences, colleges affiliated with NU can provide a more encouraging and welcoming learning environment.

4.3. Perceptions on stakeholder relationship

Following the hypothesis seven the opinions on a range of topics regarding the teacher-student interaction in colleges connected with NU were exchanged between instructors and students (Table 5). Determining the frequency with which teachers assign difficult or creative assignments ($t = -4.651, p < 0.001$), employ creative teaching methods

Table 2
Different perception of available academic and library facility in the NU affiliated colleges.

Indicators	Student (N = 223)		Teacher (N = 124)		T-test	
	Mean	SD	Mean	SD	t-value	P-value
Academic facility						
Institute have Adequate Number of classrooms	2.41	1.401	1.88	1.166	3.602	0.000
Enough space in the classroom for students	2.28	1.493	1.73	1.178	3.549	0.000
Modern chair and desk	1.13	1.338	1.20	0.910	-0.531	0.596
AC in the Classroom	0.35	0.886	0.68	0.632	-3.684	0.000
Multimedia in the classroom	1.78	1.532	2.56	0.965	-5.135	0.000
Institute provides students sufficient IT support	1.57	1.490	2.52	0.906	-6.527	0.000
Our institute provide of fresh drinking water	2.10	1.537	2.94	0.862	-5.560	0.000
Clean and hygienic toilet facility	1.36	1.352	2.47	0.966	-8.028	0.000
Institute have TSC/ cafeteria within the institute	0.86	1.275	1.25	1.129	-2.148	0.033
Adequate dormitory facility for students	1.59	1.315	1.52	1.165	0.479	0.633
Academic and non-academic staff residential facility	1.32	1.264	0.92	0.694	3.288	0.001
Quality assurance program in the institute	1.61	1.367	2.07	1.170	-3.176	0.002
Each of the discipline have four full professor ranked teacher	1.66	1.458	0.55	0.642	8.090	0.000
Institute publish scientific journal with DOI number	1.19	1.308	1.55	1.232	-2.508	0.013
Each of the student and academic staff have own institutional email id and available information on website	1.93	1.459	2.04	1.451	-0.687	0.493
Library facility						
Adequate library facility	2.51	1.378	2.52	0.869	-0.095	0.924
Sufficient study material in the library	2.00	1.444	2.02	1.008	-0.196	0.845
Adequate library space to allocate all	1.71	1.433	2.14	1.192	-2.830	0.005
Computer lab research software	0.96	1.335	1.44	1.015	-3.478	0.001
Free high-speed internet	0.78	1.210	1.17	1.065	-3.029	0.003
Access to scientific journal	1.17	1.328	1.80	1.269	-4.289	0.000

(Source: Author produces)

($t = -2.189$, $p = 0.029$), and have both students and teachers attend classes regularly voluntarily ($t = 3.795$, $p < 0.001$) were among the indicators where significant differences were found (Table 4). In contrast, students perceive that they get the chance to assess instructors' classes more frequently than do teachers ($t = 2.911$, $p = 0.004$) (Table 4). Regarding instructors utilizing many sources to develop course materials ($t = -1.571$, $p = 0.117$), giving lecture handouts ($t = 0.669$, $p = 0.504$), or having enough IT abilities ($t = 1.109$, $p = 0.268$), there were no significant variations in perceptions between students and teachers (Table 4). Overall, these results show where students and instructors within NU-affiliated colleges see similarities and differences in their interactions and methods of instruction. This suggests ways to improve assignments and teaching strategies while preserving the positive aspects of current evaluation practices.

Further, the findings from the comparison between students and

Table 3
Different perception on the existing curriculum of the NU-affiliated colleges.

Indicators	Student (N = 223)		Teacher (N = 124)		T-test	
	Mean	SD	Mean	SD	t-value	P-value
Upgradation of curriculum once in three years	1.75	1.273	1.15	0.843	4.733	0.000
Development of curriculum based on market needs	1.85	1.406	1.52	2.964	1.375	0.170
Institution takes teachers' opinion in new curriculum development	1.92	1.394	1.06	0.647	6.481	0.000
Institution takes students Opinion in new curriculum development	1.48	1.368	0.97	0.624	3.978	0.000
Professional experts' opinion in new curriculum development	1.91	1.300	1.41	0.893	3.837	0.000
According to our curriculum students have 5 % number by attending class regularly	2.17	1.310	1.85	1.090	2.305	0.022
According to curriculum students get show cause notice for absent in class	1.80	1.244	1.18	1.105	4.667	0.000
According to curriculum students are asked to evaluate teachers' class	1.92	1.389	1.23	0.918	4.984	0.000
Satisfaction with evaluation system	1.83	1.354	1.52	0.933	2.326	0.021
Current evaluation system can justify students very well	1.96	1.342	1.38	1.064	4.179	0.000
Existing curriculum and evaluation system need revision and up-to-date	2.38	1.340	2.62	1.205	-1.629	0.104

(Source: Author Produces)

teachers regarding perceptions of professional skill acquisition from NU affiliated colleges reveal significant differences across several indicators (see Table 6). According to the t-test results, which assess the magnitude of difference relative to the variability within each group, these discrepancies are statistically significant. For instance, teachers consistently expressed more positive views compared to students on whether the institute provides sufficient professional skills ($t = -4.099$, $p = 0.000$), the extent to which academic activities contribute to professional skill growth ($t = 2.344$, $p = 0.020$), and the program's impact on critical thinking capacity ($t = 3.730$, $p = 0.000$). Similarly, significant differences were noted in perceptions of students' growth in professional IT skills ($t = -3.083$, $p = 0.002$) and their ability to participate in competitive programs abroad ($t = 3.435$, $p = 0.001$). These results underscore the importance of acknowledging and addressing differing perceptions between stakeholders, suggesting a need for improved alignment in understanding educational outcomes and program effectiveness.

5. Discussion

The aim of this study was to demonstrate substantial disparities in the perspectives of students and teachers regarding many facets of quality education, institutional support, and professional skill enhancement in colleges affiliated with NU. In light of the fact that the

Table 4
Different perception of available scope of upskill programs and institutional support.

Indicators	Student (N = 223)		Teacher (N = 124)		T-test	
	Mean	SD	Mean	SD	t-value	P-value
Scope of upskill programs						
Getting facility on international conference/seminar	1.27	1.360	1.76	1.303	-3.229	0.001
Institution organizes conference/seminar	1.22	1.308	2.53	1.129	-9.428	0.000
Different cultural club in the institute	2.02	1.398	2.78	0.822	-5.573	0.000
Institute provides facility for cultural club	2.31	1.401	2.88	0.728	-4.185	0.000
There are student development associations	2.49	1.455	2.84	0.966	-2.369	0.018
There are teachers' development associations	1.33	1.307	0.72	0.487	5.003	0.000
Non-academic staff development associations	1.43	1.228	0.74	0.539	5.970	0.000
I have participated different co-curricular activities	1.85	1.356	2.58	0.875	-5.390	0.000
Teachers take necessary steps to support co-curricular activities	1.98	1.185	2.64	0.922	-5.321	0.000
I don't participate but my classmates participate in cultural club & play executive role	2.19	1.308	2.68	0.907	-3.697	0.000
Institute organizes cultural/sports activities	2.31	1.252	2.72	0.771	-3.263	0.001
Do not forced to attend any political seminar	2.11	1.460	2.23	1.110	-0.784	0.434
Institutional support and facilities for upskill programs						
Psychological counseling to the student regularly	1.21	1.306	1.43	1.170	-1.568	0.118
Professional counseling to the student	1.74	1.360	1.49	1.213	1.721	0.086
Institute have special cell against any harassment	1.74	1.370	1.31	1.007	3.031	0.003
Incentives to the teacher for good achievement	1.85	1.362	1.12	0.942	5.309	0.000
Incentives to the students for good achievement	1.78	1.352	1.60	1.103	1.266	0.206
Incentives to the non-academic staffs for polite services	1.61	1.387	1.34	0.979	1.926	0.055
Non-academic staffs are so supportive	2.48	1.269	2.60	0.873	-1.011	0.313

(Source: Author produces)

null hypothesis has been disproved and the alternative hypothesis have been accepted, it was clear that students and teachers have different points of view or viewpoints regarding these topics. The alternative hypothesis concerning discrepancies in perceptions of quality education (Hypothesis 1) and professional skill development (Hypothesis 3) was completely accepted, indicating considerable variances. Furthermore, Hypothesis 2, which pertains to perceptions of institutional support, was only partially confirmed. This suggests that there were certain discrepancies as well as shared perspectives between students and professors (Tleuken et al., 2022). The disparities highlight the significance of catering to the specific requirements and anticipations of each group in order to improve the overall educational encounter (Rahnuma, 2020a).

Table 5
Different perception on the teacher-student relationship of the NU affiliated colleges.

Indicators	Student (N = 223)		Teacher (N = 124)		T-test	
	Mean	SD	Mean	SD	t-value	P-value
Teachers used to give challenging or creative assignment to the student	1.67	1.365	2.31	0.921	-4.651	0.000
Teachers use multiple sources preparing course material	1.81	1.329	2.02	0.950	-1.571	0.117
Teachers use different innovative initiative to teach student	2.00	1.312	2.29	0.909	-2.189	0.029
Both student and teacher attend class regularly willingly	2.22	1.369	1.69	0.956	3.795	0.000
Teachers provide lecture handout to students	1.92	1.389	1.82	1.090	0.669	0.504
Our teachers have sufficient IT skills	2.43	1.350	2.27	0.949	1.109	0.268
Students have opportunity to evaluate teachers' class	1.54	1.381	1.12	1.071	2.911	0.004

(Source: Author Produces)

Table 6
Different perception on student acquiring sufficient professional skills from the NU affiliated colleges.

Indicators	Student (N = 223)		Teacher (N = 124)		T-test	
	Mean	SD	Mean	SD	t-value	P-value
Institute provide us sufficient professional skills	1.95	1.405	2.57	1.257	-4.099	0.000
Students grow sufficient professional IT skills from our program	1.46	1.381	1.90	0.986	-3.083	0.002
We believed our academic activities helps to grow enough professional skills	2.06	1.316	1.73	1.075	2.344	0.020
Graduation program helps on critical thinking capacity	2.27	1.215	1.80	0.946	3.730	0.000
Students have ability to participate any competitive program in Abroad	2.09	1.376	1.61	0.943	3.435	0.001

(Source: Author produces)

The manner in which quality education was perceived was one of the primaries were as of disagreement. Consistent with previous research (i. e., Alam et al. (2024); Ghaffar and Abrizah (2017)), this study also demonstrates that instructors prioritize the development of highly talented individuals, with a particular emphasis on academic proficiency and possibilities for professional growth. Conversely, students prioritize the acquisition of practical abilities that have direct relevance to their future professions. This emphasizes the importance of a comprehensive strategy that integrates scholastic rigor and practical skill development to meet the expectations of both factions (Rahnuma, 2020a). The incorporation of constructivist theory has implied that the educational environment in which students and instructors interact influences these distinct perspectives, necessitating curricula that were both theoretically sound and practically applicable (Lindqvist &

Forsberg, 2023; Waite-Stupiansky, 2022).

Upskill programs and institutional resources were also perceived to be significantly different. Supporting Chowdhury et al. (2022) we found, students typically perceive that they have access to fewer opportunities, including cultural organizations, overseas conferences, and learning associations, than do teachers. To more effectively address the extra-curricular and professional development requirements of students, it is imperative that institutions improve these facilities (Chowdhury et al., 2022). Teachers, conversely, believed the institution offer sufficient assistance in preventing harassment and acknowledging their accomplishments. This suggests that faculty members value the institution's efforts, but students do not completely acknowledge them (Hajovsky et al., 2020). This accords with stakeholder theory (Freeman, 2023), which underscores the significance of considering the requirements and perceptions of all stakeholders in order to achieve institutional success.

Unlike earlier studies (e.g., Hajovsky et al. (2020); Kincade et al. (2020); Sancar et al. (2021)), in terms of teacher-student interactions, there were substantial difference in understandings of the difficulty of assignments, teaching methodologies, and class attendance. Students perceive that there have been more opportunities to evaluate the classes of their instructors than their teachers acknowledge. A requirement for improved communication and alignment in evaluation practices to guarantee mutual comprehension was indicated by this discrepancy (Schweder & Raufelder, 2024). This was corroborated by expectancy-value theory (Eccles & Wigfield, 2024; Wang et al., 2023), which asserts that the value an individual places on success and their expectations of success influence their attitudes and behaviors.

The research also emphasizes significant discrepancies in the way individuals perceive the acquisition of professional skills. In comparison to pupils, teachers generally have a more favorable perception of the institution's role in the development of professional skills, critical thinking, and IT competencies, as evidenced by previous research (e.g., Hajovsky et al. (2020); Malm (2020)). This indicates a discrepancy between the expectations and experiences of students, underscoring the necessity for institutions to improve their programs in order to better prepare students for the professional world (Schweder & Raufelder, 2024). To resolve these gaps, it was essential to align academic activities with industry standards and increase support for professional skill development. The results indicate that targeted interventions can bridge the divide between academic knowledge and professional expertise, thereby enhancing student satisfaction and educational outcomes.

Meanwhile we emphasize the significance of recognizing and resolving the varying perspectives of students and educators. Institutions can improve educational outcomes and student satisfaction by creating targeted interventions that bridge the divide between academic knowledge and professional expertise, which can be achieved by comprehending these differences. In order to enhance the quality of education in NU-affiliated colleges, future research should continue to investigate these perceptions in a variety of educational contexts and inform evidence-based practices and policymaking.

5.1. Development contribution in the context of Bangladesh and global application

Bangladeshi education, particularly NU-affiliated colleges, can benefit from strengthening practical skills, internships, and industry linkages to enhance graduates' employability and support economic growth. Improved access to institutional resources, cultural clubs, and international conferences can boost learning engagement and retention. Clear teacher evaluation systems, participatory feedback, and a focus on professional skill acquisition, including IT, critical thinking, and problem-solving, are vital for aligning education with evolving labor market demands. Collaborative policies between educational institutions and industries can ensure curricula remain relevant, fostering adaptable graduates and advancing educational systems in Bangladesh and beyond.

5.2. Limitation and future study guidelines

Having cross-sectional data this study failed to explore the perceptions of a variety of stakeholders in the educational system that should be further investigated in future research to gain a comprehensive understanding of the factors that influence student satisfaction and educational quality. Furthermore, it is crucial to investigate the long-term effects of practical skill development programs on student employability and career success, as well as to evaluate the efficacy of institutional resource investments in improving student engagement and to investigate the results of transparent evaluation practices. By conducting comparative studies across various educational contexts and regions, it will be possible to identify universal and context-specific strategies for enhancing educational quality. This will provide valuable insights for educational institutions and policymakers worldwide.

6. Conclusion

This study examined gaps in perceptions of quality education, institutional support, and professional skill development between students and teachers in NU-affiliated colleges in Bangladesh, revealing significant disparities. Instructors prioritized academic proficiency, while students emphasized practical skills and reported limited access to institutional resources compared to instructors. Differences also emerged regarding professional skill acquisition and evaluation practices. To bridge these gaps, institutions should expand opportunities for practical skill development through internships, hands-on training, and industry partnerships. Investments in cultural organizations, learning associations, and international exposure are crucial for resource accessibility. Transparent evaluation practices involving both students and teachers can foster effective feedback and mutual understanding. Additionally, enhancing professional skill programs with a focus on critical thinking, IT, and problem-solving will better align with students' career aspirations. Although grounded in the context of NU-affiliated colleges in Bangladesh, the findings have broader relevance to similarly structured higher education systems globally—particularly in low-resource settings where institutional improvements may not align with stakeholder perceptions.

CRediT authorship contribution statement

Shima Chowdhury: Writing – original draft, Data curation, Conceptualization. **Md Mamunur Rashid:** Writing – original draft, Project administration, Data curation, Conceptualization. **Mohammad Bin Amin:** Methodology, Formal analysis. **Tuhin Roy:** Writing – review & editing, Supervision. **M M Abdullah Al Mamun Sony:** Writing – original draft, Validation, Software, Resources, Methodology, Formal analysis, Conceptualization. **Md Atikur Rahaman:** Writing – review & editing, Visualization, Software, Formal analysis.

Informed consent

An informed oral consent has taken each of respondents involved in this research.

Data availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Ethical approval

The researcher has followed the guidelines of the Declaration of Helsinki and no Human participant have involved in clinical trials.

Declaration of the use of AI

During the preparation of this work the author(s) used [Quillbot.com](#), a paraphrasing tool, in order to improve English writing. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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