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STUDENTS' PERCEPTIONS AND ATTITUDE TOWARDS OUTCOME-BASED EDUCATION (OBE) IN BANGLADESHI UNIVERSITIES

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Abstract

This study analyzed students' perceptions and attitudes toward Outcome-Based Education (OBE) in Bangladeshi universities and acknowledged challenges and opportunities in its implementation. A mixed-research methodology was used, combining quantitative surveys and qualitative focus group discussions with 275 students from Islamic University and Khulna University. Data were analyzed using descriptive statistics and ANOVA, multiple regression models, and Cronbach's Alpha to assess reliability. Findings showed high awareness of OBE (89.09%), although only 34.55% reported a strong understanding of its principles. Most students viewed OBE as fair, practical, student-centered and conducive to continuous improvement, and many favored it over traditional methods. Regression Model 1 indicated that perception, attitude,



and academic performance positively influenced students' satisfaction, while Model 2 showed that satisfaction, perception, and attitude significantly enhanced academic performance. However, excessive workload (66.18%), limited resources (65.09%), inconsistent teaching methods (36.73%), and insufficient instructor guidance (46.18%) negatively affected satisfaction and adaptation of OBE. Students suggested improvements such as clearer learning outcomes, diverse and fair assessments, better instructor interaction, more OBE-related workshops, and improved access to online materials. The study showed strong reliability, with a Cronbach's Alpha of 0.82. In conclusion, successful OBE implementation in Bangladesh required clear goals, student-centered approaches, adequate resources, and institutional commitment. Recommendations included continuous monitoring, enhanced teacher training, standardized methods, and up-to-date infrastructure to make OBE more effective.

Keywords: Attitudes, Challenges, Outcome-Based Education (OBE), Perceptions, Satisfaction

INTRODUCTION

Outcome-Based Education (OBE) is an innovative educational tactic that focuses on attaining clearly distinct learning outcomes in terms of student learning, skills, and proficiencies. Traditional education systems often emphasize content delivery and rote memorization, whereas OBE shifts the focus towards what students are expected to know, do, and value by the end of their education. The goal of OBE is to ensure that graduates well-equipped to meet the demands of the rapidly changing job market, both locally and globally. In Bangladesh, the implementation of OBE has expanded in recent years, driven by the need to enhance the quality and relevance of higher education. The University Grants Commission (UGC) of Bangladesh has played a pivotal role in promoting OBE by providing policy guidelines and encouraging universities to reform their curricula, teaching methodologies, and assessment strategies. Outcome Based Education (OBE) is starting to function following the creation of the Bangladesh Accreditation Council (BAC) under the Act, 2017. The BAC is assigned with the crucial responsibility of promoting and assuring quality in higher education through implementing a National Qualifications Framework (NQF) and accrediting both academic programs and institutions. The execution of OBE curriculum is now fetching mandatory for higher education institutions in search of accreditation from the BAC. The successful adoption of OBE now depends largely on students' perceptions and attitudes towards this educational transformation. If students view OBE positively and are willing to take part actively in outcome-based education processes, the probability of achieving educational objectives increases. Given the prevalence of traditional, teacher-centered approaches in Bangladeshi universities, understanding students'

perceptions and attitudes towards OBE is essential. This study, therefore, aims to examine how students in Bangladeshi universities perceive Outcome-Based Education, identify the factors that stimulate their attitudes, and how their perceptions may influence the overall success of OBE initiatives.

Statement of the Problem

Outcome-Based Education (OBE) aims to improve graduate quality and align academic programs with international standards (Rahman et al., 2023; UGC, 2022). Although the Bangladesh Accreditation Council (BAC) and other authorities have taken steps to promote OBE, its implementation in Bangladeshi universities is still uneven (BAC, 2021; Chowdhury & Alam, 2020). A key challenge in implementing OBE is students' limited awareness and understanding of its principles. As primary stakeholders, many students remain unsure about the relevance of OBE-based assessments and outcomes, often viewing them less favorably than traditional methods. This skepticism can reduce their engagement and hinder the success of OBE initiatives. Evidence shows that many students are confused about the goals and methods of OBE, particularly its outcome-focused learning and new assessment styles (Karim & Begum, 2021). This confusion often leads to anxiety about evaluations and uncertainties about OBE's relevance to their learning and career goals (Rahman et al., 2023). Despite students' central role in educational reforms, their voices are often missing from research and policy debates in Bangladesh (Chowdhury & Alam, 2020). Few empirical studies have explored their experiences and attitudes toward OBE implementation (UGC, 2022). This gap limits educators' and policymakers' ability to address student needs, build effective support systems, and improve OBE strategies. Understanding student perspectives is essential for making OBE both effective and sustainable in Bangladeshi higher education. This study aims to answer the following research questions:

- How do students perceive and what attitudes do they hold toward Outcome-Based Education in Bangladeshi universities?
- Are there significant differences in student satisfaction with OBE based on gender and university affiliation?
- Which factors significantly influence student satisfaction with OBE, as revealed through regression analysis?
- Is there any significant impact of student satisfaction with OBE on academic performance?
- What challenges and opportunities do students perceive in the implementation of OBE?

Objectives of the Study

The primary objective of this study is to explore students' perceptions and attitudes towards Outcome-Based Education (OBE) in Bangladeshi universities. The specific objectives of the study are as follows:

1. To assess students' perceptions and attitudes towards OBE in Bangladeshi Universities.
2. To compare student satisfaction with OBE across gender and university affiliation (Islamic University vs. Khulna University) using two-way ANOVA.
3. To measure students' satisfaction with OBE by examining the impact of key factors— Perception, Attitude, Academic Performance, and Challenges—using multiple regression analysis.
4. To analyze the link between academic performance and student satisfaction with Outcome-Based Education (OBE).
5. To explore perceived challenges and opportunities in the implementation of OBE from the students' perspective.

Research Hypotheses

H₁: There is a significant difference in student satisfaction with OBE between Islamic University and Khulna University.

H₂: There is a significant difference in student satisfaction with OBE based on gender.

H₃: Perception, attitude, and academic performance positively influence student satisfaction with OBE.

H₄: Student satisfaction with OBE does not significantly influence academic performance.

H₅: Challenges met by students negatively influence their satisfaction with OBE.

Rationale of the Study

Outcome-Based Education (OBE) is important for improving the quality and relevance of higher education in Bangladesh. The Bangladesh Accreditation Council (BAC) now requires universities to use OBE for accreditation. This puts pressure on universities to move away from traditional teaching methods to an outcome-based approach. However, the success of OBE depends on how well students understand and accept it. Students are the main part of any education system, but their opinions about OBE are not known. Therefore, there is an urgent need to systematically explore and document students' experiences and attitudes toward OBE in the local context. The results of this study will help teachers, university leaders, and policymakers improve teaching practices and assessment methods to better align with student needs. It will also contribute to making Outcome-Based Education (OBE) more student-centered

and effective. By incorporating student perceptions and attitudes, the study can enhance the quality of higher education and make it more relevant to future employment. In the long term, a deeper understanding of student perceptions and attitudes will support the successful implementation and sustainability of OBE, helping Bangladesh's higher education system meet international standards and adapt to the demands of a rapidly changing workforce.

Limitations of the Study

This study emphasizes on exploring students' perceptions and attitudes towards Outcome-Based Education (OBE) in selected Bangladeshi universities. It aims to assess students' awareness, understanding, and acceptance of OBE principles, as well as their experiences with outcome-based teaching, learning, and assessment practices. Despite its value, the study has several limitations. Firstly, it is limited to a sample of universities and may not represent all higher education institutions in Bangladesh. The findings rely on self-reported data, which may be influenced by personal biases or misunderstandings regarding OBE. Additionally, the study mainly examines students, the perspectives of faculty members are not covered. Time and resource constraints also limited in-depth qualitative analysis. Since OBE is still evolving in Bangladesh, student views may change over time, affecting the generalizability of findings. Future research should include a more diverse and representative sample from various university types and regions to improve the relevance and applicability of results.

REVIEW OF LITERATURE

The literature on Outcome-Based Education (OBE) discloses its rising global recognition as a student-centered, skill-oriented framework aimed at aligning academic outcomes with real-world capabilities. Numerous studies, including those by Zain and Hadi (2016) and Vijayakumar et al. (2023), highlight students' generally positive perceptions of OBE, particularly its emphasis on active learning and real-life application. However, recurring issues such as unclear learning outcomes and insufficient student orientation emerge as common barriers across contexts (Kauthar et al., 2017; Thuy, 2022). From a student readiness perspective, Khan et al. (2023) and Thuy (2022) underscore the importance of awareness, ease of understanding, and transparent communication of learning goals. These findings suggest that institutional support and clarity are essential in enhancing student engagement with OBE. Complementing this, institutional-level analyses by Sheikh Irfan et al. (2023) and Guggari et al. (2023) identify challenges such as untrained faculty, infrastructural gaps, and resistance to change—particularly in developing countries, as reinforced by Katawazai (2021). In professional and engineering education, scholars like Tewari et al. (2024) and Syeed et al. (2022) emphasize the

alignment of OBE with global workforce demands and accreditation standards, while Saha et al. (2023) highlight its role in building workplace-relevant skills in business education. Meanwhile, implementation tools like Bloom's Taxonomy, Continuous Quality Improvement (CQI), and structured outcome mapping (COs, POs, PSOs) are widely promoted for effective operationalization (Sikarwar, 2022; Rao, 2020), though critiques warn of over-standardization limiting creativity and flexibility (Sanyal & Gupta, 2018; Naskar, 2023). Regionally, research in Bangladesh and South Asia shows a mixed picture. While models by Syeed et al. (2022) and Khan et al. (2023) demonstrate OBE's promise in aligning education with global standards, these studies also reflect uneven adoption, lack of empirical rigor, and insufficient faculty development. Asim et al. (2021) and Paul (2023) further stress the importance of assessment strategies, English proficiency, and institutional reform, but also point to structural issues like underfunding and inadequate longitudinal research. Finally, philosophical perspectives offered by Ankiewicz et al. (2006) and Joshi et al. (2023) call for a balanced approach to OBE—one that promotes accountability and measurable learning while also nurturing creativity and learner diversity. Overall, the literature confirms OBE's potential to enhance educational relevance, engagement, and real-world applicability.

Research Gap

Numerous studies have examined the effectiveness of Outcome-Based Education (OBE), but research in Bangladeshi higher education—especially focusing on students' perceptions, attitudes, and outcomes—remains limited. Most existing work focuses on institutional or policy-level perspectives, often overlooking the student perceptions and attitudes. Even the studies that do address OBE in Bangladesh tend to lack empirical depth, relying more on theory than on solid data or validated models. A key gap lies in the absence of an integrated framework that connects student satisfaction, academic performance, and the challenges students face in adapting to OBE. We still know very little about how different factors—like perception, attitude, institutional support, or teaching methods—work together to influence learning outcomes. There's also a lack of comparative analysis across demographic groups such as gender, academic year, or type of institution, which could help uncover disparities in student experiences. Finally, as OBE is still relatively new in Bangladesh, there are no long-term or follow-up studies to track how student attitudes or institutional practices change over time. This study aims to address these gaps by collecting empirical evidence through structured surveys and statistical analysis, grounded in well-established educational theories such as Bloom's Taxonomy and Constructive Alignment.

METHODOLOGY

Research Design

This study employed a mixed-methods approach, combining both quantitative and qualitative data to explore students' perceptions, attitudes, academic performance, and challenges related to OBE. The research started with quantitative surveys conducted online using Google Forms, complemented by qualitative data gathered through interviews and focus group discussions (FGDs) with selected students.

Study Area and Population

The study focused on two public universities in Bangladesh: Islamic University and Khulna University. The study population consisted of undergraduate and postgraduate students from various academic disciplines, to ensure a diverse representation of student perspectives on Outcome-Based Education (OBE).

Sampling Technique and Sample Size

For this study, two public universities—Islamic University and Khulna University—were purposively selected. Students from different subjects, years of study, and genders were included to capture a variety of perspectives. The sample size consisted of 275 students, with 175 students from Islamic University and 100 students from Khulna University; among them, 120 were male and 155 were female.

Data Collection Tools and Techniques

Quantitative data were collected through a structured, close-ended questionnaire distributed online via Google Forms, covering students' awareness, perceptions, attitudes, satisfaction, and challenges related to OBE. To gain deeper insights, qualitative data were collected through focus group discussions (8–10 participants grouped by discipline) and semi-structured interviews with selected students, guided by key themes to explore their experiences in adapting to OBE.

Coding and Decoding of Data

A Likert scale was used to measure respondents' agreement with statements about Outcome-Based Education (OBE), covering perceptions, attitudes, satisfaction, and challenges. Responses were coded numerically, “Strongly Disagree” (1) to “Strongly Agree” (5) enabling the conversion of qualitative opinions into quantitative data for statistical analysis using software like SPSS.

Data Analysis

Quantitative data were analyzed with SPSS 22 using methods like descriptive statistics, ANOVA, and regression to explore relationships and test hypotheses. Qualitative data were organized by coding responses to find main themes about students' perceptions and attitudes towards OBE.

Validity and Reliability of Data

To ensure validity of collected data, the survey questionnaire was reviewed by academic experts in education and OBE. A pilot study was conducted with a small group of students to test the clarity, consistency, and effectiveness of the instruments. Reliability was assessed using Cronbach's Alpha to confirm the internal consistency of the survey items.

Design of Questionnaire

The questionnaire utilized in this study was self-designed. It was specifically developed to align with the research objectives and to collect pertinent data from the target population. The design process involved an extensive review of existing literature to ensure that the items reflected key themes and concepts relevant to the study. Additionally, input was sought from subject matter experts to validate the content, enhance clarity, and ensure the overall relevance and reliability of the questionnaire.

Data Analysis Approach

Analysis of variance (ANOVA)

To examine whether there are statistically significant differences in satisfaction with Outcome-Based Education (OBE) across different groups, the study employed Analysis of Variance (ANOVA). Specifically, a two-way ANOVA was conducted to assess the main effects of university affiliation and gender.

Formation of Multiple Regression Model

To explore the factors affecting students' satisfaction with Outcome-Based Education (OBE) and the key determinants of their academic performance, this study developed and tested two multiple regression models. The two models are:

Model 1: Student's Satisfaction = $\beta_0 + \beta_1(\text{Perception}) + \beta_2(\text{Attitude}) + \beta_3(\text{Academic Performance}) + \beta_4(\text{Challenges}) + \varepsilon$

Model 2: Academic Performance = $\beta_0 + \beta_1(\text{Perception}) + \beta_2(\text{Attitude}) + \beta_3(\text{Student's Satisfaction}) + \beta_4(\text{Challenges}) + \varepsilon$

Model Estimation Approach

Both models were estimated using Ordinary Least Squares (OLS) in SPSS version 22. The analysis checks for the assumptions of regression, including linearity, normality, and absence of multicollinearity. Model results are interpreted in terms of coefficients, significance levels, and explanatory power (R-squared), providing a comprehensive understanding of how the selected factors influence satisfaction and academic performance in the context of OBE.

RESULTS AND DISCUSSION

Socio-Demographic Profile of Respondents/Students'

Table 1: Socio-Demographic Profile of Respondents

Variable	Categories	Respondents	Percentage
Gender	Male	120	43.64
	Female	155	56.36
Age Group	Below 20	75	27.27
	21-25	105	38.18
	25-Above	95	34.55
Education Level	Undergraduate	185	67.27
	Graduate	90	32.73
University	Islamic University	175	63.64
	Khulna University	100	36.36

The socio-demographic profile shows a fairly balanced sample, with a slight majority of females at 56.36% compared to 43.64% males. In terms of age distribution, the largest group of respondents falls within the 21–25 age range, accounting for 38.18% of the sample. This is followed by those aged 25 and above (34.55%), and then the 17–20 age group (27.27%). Regarding educational level, the majority of respondents are undergraduates, making up 67.27% of the sample, whereas graduates comprise 32.73%. With respect to institutional representation, a greater proportion of participants are from Islamic University, which constitutes 63.64% of the sample, while 36.36% are from Khulna University.

Overall, the demographic composition of the respondents ensures a diverse range of insights, particularly with respect to gender, age, educational background, and university affiliation.

Students' General Awareness and Understanding of OBE

Table 2: Students' General Awareness and Understanding of OBE

Variable	Categories	Respondents	Percentage
Have you heard about OBE?	Yes	245	89.09
	No	30	10.91
How would you rate your understanding of OBE?	High	95	34.55
	Moderate	125	45.45
	Low	55	20.00
Can you distinguish OBE from traditional education?	Yes	160	58.18
	No	115	41.82
Main source of information about OBE	Teachers	160	58.18
	Social media	50	18.18
	Friends	40	14.55
	Academic Materials	25	9.09

The survey shows that most students know about Outcome-Based Education (OBE), with 89.09% saying they have heard of it and only 10.91% saying they have not. Despite this strong awareness, students' depth of understanding varies considerably. Only about one-third of respondents (34.55%) rated their understanding as high, while a larger proportion (45.45%) described their understanding as moderate, and 20% admitted to having a low understanding of OBE. When asked if they can tell the difference between OBE and traditional education, 58.18% said yes, but a large number (41.82%) said no. This means that even though many have heard of OBE, quite a few are not sure how it is different from traditional education methods. Most students (58.18%) learn about OBE from their teachers. Social media (18.18%), friends (14.55%), and academic materials (9.09%) are fewer common sources. This indicates that formal instruction plays the most significant role in shaping students' awareness and understanding of OBE.

Students' Perceptions Towards OBE Curriculum

The survey results show that most students have a positive view of the OBE curriculum and assessment (Table 3). For example, 211 students (55 strongly agree, 156 agree) said the OBE curriculum is clear and easy to understand, while only 52 were neutral and 12 disagreed. Similarly, when asked if learning outcomes are well defined, 225 students (85 strongly agree, 140 agree) responded positively, with just 40 neutral and 10 disagreeing. For OBE assessment methods, 177 students (62 strongly agree, 115 agree) felt they are fair and relevant, but 79

were neutral and 19 disagreed, suggesting that a notable number of students are unsure about assessment fairness. The statement that OBE encourages continuous improvement in education also received strong support, with 219 students (76 strongly agree, 143 agree) and only 42 neutral and 14 disagreeing. When asked about practicality, 199 students (71 strongly agree, 128 agree) said OBE is useful for real-life applications, while 60 were neutral and 16 disagreed. In summary, the majority of students agrees or strongly agrees that OBE has clear goals, practical benefits, and supports continuous improvement.

Table 3: Perceptions of Students Towards OBE Curriculum

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The OBE curriculum is clear and easy to understand	55	156	52	12	0
Learning outcomes are well defined in OBE curriculum	85	140	40	10	0
OBE assessment methods are fair and relevant	62	115	79	19	0
OBE encourages continuous improvement in education	76	143	42	14	0
The OBE approach is practical and useful for real-life applications	71	128	60	16	0

Students' Attitudes Towards OBE Teaching-Learning Approach

Table 4: Students' Attitudes Towards OBE Teaching-Learning Approach

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Students prefer OBE to traditional teaching methods.	88	118	56	13	0
OBE makes learning more engaging and interactive.	72	141	52	10	0
OBE inspires active participation in class activities.	98	114	47	16	0
OBE encourages critical thinking and problem-solving skills.	82	124	53	16	0
The learning outcomes in OBE align well with my career goals.	65	109	84	17	0

The result shows that most students have a positive attitude toward OBE over traditional methods. A large number of students either strongly agreed (88) or agreed (118) that they prefer OBE, while only a small group was neutral (56) or disagreed (13). When it comes to making learning more engaging and interactive, a majority agreed (141) or strongly agreed (72), and very few were neutral (52) or disagreed (10). Similarly, students feel that OBE inspires active participation in class activities. Here, 98 students strongly agreed and 114 agreed, while just 47 were neutral and 16 disagreed. A positive trend continues with the statement that “OBE encourages critical thinking and problem-solving skills.” Most students either strongly agreed (82) or agreed (124), with a small number being neutral (53) or disagreeing (16). Finally, the statement about career goals, more than half agreed (109) or strongly agreed (65) that learning outcomes in OBE align with their future career plans. However, a slightly higher number (84) were neutral, showing that some students are not sure about the link between OBE and their career, and 17 disagreed. Very few disagreed with the positive statements, and no students strongly disagreed. This suggests that OBE is well accepted and valued among the respondents.

Students’ Satisfaction with Outcome-Based Education (OBE)

Table 5: Students’ Satisfaction with Outcome-Based Education (OBE)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Students satisfied with the clarity of learning outcomes in OBE courses.	48	139	70	18	0
The feedback provided by instructors is helpful and timely.	62	134	64	15	0
OBE positively influences students learning experience.	62	147	53	13	0
The assessment and grading system in OBE are transparent and fair.	78	115	68	14	0
OBE provides opportunities for practical application of knowledge.	72	146	47	10	0
Students overall satisfied with the implementation of OBE	70	117	71	17	0

The results show that most students are satisfied with various aspects of OBE at their university. For example, a large number of students are happy with the clarity of

learning outcomes in OBE courses, with 48 strongly agreeing and 139 agreeing, while only a smaller group (70) were neutral and very few (18) disagreed. Helpful and timely feedback from instructors is also viewed positive, as 62 students strongly agree and 134 agree, with just 64 neutral and 15 disagreeing. When it comes to the overall learning experience, 62 students strongly agree and 147 agree that OBE has a positive influence, while only 53 are neutral and 13 disagree. Similarly, most students trust the transparency and fairness of the OBE assessment and grading system, as 78 strongly agree and 115 agree, with 68 neutral and 14 disagreeing. OBE is also recognized for offering practical application opportunities, supported by 72 strongly agreeing and 146 agreeing, while only 47 remain neutral and 10 disagree. Overall satisfaction with OBE implementation at the university is high, as 70 students strongly agree and 117 agree, with 71 neutral and just 17 disagreeing. Only a small number of students express dissatisfaction, showing that overall satisfaction with OBE is high.

Major Challenges in Adapting to OBE

Table 11: Major Challenges in Adapting to OBE

Challenge Option	Number of Students	Percentage
Excessive class load	182	66.18
Inconsistent teaching methods	101	36.73
Lack of resources and facilities	179	65.09
Difficulty understanding OBE concepts	84	30.55
Limited guidance from instructors	127	46.18
Sample Size N = 275		

The data indicate that the most significant challenge faced by students is “Excessive class load,” reported by 182 students (66.18%). “Lack of resources and facilities” is the second most reported challenge, cited by 179 students (65.09%), highlighting concerns about insufficient learning materials, infrastructure, and overall institutional support. “Limited guidance from instructors” is another notable issue, affecting 127 students (46.18%). “Inconsistent teaching methods” was identified by 101 students (36.73%), indicating that variability in instructional approaches can lead to confusion and hinder effective learning. Lastly, “Difficulty understanding OBE concepts” was reported by 84 students (30.55%), suggesting that a considerable number of students find it challenging to grasp the underlying principles of OBE.

Measurement of Student's Satisfaction with Multiple Regression Model

The model specifies student satisfaction as a function of key factors including perception, attitude, academic performance, and challenges met by students. The specified model is:

$$\text{Model 1: Student's Satisfaction} = \beta_0 + \beta_1(\text{Perception}) + \beta_2(\text{Attitude}) + \beta_3(\text{Academic Performance}) + \beta_4(\text{Challenges}) + \varepsilon$$

Table 6: Estimation of Student's Satisfaction with Multiple Regression Model (SPSS 27 output)

Variable	Coefficient	t-value	P-Value
Intercept (β_0)	0.905*	3.89	0.0002
Perception (β_1)	0.308*	3.91	0.0002
Attitude (β_2)	0.150**	2.10	0.0377
Academic Performance (β_3)	0.397*	6.04	0.0000
Challenges (β_4)	-0.122**	-2.14	0.0341
F-statistic	98.06*		0.0000
Durbin-Watson	1.99		
R-squared	0.751		
Adjusted R-squared	0.743		

Dependent variable: Student's Satisfaction

Number of observations (N) =275

*Significant at the 1% level and **significant at the 5% level

The regression analysis reveals that **academic performance, perception, and attitude** positively influence students' satisfaction with OBE, while **challenges** have a significant negative effect. Among the predictors, **academic performance** has the strongest impact, with a coefficient of 0.397 ($p < 0.001$). It indicates that higher academic success leads to greater satisfaction. **Perception** of OBE also plays a crucial role ($\beta = 0.308$, $p = 0.0002$), followed by **attitude** ($\beta = 0.150$, $p = 0.038$). **Challenges** show a negative impact ($\beta = -0.122$, $p = 0.034$), indicating that barriers reduce satisfaction. The model is robust, explaining 75% of the variance in satisfaction ($R^2 = 0.751$, Adjusted $R^2 = 0.743$), with a significant F-statistic (98.06, $p < 0.001$) and no autocorrelation (Durbin-Watson = 1.99). The model demonstrates a strong fit, explaining approximately 75% of the variation in satisfaction (R-squared = 0.751), and the adjusted R-squared (0.743), meaning it explains around 75% of the variation in satisfaction. These findings highlight the importance of fostering academic performance, positive perceptions, and

supportive attitudes while minimizing implementation challenges to enhance student satisfaction with OBE.

Regression Model 2: Academic Performance = $\beta_0 + \beta_1(\text{Perception}) + \beta_2(\text{Attitude}) + \beta_3(\text{Satisfaction}) + \beta_4(\text{Challenges}) + \varepsilon$

Table 7: Estimation of Academic Performance with Multiple Regression Model (SPSS 27 output)

Variable	Coefficient	t-value	P-Value
Intercept (β_0)	-0.488	-1.70	0.0916
Perception	0.354	3.81	0.0002
Attitude	0.170	2.01	0.0464
Satisfaction	0.552	6.04	0.0000
Challenges	0.028	0.40	0.6871
F-statistic	95.18		000
Durbin-Watson	1.92		
R-squared	0.745		
Adjusted R-squared	0.738		

Dependent variable: Academic Performance

Number of observations (N) =275

*Significant at the 1% level and **significant at the 5% level

The regression analysis showed that **satisfaction, perception, and attitude** significantly and positively influenced on students' academic performance. **Satisfaction** is the strongest predictor ($\beta = 0.552, p < 0.001$), followed by **perception** ($\beta = 0.354, p < 0.001$), and **attitude** ($\beta = 0.170, p = 0.046$). These results suggest that students who are more satisfied, have favorable perceptions, and maintain a positive mindset tend to perform better academically. In contrast, **challenges** have a negligible and statistically insignificant effect ($\beta = 0.028, p = 0.687$), indicating they do not directly impact academic outcomes. The model explains about **74.5% of the variance** in academic performance ($R^2 = 0.745$, Adjusted $R^2 = 0.738$) and is highly significant ($F = 95.18, p < 0.001$). These findings emphasize the need to enhance student satisfaction and attitudes to improve academic achievement.

Two-way ANOVA Summary by University Affiliation and Gender

A two-way analysis of variance (ANOVA) was conducted to examine the effects of university affiliation and gender on students' satisfaction with OBE, highlighting differences in satisfaction levels across these groups.

Table 9: Two-way ANOVA Summary for Satisfaction by University and Gender (SPSS 27 output)

Source	Sum of squares	df	F-Statistics	p-value
University (Islamic vs. Khulna University)	0.686	1	2.68	0.111
Gender	0.024	1	0.09	0.762
University × Gender (Int)	0.163	1	0.64	0.430
Error (Residual)	9.231	36		

The results of the two-way ANOVA show that there is no statistically significant difference in satisfaction scores between students from Islamic University and Khulna University ($p = 0.111$). This suggests that students' overall satisfaction with OBE is quite similar across both institutions. Additionally, the analysis shows no significant difference in satisfaction between male and female students ($p = 0.762$), indicating that gender does not meaningfully influence students' perceptions of OBE in this sample. Furthermore, the interaction effect between university affiliation and gender is not significant ($p = 0.430$), meaning that the relationship between university affiliation and satisfaction does not differ between males and females. In conclusion, based on this subsample, neither university affiliation, gender, nor their combination has a statistically significant impact on students' satisfaction with OBE.

Reliability Analysis

The reliability analysis measures how consistently the variables work together to represent the concept. Cronbach's Alpha is used to assess the internal consistency among the selected items.

Table 14: Analysis of Reliability (SPSS 27.0 output)

Cronbach's Alpha	Sample Size
0.82	275

The Cronbach's Alpha analysis yielded a value of 0.82 for the five variables—Perception, Attitude, Satisfaction, Academic Performance, and Challenges—indicating a strong level of internal consistency. This suggests the items are reliably measuring a shared concept, likely related to student experience or engagement. A Cronbach's Alpha ranges from 0 to 1, with values above 0.80 considered good and values above 0.90 excellent, meaning that the items correlate well with each other and can be considered part of a coherent scale. The relatively balanced variances across items, including the slightly higher variance for "Challenges," do not

undermine the overall reliability of the scale. In short, the questionnaire demonstrates strong consistency, making it a reliable tool for data collection and further analysis.

RECOMMENDATIONS

Based on the key findings of this study, several recommendations are proposed to enhance the effectiveness and student-centeredness of Outcome-Based Education (OBE) in Bangladeshi universities:

1. Clarify Learning Outcomes

In this study, 64% of students expressed a need for clearer expectations regarding learning outcomes. Therefore, it is recommended that instructors explicitly communicate course learning outcomes at the beginning of each course and ensure that all assessments are closely aligned with these outcomes. This can be achieved through orientation sessions, detailed course outlines, and ongoing discussions between faculty and students.

2. Improve Assessment Techniques

In this study, 56.73% of students called for better assessment methods, universities should diversify assessment tools, incorporate formative assessments, and ensure that evaluation methods are aligned with intended learning outcomes and competencies. Universities should develop more transparent, diverse, and fair assessment methods aligned with OBE principles. Regular training for faculty on innovative assessment strategies and timely feedback mechanisms is essential.

3. Increase Student Workshops on OBE

With 54.91% of students recommending more workshops, universities should organize regular, hands-on training sessions focused on Outcome-Based Education. These workshops can help students develop a clearer understanding of OBE principles, processes, and expected outcomes, while also providing practical guidance on how to succeed within the OBE framework.

4. Promote Interactive Learning Environments

The highest proportion of students (63.64%) suggested more frequent interactive sessions with instructors. Universities should facilitate regular discussion forums, Q&A sessions, and group activities to encourage open communication and clarify students' doubts.

5. Improve academic infrastructure and Facilities

The lack of adequate resources and facilities, reported by 65.09% of students, highlights the urgent need for investment in academic infrastructure. Institutions should prioritize upgrading classrooms, expanding access to learning materials, and providing necessary technology and equipment to support effective OBE delivery.

6. Manage Academic Workload

With 66.18% of students citing excessive class load as a major challenge, universities should review curriculum structures and workload distribution. Streamlining course requirements, optimizing schedules, and balancing assignments can help prevent student overload and improve learning outcomes.

7. Standardize Teaching Methods

Given that 36.73% of students identified inconsistent teaching methods, there is a need for greater standardization and coordination among faculty. Universities should provide regular training and workshops for instructors, along with opportunities for sharing best practices, to ensure a consistent and student-centered approach to OBE across all departments.

8. Enhance Instructor Guidance and Mentorship

As 46.18% of students reported limited guidance from instructors, faculty members should be encouraged to provide more proactive academic support. Regular mentoring, timely feedback, and open communication channels between instructors and students will help address concerns and foster a more supportive learning environment.

9. Enhance Online Resources and Leverage Technology

Since 46.18% of students emphasized the need for better online resources, institutions should develop and provide accessible digital materials, video tutorials, and comprehensive guides on OBE concepts and assessments. Prioritizing investment in updated academic content, user-friendly digital platforms, and improved classroom facilities will help address the ongoing issue of inadequate learning resources.

10. Simplify OBE Concepts and Processes

With 30.55% of students experiencing difficulty in understanding OBE concepts, universities should develop clear, accessible guides and orientation programs. Integrating OBE concepts gradually into the curriculum and offering additional support sessions can help students better grasp the underlying principles and requirements.

11. Monitor and Evaluate OBE

To effectively implement the OBE curriculum, ongoing monitoring and evaluation are essential for ensuring continuous improvement. This process should include regularly gathering and analyzing student feedback through surveys and focus groups, reviewing the alignment of assessments with learning outcomes, and tracking student performance data. Periodic evaluation of teaching methods, clarity of learning outcomes, faculty training, and resource availability is essential. Engaging all stakeholders—students, faculty, administrators, and employers—in these reviews will ensure continuous improvement and keep OBE practices aligned with institutional goals.

CONCLUSION

This study offers a detailed picture of students' awareness, perceptions, and satisfaction with Outcome-Based Education (OBE) in Bangladeshi universities. A high level of awareness was reported, with 89.09% of students indicating they had heard of OBE, but only 34.55% rated their understanding as high. Students generally perceived the OBE curriculum positively—over 80% agreed or strongly agreed that learning outcomes were clear and that the system supported practical learning and continuous improvement. Attitudinal responses were also strong, with 74.91% preferring OBE over traditional methods and 78.18% agreeing that it promoted critical thinking and active participation. Satisfaction levels were high overall; 78.91% of students expressed satisfaction with the learning outcomes, assessment transparency, and feedback mechanisms. However, notable challenges were identified—66.18% of students reported excessive class load, 65.09% cited lack of resources, and 46.18% noted limited guidance from instructors. Regression analysis showed that academic performance ($\beta = 0.397$), perception ($\beta = 0.308$), and attitude ($\beta = 0.150$) significantly and positively influenced satisfaction, while challenges had a negative effect ($\beta = -0.122$). Although male students at Khulna University reported slightly higher satisfaction, ANOVA results showed no statistically significant differences across gender or university affiliation. In summary, while students hold generally favorable views of OBE, its success depends on reducing institutional barriers and increasing support to fully realize its student-centered potential. By proactively addressing the challenges identified and embracing student-driven suggestions, universities can foster a more supportive, engaging, and transparent OBE environment. Arranging student workshops, enhancing online resources, encouraging interactive learning, clarifying outcomes, and refining assessment strategies will significantly improve both the adoption and effectiveness of OBE, ultimately making higher education more impactful and inclusive for all learners.

SCOPE OF FUTURE RESEARCH

Future research should rigorously compare student attitudes toward OBE across public and private universities, as well as between undergraduates and postgraduates and early-versus final-year cohorts, to evaluate how prior exposure and familiarity influence perceptions. A longitudinal approach tracking students before, during, and after OBE adoption would provide valuable insight into attitude shifts over time. In-depth attention should be paid to how assessment alignment—such as CO–PO mapping and rubric design—supports the cultivation of critical soft competencies like communication, teamwork, and critical thinking, addressing documented concerns about the overly technical or rigid application of OBE frameworks. Additionally, research must investigate how OBE is culturally translated within the Bangladeshi

context—examining how local educational traditions, norms, and institutional cultures shape its reception and implementation. Finally, integrating perspectives from employers, accreditation bodies (e.g. BAC), and industry stakeholders will help align curriculum outcomes with labor market expectations and national policy goals —making OBE both contextually relevant and practically effective

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