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Quality in Education: Ascertaining the Use of Rubrics for Successful Implementation of OBE at the Tertiary Level in Bangladesh

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Abstract

This article highlights the potential of rubrics as tools for effective assessment in education by encouraging students to pursue high-quality education, assessing students in ways other than traditional testing, and fostering outcome-based education. It highlights the importance of quantitative research for data gathering and analysis, as well as the use of statistical applications like SPSS for data analysis in educational research. The study examines various types of rubrics and their components to create a full rubric for classroom effectiveness. It also provides literature on appropriate rubric usage for students and teachers, as well as rubric researchers. The findings suggest that a nationwide database of discipline-specific rubrics is necessary for preserving and advancing standards in technical and higher education. A guidelines handbook should be developed before employing rubrics. Implementing rubrics at elementary and secondary levels is essential for students to advance to higher education, as they may be exposed to unprepared OBE approaches in cities with inadequate communication and technology skills. The Ministry of Higher Education should determine teaching obligations and responsibilities, and universities should implement rubrics immediately and emphasise them. The findings are relevant to both students and teachers, emphasising the importance of user perception, rubric design, and intended use in determining the usefulness of rubrics in raising student performance. By optimising variables based on trustworthy data and knowledge of the intended educational context, educators can maximise students' learning opportunities.

Keywords: Rubric, Outcome-Based Education, Rubric Design, Rubric Types

1. Introduction

Outcome-based education (OBE) is a learner-centric education process that assists institutions in measuring their learning outcomes and enabling students to achieve the skills and knowledge at the end of the educational program to stand out with their desired goals. William Spady is considered the key promoter of the OBE. To enhance the quality of student performance significantly and to minimize the gap between job market demand and skilled graduates equally well at a global level, William Spady thought of the OBE in higher education curricula. According to Spady, "outcome-based education is focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences. This means starting with a clear picture of what is important for students to be able to do, then organizing curriculum,

instruction, and assessment to make sure this learning ultimately happens" (Spady, 1994). OBE is an eclectic educational philosophy that pre-determines and modifies learners' needs, allowing stakeholders with a socio-constructivist base for input and adaptation (Mallan, 2000).

Outcome-based education (OBE) has been adopted internationally for three to four decades as a central feature in the accreditation of educational institutions. Academic institutions have a key responsibility to prepare graduates for 'employability' in the global market, leading to rechecking and upgrading educational systems (Mitra and Gupta, 2020). The University Grant Commission (UGC) of Bangladesh is working to adopt the OBE system to ensure quality education and skilled graduates and to get a place in the country's universities in the world rankings. In March 2018, the UGC of Bangladesh formed a committee consisting of seven experts to prepare the templates for OBE. The Strategic Planning and Quality Assurance (SPQA) division of UGC organized the entire procedure of template preparation. The Full Commission of UGC finally approved the templates at its 157th meeting on February 6, 2022 (Templates of Outcome, 2020). According to the Revised Outcome-Based Education (OBE) Curriculum Templates and Assessment Part on the syllabus of the current program, it was sent to all the private universities on June 30, 2021. The objectives of assessment in all of its fundamental models strongly relate to the role of assessment in OBE. However, OBE emphasizes ongoing and criterion-referenced evaluation. OBE seeks to evaluate all of a learner's competencies (Mallan, 2020).

The successful execution of outcome-based education involves learner-centered classrooms, competent teachers, active students, and continuous assessments through effective assessment tools (Gupta, 2021). A rubric is an education tool used to set learning standards, develop self-motivation, assess progress, improve learning process, and make policy decisions in outcome based education (Gupta, 2021; Nkhoma, Nkhoma, Thomas, & Le, 2020). According to Shohidul, high-quality, shareable resources, tests, and rubrics are created for OBE to support learning objectives (Shahidul, 2020). Rubrics provide a transparent means by which students can identify what work looks like of the highest quality, promote consistency and build trust among students, and define what exemplary work looks like in the discipline or profession (Wolf† & Stevens, 2007). Accurately designed rubrics and their best assessment practices have extensive consequences for autonomous learning and individual students' assessment of the desired goal of OBE (Nsabayezu, lyamuremye & Nsengimana, 2022; Silva, 2014).

2. Objectives of the research

This study aims to facilitate and simplify outcome-based education at the tertiary level in Bangladesh by implementing rubrics as an authentic assessment instrument, considering individual students' self-directed learning, achieving expected learning outcomes, and getting consistency in assessment. More specifically, this study aims to:

1. Involve students in creating the criteria for a task that makes learning targets direct and clear, communicates their ideas effectively, and correlates with the program's learning outcome.
2. Enhance, be more careful, be well-judged, and be thoughtful judges of the quality and gradations of work from top-grade to low-grade.
3. Involve students in their performances with a tool for self-assessment and peer feedback.

3. Literature Review

3.1. Introduction to rubrics

The rubric is a set of scoring guidelines for identifying the essential criteria of a particular task or skill and giving feedback on students' performances. Rubrics as an influential assessment instrument in learning have been applied, along with standardising the assessment of students in higher education, for almost three decades around the world. Rubrics have been used as a tool to analyse writing since 1912, when Noyes first used rubrics to systematise the evaluation of student compositions (Brooks, 2012). Noyes first proposed uniform, definite, and fixed standards of measurement to avoid subjective judgments (Noyes, 1992). Rubrics have advanced rapidly from their earlier use within holistic evaluation processes (Grubb, 1981) to the present. According to Guskey, (2016) "interest in rubrics surged during the 1990s as educators turned their focus to documenting student achievement of specific learning

standards. Today, rubrics for describing and assessing student performance can be found at every level of education, from preschool and kindergarten to graduate and professional school." Rubrics are beneficial instructional tools that lead to standardisation and create connectivity between teachers and students (Turley & Gallagher, 2008). Almost six hundred articles in different disciplines have been published related to rubric design, application, and reliability for ensuring a high level of quality in recognised indexed journals (Elsevier, 2019; Katherina, 2020). Changes in evidence collecting are necessary because new teaching practises frequently raise learning expectations for students. Although it has its limitations, the multiple-choice exam, which is the standard evaluation method in college-level scientific courses, can give students feedback on their understanding. It is necessary to apply additional evaluation techniques, such as written assignments, oral presentations, debates, problem-solving exercises, and demonstrations. By creating concrete performance and attainment requirements for students, rubrics can address these problems (Wiggins, 1989; Luft, 1999; Porter, 2005; Lynd-Balta, 2006; Allen &Tanner, 2006). Rubrics are an invaluable tool in a variety of higher education environments, including Bangladesh, because they incorporate openness and justice into their design.

3.2. Advantages of using Rubrics in outcome-based education

A well-designed rubric establishes a clear framework for tasks, clarifying expectations and highlighting the significance of specific components. It is essential for teaching and learning since it motivates students to do honest self-evaluations. Rubrics offer consistent feedback during peer and self-review, which enhances students' metacognition and abilities to evaluate their work (Ragupathi & Lee, 2020; Allen &Tanner, 2006). Faster grading, more uniformity, and simple identification of weak areas are made possible by predetermined expectations. Rubrics can be used by teachers to find chances for teaching and give insightful criticism.
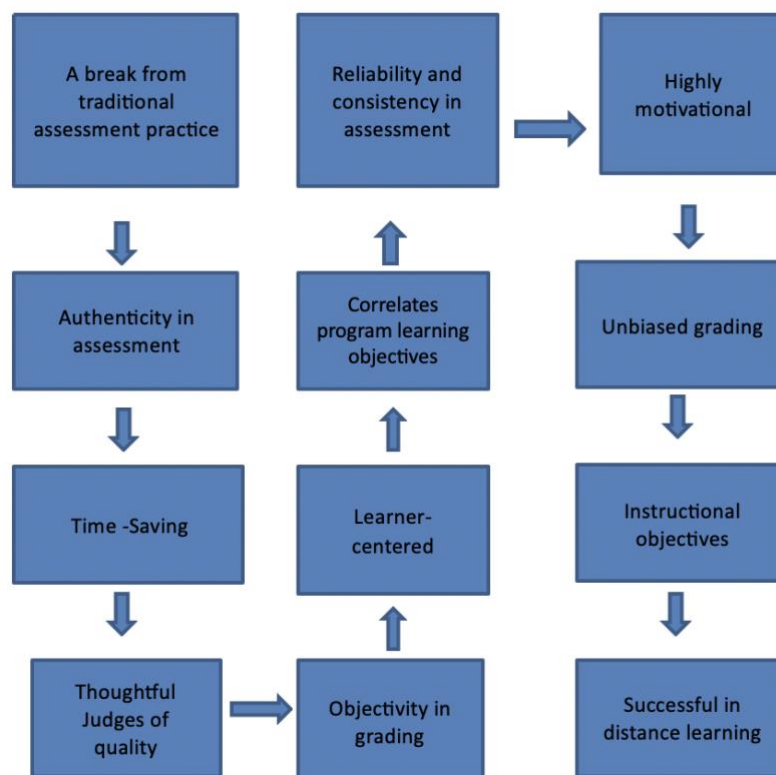
Figure 1: Advantages of Rubrics

A skillfully created rubric makes the educational goal clear. The evaluation process comes to be perfect, unbiased, and consistent (Wolf & Stevens, 2007). Well-designed and carefully designed rubrics help students become more rational judges of the quality of their work by identifying the essential criteria and targeting the goal and learning outcomes of the task. Rubrics are beneficial for teachers in assessment as they are time-consuming and fair in

grading, providing feedback, and giving more demanding work to students (Andrade, 2005; Gusky, 2016). According to Moskal (2000), an elaborate rubric entails rational objective scoring in the assessment so that one can avoid subjectivity in general impression marking. The attributes of rubrics, according to Johnson & Svingby (2007), include "increased consistency of scoring, the possibility to facilitate valid judgment of complex competencies, and promotion of learning." Rubrics play a vital role in the transition from traditional evaluation processes to competency and authentic assessment in higher education institutions (Dochy, Gijbels, & Segers, 2006). A well-structured rubric has many advantages as an appraisal tool for students. It helps us understand the strengths and weaknesses of the learners (Chowdhury, 2019; Suskie, 2018). Rubrics and standardized education philosophy meet the particular learning objectives and proficiency of the students (Guskey, 2016). Rubric highly facilitates or thoroughly assists the OBE process and provides certain specified criteria in terms of individual student learning outcomes that correlate with the standard of program learning objectives (Gupta, 2021). The modern digital rubric is a facilitator of educational technology. Rubric use makes online learning more interactive, optimizes the teaching-learning process, and meets the demand for universal goals for sustainable quality education (Menéndez-Varela and Gregori-Giralt, 2016; Moril, Ballester, and Martnez, 2012). Rubric use facilitates the teaching-learning process by avoiding time-consuming activities (Nkhoma, Nkhoma, Thomas, & Le, 2020). Rubrics enhance students' competency to communicate their ideas effectively. They become more autonomous in their performances and can develop or acquire the required skills at any time (Jaidev, 2011). Rubrics are proper instruments that give feedback through comprehensive and distinguishing exercises and provide fair grading to the students. Rubrics enhance students' ability to judge and give feedback on both their own and peer work. Thus, the rubrics direct a learner-centered approach and improve students' self-assessment learning (Ragupathi & Lee, 2020). By assisting students in identifying the critical cognitive abilities they must master to succeed in the assignment, rubrics raise students' sense of self-efficacy. When students have these skills defined, they may plan and evaluate their own work, making rubrics useful tools for promoting students' ability to control their learning (Jansen, Meier, &Trace, 2015). When utilized as teaching aids, rubrics not only make the instructor's expectations and subsequent grading explicit, but they can also help students understand what is expected of them and how to achieve it. When students lack experience with a particular task or mode of expression, the use of rubrics might be particularly crucial (Bresciani et al., 2004).

Finally, Rubrics promote reflective practice among teachers and students, encouraging reflection on expectations and classroom practices. Students can develop self-direction and gain insight into how they learn (Luft, 1999).

3.3. Types of Rubrics

Analytic Rubric:

Concepts: An analytic rubric is used for assessing the different necessary criteria individually and addressing them comprehensively. In the analytic rubric, each criterion is used to score on the different illustrative scales (Brookmart, 1999). Analytic rubrics divide the performance of a task into different categories and give feedback on areas of strength and weakness (Tedick, 2000). In this way of assessing, learning plans become more closely correlated with educational objectives (Truemper, 2004). Analytical rubrics are singularly useful for complex and problem-solving assignments, research papers, or longer projects as they list different categories of each component of the assessment individually.

Table 1: An analytic rubric with it's features

Rating Scale	The analytic rubric provides a detailed rating scale constituting performance or scores on each criterion separately.
When to Use	An analytical rubric distinctly uses a simple multiplier for each criterion separately to assess each skill of an assignment. An analytic rubric promotes consistency and reliability in scoring when several teachers assess students' performances (Suskie 2018). Teachers can apply analytic rubrics to bring out summative assessments at the end of an instructional unit or course.
Advantages	**Detailed feedback on students' performance:** Analytic rubrics create students' profiles with detailed feedback on strengths and weaknesses and specific skills to be improved (Suskie, 2018; Mertler, 2001). According to Suskie (2018), analytic

	rubrics are the "gold standard of rubrics because they document student performance." It is also similar to a diagnostic approach in that it facilitates teaching and learning by providing effective feedback on students' performances (Nasab 2015). **The analytical rubric encourages self- and peer-learning** and attaining a minimum level of competency as it assesses each skill and competency (Gupta, 2021). **Correlate learning outcomes:** In an analytic rubric, multiple criteria of a task can be correlated to their importance in achieving the learning outcomes (Hannagin & Hannafin, 2010; Rogers, 1983). **Consistency and fair grading:** Analytical rubrics provide more consistency and reliability in the grading of specific criteria for each performance level (Nkhoma, Nkhoma, Thomas, & Le, 2020). **Self-assessment and learner centered:** Analytical rubrics motivate self-assessments and a student-centered mindset that promote quality evaluation of education programs (Grundnitski, 1997; Wright, 2011; Crumly & Dietz, 2014).
Disadvantages	**Bias grading prospects:** The evaluation of small-skill proficiency can be biased as many criteria over-petition a task in the analytic rubric. (Jae and Cowling, 2009; Kahneman, 2003; Rosenzweig, 2014). May not be used consistently across raters, whereas reliability is a question. **Can be focused on lower-level skills:** Detailed criteria-based analytic rubrics can avoid the measurement of deeper understanding and knowledge. **Time-consuming:** The development of detailed scores and skill-based rubrics is time-consuming.

Holistic Rubric:

Concepts: A holistic rubric evaluates the multiple criteria of a task based on a single descriptive scale (Brookhart 1999). In the holistic rubric, the instructor doesn't score a task in parts, but all of the criteria are assessed together (Nikto, 2001).

Example: Holistic rubrics can be useful for a task with interrelated criteria or a single learning outcome. For example, works of art, creative writing, engineering design, projects, oral presentations, broad posts, portfolios, and projects. It will be efficient for large group scoring (Young, 2013), and the focus is on overall quality, proficiency, or understanding of specific content or skills (Mertler, 2001).

Table 2. Holistic Rubric and it's features

Rating Scale	A holistic rubric records the different levels of overall proficiency on a single and detailed rating scale comprising clarity, organization, and mechanics.
When to Use	**Simple, singular task or minor assessment:** It is adequate to use holistic rubrics in the case of minor assessments for simple and singular tasks (Brookhart, 2013). **Errors can be tolerated:** Holistic rubrics are generally used to identify errors that can be tolerated when the overall quality of the task is high (Chase, 1999). **The answer is not clear or definite in meaning:** It is more appropriate to use holistic rubrics. When students are asked to respond and the answer is not specific (Nikto, 2001). **Fast and general judgment:** Holistic rubrics can be very useful for fast and overall performance standards (Nkhoma, Nkhoma, Thomas, & Le, 2020). **Certain written tasks:** On some tasks, it is not easy to evaluate performance on one criterion independently of performance on another criterion. For example, many writing rubrics are holistic because it is not always easy to disentangle clarity from organization or content from presentation. So, some educators believe a holistic or global assessment of student performance better captures students' abilities on certain tasks (Nkhoma, Nkhoma, Thomas, & Le, 2020). In some cases of task assessments, the separate or individual criteria can't reflect coherence and lack cohesion. Holistic rubrics appropriately correlate and evaluate the process (Brookhart, 2013).

Advantages	**Increase reliability and validity**: Holistic rubrics reduce the number of decisions and can be used consistently by several raters, which increases reliability and validity in measurement (Nkhoma, Nkhoma, Thomas, & Le, 2020). **Authentic assessments:** Holistic rubrics evaluate the impact of the performance. Hence, this attitude allows holistic rubrics to assess authentically (Brookhart, 2013). **Quick scoring and time-saving:** Holistic rubrics save time by reducing the number of decisions (Nitko, 2001). **Encourage organizational skills:** The holistic rubric encourages students to be interconnected and organized, as it requires the integration of several parts to reach a planned goal.
Disadvantages	**Lack of detailed and specific feedback or limited feedback**: The holistic rubric doesn't provide specific feedback for certain areas of improvement. **Overlap between criteria or ideas**: In holistic rubric scoring, overlap results in certain criteria being weighted more than needed (Chase, 1999). **Criteria cannot be weighted equally:** As the holistic rubric evaluates all criteria simultaneously, it is difficult to weigh the different parts equally in the assessment (Nkhoma, Nkhoma, Thomas, & Le, 2020; Gulikers et al. 2004).

Generic Rubric:

Concepts: General rubrics are descriptions of similar criteria across tasks and can be used for different types of tasks with similar learning outcomes. Like analytic rubrics, general rubrics assess different criteria separately. The general rubrics can be helpful for self-assessment, peer review, teamwork, and individual contributions to group work and oral communication skills in different academic courses

Table 3: Generic Rubric and it's features

Rating Scale	General rubrics evaluate several criteria independently, just like analytical rubrics do.
When to Use	**Beginners' fundamental skills:** General rubrics are highly recommended for beginners who have difficulties with fundamental skills (Brookhart, 2013; CARLA, 2018). **Teachers who have difficulties designing new rubrics**: General rubrics assist teachers who may have difficulties communicating the behaviors of students. **At the very beginning of a task**: General rubrics can be provided at the very beginning of a task to promote students' self-regulatory processes and how they approach the task (Jönsson & Svingby, 2007).
Advantages	**Consistency in assessment:** Generic rubrics create greater assurance of consistency among students in the assessment of tasks of a similar nature. **Encouraging and learner-centered:** A well-built general rubric prioritizes students' knowledge and skills related to learning outcomes and motivates beginners with confidence to overcome any difficult situation. (Moreno, 2004; Bawden & Robinson, 2009). **Successful learning targets**: Encountering identical elements, students become competent in their learning targets for different tasks with a similar approach **Mastery of general skills:** Using a similar rubric of essential criteria for the 'skill to be measured' (Popham 1997; Oakleaf 2006), students learn the general qualities of good, easy writing, problem-solving, and so on (Brookhart 2013). A general rubric helps teachers monitor student progress over time and saves time.

Disadvantages	**Less inconvenient for a growth mindset:** The innate quality of general rubrics is less helpful for great accomplishments, challenging skills, and creativity.

Task-specific Rubric:

Concepts: A task-specific rubric assesses a specific task, and 'specific features of the elicited performance' (Brookhart, 2013) are assessed separately (Gupta, 2021). The detailed elements of task-specific rubrics require students to fulfill the elementary to a more specialized level of knowledge successfully.

Example: Task-specific rubrics are helpful for assessments that instruct specific performance criteria for a particular task of a final exam, a project, or a research proposal.

Table 4: Task-specific Rubric and it's features

Rating Scale	A task-specific rubric evaluates a single task, and specific aspects of the evoked performance' are evaluated individually.
When to Use	**In high-stakes testing**: Task-specific testing is useful in high-stakes testing with important consequences for test takers in a large-scale context, such as state-level accountability assessments at the local, state, or national level. (Arter & McTighe, 2001; Nkhoma, Nkhoma, Thomas, & Le, 2020). When you need to evaluate the skills of particular facts, equations, methods, or procedures, knowledge and consistency of scoring are important.
Advantages	**Quality assurance**: To fulfill quality requirements and improve rubric content validity, an advanced task-specific rubric is highly suggested (Taggart et al., 2001). **Reliability, validity, and consistency in assessment:** Task-specific rubrics are considered an attainable solution for easier and faster consistency in scoring and assessment reliability (Brookhart, 2013). According to Arter and McTighe (2001), task-specific scoring rubrics can transform a subjective and traditional evaluation process into clear, consistent, and valid strategies (Taggart et al., 2001). **Authentic assessment and visualization of learning targets:** A task-specific rubric with explicit descriptions of specific tasks stimulates authentic assessment and relates to achieving educational targets (Jönsson & Svingby, 2007; Gulikers et al. 2004). **Higher scorer and attain further achievements:** A task-specific rubric entails students scoring higher and reaching further achievement (Howell, 2011; Howell, 2014). **Cost-effective:** A qualified task-specific rubric for large-scale assessment including a large number of students can be found to be cost-effective.
Disadvantages	**Time-consuming**: A good-quality task-specific rubric is difficult to design and requires investment in terms of time and effort. **Limits skills:** When students are strictly outlined in the specific criteria, they get entangled in limitations. Assessors find it difficult to meet the specified criteria of rubrics when they come across open-ended tasks (Bawden & Robinson, 2009; Gulikers et al. 2004).

3.4. Elements of Rubric

Many educators looking for evaluation tools are drawn to the rubric's simplicity and design freedom. In particular, rubrics are becoming more and more common in educational settings as 21st century skills are developed because "rubrics are used as an instrument to support learning complex skills in schools" (Lowe, Booth, Stone, & Tagge, 2015).

Popham was the first to, in his article "What's Wrong and What's Right with Rubrics," think of rubric construction and point out three relevant components of a rubric.
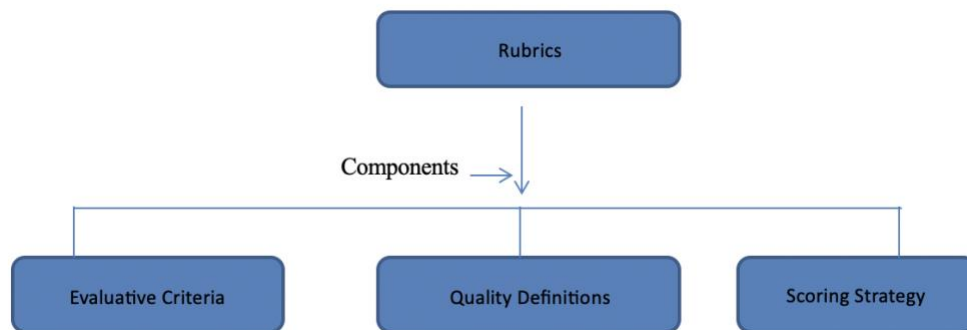
Figure 2: Elements of Rubric   *Source: Popham (1997)*

It's possible that the rubric design's matrix shape is not the most important element to comprehend: The provision of focused learning goals, criteria, and performance descriptions in whatever form may end up supporting learning and motivational outcomes for students rather than rubrics per se (i.e., rubrics as an assessment tool in a particular form) (Brookhart & Chen, 2015).

With this in mind, we wish to examine the guidelines that can be stated for the creation of evaluating criteria for rubrics and the construction of quality scales for rubrics based on the literature and our personal experiences.

Rubric Design Elements:
1. **Performance criteria in row headings:**
Write a description of the tasks or criteria that will be evaluated.
Specify the skills, knowledge, and behavior that are intended to be assessed.
   2. **Rating scale in column headings:**
Identify the different levels of mastery or performance.
Specify different grading scales and numbers for each assignment type.
   3. **Performance level descriptors within each cell of the table:**
Write criteria descriptions for each level of performance using similar language across the scale.
Specify the degree of best to lowest categories through noticeable and assessable conduct.

3.5. Chief exercises of rubrics development

Though the rubric types vary, the exercises for designing each type of rubric share some common steps. A robust and reliable rubric comprises the following principles:

Table 5: Principles of robust and reliable rubric

Objectives of the task or assignment	The first stage of rubric development is to specify the goals of the learning task. When learning targets are identified, teachers can easily communicate with instructional approaches, and learners reach their expectations (Arter & McTigue, 2001; Stiggins, 2001). Stating the objectives of the learning tasks correlates with the course development process (Wiggins & McTighe, 2001).
Decide the rubric types	Identify the type of rubric that is appropriate to the assignment task. If there are any difficulties in creating the rubric, it can be helpful to at least have a standard set of widely used types of the rubric to start with.
Adopt and adapt phases	Crusan (2010) proposes two helpful phases for rubric development: adopt and adapt. In the adoption phase, a well-developed rubric can be used without any necessary changes to criteria and standards. In the second stage of the adaptation phase, performance-level descriptions require modification to meet teachers' expectations for grading skills.
Develop the rubric interactively with the target students	An effective way is to create a rubric interactively with students, discussing their weak and strong performances, and then draft the list of criteria resulting from their work. (Andrade, 2000; Huba & Freed, 2000). Engaging

	students with rubric development also helps them understand the use and benefits of grading skills.
Test and revise the rubric	Try it out on a sample of student work, both individual and peer assessment, and discover how effective it is. It gives teachers results for knowing students' comprehension of the rubric criteria and reviewing teaching strategies and learning outcomes.
Share the rubric	Sharing the rubric collaboratively with teachers to get rubric-attached feedback on students' performance will promote the validity of the rubric.
Check the progress	Keeping a continuous record of the extent to which "the scale was functioning and in which parts" (Jansen, Meier & Trace, 2015) will adequately determine whether the criteria have been working (Wiggins and Melishe 2005).
Language and format	A quality rubric consists of descriptive and comprehensive language that helps students improve their work and clearly understand their expectations. The rubric format needs to be simple and consistent throughout the entire process so students can communicate their information (Rubric Best Practices, Examples, and Templates).

4. Methodology

Quantitative research is used in this study to gather numerical data. Data gathering and analysis are swift and quick when quantitative research is used.

Figures and numbers are essential to the collecting and processing of data in quantitative research approaches, according to Bryman's (2012) reasoning. Connolly (2007) demonstrates how the statistical application SPSS (Statistical Package for Social Science) can be used by computers to perform data analysis in educational research. Unquestionably, these tools may provide researchers with technical assistance, allowing them to significantly reduce their time and effort.

4.1. Research methodology for the study

The researchers conducted a quantitative research study to ascertain teachers' and students' opinions on the use of rubrics to support outcome-based education models in their classrooms while collecting data using a Google Form in response to the research's concern about the continued use of traditional teaching and learning methods at the tertiary level in Bangladesh.

4.2. Intended population and sampling

Participants in the study of the quantitative method included teachers from Bangladesh's private universities. 120 students and 110 teachers made up the study's sample size. According to Chuan and Penyelidikan (2006), this sample size is appropriate for doing quantitative research and will allow the researcher to answer the research questions and objectives. The snowball sampling method was employed to obtain the quantitative data, and teachers from various private institutions were asked to forward and share the questionnaire with their other counterparts.

As a result, the researchers believed that this style of sampling technique was appropriate for gathering quantitative data.

4.3. Instrument and procedures

Questionnaires were the only instrument used in this study as its main resource. The researcher modified questions from Ortega and Cruz, 2016; Baguio, 2019; Loreto, 2018; and other sources for this quantitative section. Each quality element was given a score on a Likert scale of 1 to 5, with 5 being the highest quality element completion and 1 representing the lowest quality element completion.

4.4. Data Analysis techniques

The data in this study were assessed both statistically because it used quantitative research. Statistical Package for Social Sciences (SPSS 26.0) was used to analyse the data in order to produce the tabulations, graphs, charts, frequency distributions, and descriptive statistics for the quantitative method.

5. Findings and Results

The quantitative results of the current study are presented in the following sections. They were gathered via a questionnaire and evaluated using tabulation, frequencies, and descriptive statistics.

Look at Table 6, which contains the list of 8 questions used to evaluate teachers' explanations when evaluating students' knowledge and skills with or without any instructional standards.

Table 6: Teachers' explanations when evaluating students' knowledge and skills with or without any instructional standard

Items	Extremely High 5	High 4	Moderately High 3	Low 2	Very Low 1
1. I use my impressionistic grading system, which I believe to be quite trustworthy.	63 (57.2%)	17 (15.5%)	10 (9.0%)	13 (11.9%)	7 (6.7%)
2. provide written scoring guidelines for a task or assignment.	33 (30.0%)	16 (14.6%)	11 (10.0%)	12 (10.1%)	38 (34.6%)
3. I can evaluate or judge every criterion of a task without any instructional or written scoring guidelines.	16 (14.6%)	8 (7.2%)	13 (11.9%)	25 (22.8%)	48 (43.7%)
4. Whether or not they are using a tool for self-evaluation and peer criticism, I involve students in their performances.	46 (41.9%)	30 (27.2%)	15 (13.7%)	14 (12.8%)	5 (4.5%)
5. Regardless of the presence or absence of instructions or written scoring rules, I can assess or judge each task's criteria.	55 (50.0%)	38 (34.6%)	10 (9.0%)	6 (5.4%)	1 (0.9%)
6. In my opinion, using an impressionistic or generic scoring approach to assess the caliber of students' work and grades is insufficient.	68 (61.9%)	26 (23.7%)	14 (12.8%)	2 (1.9%)	0 (0%)
7. I am conscious of the fact that the absence of a trustworthy scoring procedure leads to unbalanced and inconsistent scoring, making it challenging to compare the various talents of students.	57 (51.9%)	29 (26.3%)	17 (15.4%)	6 (5.4%)	1 (0.9%)
8. I believe that by using a grading scheme or tool, more students will be able to create the requirements for a task.	54 (49.0%)	17 (15.4%)	15 (13.7%)	23 (20.9%)	1 (0.9%)
Total	**44.5%**	**20.5%**	**11.9%**	**11.4%**	**11.5%**

The results of Table 6 show that (44.5%) of respondents formulated extremely high, (20.5%) high, and (11.9%) moderately high in terms of teachers' explanation when evaluating students' knowledge and skills with or without any instructional standards. On the other hand, 11.4% of them are still in the low and very low (11.5%) levels of teachers' explanation when evaluating students' knowledge and skills with or without any instructional standards.

The attitudes of Bangladeshi higher education students toward OBE are evaluated in Table 7 based on their responses to 25 questions concerning their comprehension, thoughts, and feelings as well as their readiness to accept the new OBE technique and level of rubric adoption.

Table 7: Teachers' attitudes regarding knowledge, beliefs, readiness to accept OBE technique and level of Rubric adoption

Thoughts and Comprehension Items	Extremely High 5	High 4	Moderately High 3	Low 2	Very Low 1
1. In my opinion, rubrics will improve students' academic achievement.	75 (68.1%)	25 (22.8%)	8 (7.2%)	2 (1.9%)	0 (0%)
2. I believe that the rubric will offer me more freedom to employ OBE in my class.	68 (61.9%)	25 (22.8%)	11 (10.0%)	5 (4.5%)	1 (0.9%)
3. I think Rubric will give all of my students an equal opportunity to succeed academically.	60 (54.5%)	24 (21.9%)	13 (11.9%)	13 (11.9%)	0 (0%)
4. I think the use of rubrics demands more accountability from academics and instructors than traditional teaching methods do.	69 (62.8%)	25 (22.8%)	10 (9.0%)	6 (5.4%)	0 (0%)
5. Using the Rubric wouldn't, in my opinion, be a waste of time.	44 (40.0%)	38 (34.5%)	20 (18.1%)	6 (5.4%)	2 (1.9%)
6. In my opinion, learners do not always benefit from traditional paper-and-pencil testing that evaluates students' competencies.	66 (60.0%)	28 (25.4%)	13 (11.9%)	5 (4.5%)	0 (0%)
7. In my opinion, the assessment criteria in the rubric are the most helpful for the OBE implementation.	70 (63.7%)	30 (27.2%)	6 (5.4%)	2 (1.9%)	2 (1.9%)
8. I think the rubric helps me or the teacher give clear directions.	70 (63.7%)	18 (16.3%)	17 (15.4%)	5 (4.5%)	0 (0%)
9. I firmly believe in the rubric, and I recognize the importance of providing clear, targeted feedback that is centered on ways to enhance learning.	74 (67.2%)	20 (18.1%)	10 (9.0%)	3 (2.7%)	3 (2.7%)
10. I think using a rubric or instructional guideline will make scoring more consistent.	80 (72.8%)	17 (15.4%)	8 (7.2%)	3 (2.7%)	2 (1.9%)
11. I think the rubric makes grading more neutral.	75 (68.1%)	22 (20.0%)	7 (6.3%)	4 (3.6%)	2 (1.9%)
12. I agree with the rubric or I prefer a lesson plan that will reduce grading confusion and student complaints.	70 (63.7%)	24 (21.9%)	9 (8.1%)	4 (3.6%)	3 (2.7%)
13. I think the rubric can be employed to alter the OBE guidelines.	68 (61.9%)	20 (18.1%)	8 (7.2%)	13 (11.9%)	1 (0.9%)
14. A rubric, in my opinion, is an additional tool it takes considered a class's overall performance.	65 (59.0%)	28 (25.4%)	13 (11.9%)	4 (3.6%)	0 (0%)
Total	62.0%	22.2%	9.9%	4.8%	1.0%
Readiness to adopt Rubric Items	Extremely High 5	High 4	Moderately High 3	Low 2	Very Low 1
1. I'm ready to go from the conventional approach to the OBE strategy.	73 (66.3%)	23 (20.1%)	10 (9.0%)	3 (2.7%)	1 (0.9%)
2. I am sufficiently knowledgeable with OBE evaluation techniques.	33 (30.0%)	30 (27.2%)	25 (22.8%)	12 (10.1%)	10 (9.0%)

	Extremely High	High	Moderately High	Low	Very Low
3. I'm willing to arrange my schedule so that I have enough time to prepare for the OBE rubric.	48 (43.7%)	28 (25.4%)	12 (10.1%)	10 (9.0%)	12 (10.1%)
4. I'm ready to offer my lesson using the rubric and any resources that are easily available.	61 (55.4%)	30 (27.2%)	16 (14.5%)	3 (2.7%)	0 (0%)
5. I think that using rubrics in teaching and learning will benefit from my teaching experience.	66 (60.0%)	23 (20.1%)	19 (17.2%)	2 (1.9%)	0 (0%)
6. I'm willing to learn more about the topic to broaden my knowledge and understanding of rubrics for better OBE.	80 (72.8%)	18 (16.3%)	12 (10.1%)	0 (0%)	0 (0%)
7. I'm willing to design a rubric that adheres to the objectives of the course and the program.	77 (70.0%)	23 (20.1%)	10 (9.0%)	0 (0%)	0 (0%)
8. I'm ready to provide the written rubric that has been developed for the tasks.	69 (62.8%)	20 (18.1%)	18 (16.3%)	2 (1.9%)	1 (0.9%)
9. I'm interested in employing various rubrics to assess learners' development.	64 (58.1%)	21 (19.0%)	16 (14.5%)	9 (8.1%)	0 (0%)
10. I am prepared to create a rubric by offering activities that are interactive, well-planned, and guided.	40 (36.3%)	33 (30.0%)	21 (19.0%)	11 (10%)	5 (4.5%)
11. I'm open to participating in seminars and training sessions on creating and putting into practice the standards to support OBE in Bangladeshi universities.	86 (78.1%)	14 (12.8%)	10 (9.0%)	0 (0%)	0 (0%)
Total	**57.5%**	**21.4%**	**13.8%**	**4.2%**	**2.3%**

Table 7 displays the overall highness and lowness of all respondents' thoughts and comprehension levels in relation to the 14 questionnaire items that were given to them. It demonstrates that (62.0%) are extremely high, (22.2%) are high, and (9.9%) are moderately high. They are capable of comprehending the OBE methodology and level of rubric implementation. Nevertheless, it is nevertheless apparent that a significant portion of respondents (4.8%) have low and (10%) have low comprehension of OBE and the instructional guiding rubric.

There are 11 questions provided to the teachers regarding their readiness to accept the rubric. A significant portion of respondents (57.5%) rated the likelihood that they would accept the rubric as extremely high, high (21.4%), and moderately high (13.8%). Nevertheless, in terms of their readiness and desire to adopt the Rubric, (4.2%) were low and (2.3%) were very low.

Referring to Table 8 for identifying students' perceptions and knowledge of their strengths and weaknesses in their performance and evaluation processes, which are being measured by asking 5 questions.

Table 8: Students' perceptions and knowledge of their strengths and weaknesses in their performance and evaluation process

Items	Extremely High	High	Moderately High	Low	Very Low
1. I'm quite aware of my weaknesses and failings.	3 (2.5%)	8 (6.7%)	25 (20.8%)	62 (51.7%)	22 (18.3%)
2. I am able to interpret and comprehend the results.	10 (8.3%)	10 (8.3%)	30 (25.0%)	48 (40.0%)	22 (18.3%)
3. I can't comprehend the instructor's expectations of an assignment or any task.	30 (25.0%)	53 (44.1%)	22 (18.3%)	8 (6.7%)	7 (5.8%)
4. I'm always aware of the standards for excellent writing and performance that merit good grades.	9 (7.5%)	12 (10.0%)	17 (14.1%)	60 (50.0%)	22 (18.3%)

	Extremely High 5	High 4	Moderately High 3	Low 2	Very Low 1
5. Finding appropriate standards for a task or assignment is challenging for me.	65 (54.1%)	26 (21.7%)	16 (13.3%)	3 (2.5%)	10 (8.3%)
Total	**19.4%**	**18.1%**	**18.3%**	**30.1%**	**13.8%**

When evaluating student performance, the five questions listed in Table 8 are used to determine how well-informed the students are about their perceived strengths and weaknesses. It reveals that in their responses to their views and knowledge of their strengths and limitations in their performance and evaluation processes, (19.4%) are extremely high, (18.1%) are high, (18.3%) are moderately high, (30.1%) are low, and (13.8%) are very low.

Table 9 shows students' attitudes towards any instructional tool (Rubric), which is being measured by asking 11 questions in terms of their beliefs, readiness, and acceptance level.

Table 9: Students' attitudes towards the use of any instructional tool (Rubric)

Items	Extremely High 5	High 4	Moderately High 3	Low 2	Very Low 1
1. I want a tool or guideline to gain a better understanding of the course and assignments.	85 (70.9%)	25 (20.8%)	7 (5.8%)	3 (2.5%)	0
2. I feel an instructional guideline should clarify an instructor's expectations on an assignment.	90 (75.0%)	25 (20.8%)	4 (3.3%)	1 (0.8%)	0
3. I want to have a guideline. Understanding how the assignment aligns with the course objectives	85 (70.9%)	26 (21.7%)	6 (5.0%)	3 (2.5%)	0
4. I want a way to provide feedback that is both helpful and specific.	90 (75.0%)	20 (16.7%)	10 (8.3%)	0	0
5. I want a method that will improve performance.	95 (79.1%)	24 (20.0%)	1 (0.8%)	0	0
6. I'm looking for a technique that will boost productivity.	96 (80.0%)	23 (19.1%)	1 (0.8%)	0	0
7. I'm looking for a system for assessing one's own work.	84 (70.0%)	27 (22.5%)	4 (3.3%)	5 (4.1%)	0
8. I feel the scoring guidelines make the assessment flawless.	96 (80.0%)	24 (20.0%)	0	0	0
9. I want a tool that will close the gap between academic work and what employers are looking for.	98 (81.7%)	22 (17.3%)	0	0	0
10. I'm looking for an evaluation tool that can lessen the amount of prejudice in grading.	83 (69.1%)	26 (21.7%)	6 (5.0%)	5 (4.1%)	0
11. I need guidance so that I can easily recognize my shortcomings and flaws.	97 (80.3%)	22 (18.3%)	1 (0.8%)	0	0
Total	**75.6%**	**19.9%**	**3.0%**	**1.2%**	

Table 9 displays students' attitudes towards any educational tool (Rubric), as determined by 11 questions regarding the students' beliefs, level of awareness, and acceptance of the tool. The possibility that respondents (75.6%) would accept the rubric was assessed as extremely high, high (19.9%), or moderately high (3.0%). However, (1.2%) were low and (0%) were very low in terms of their readiness and motivation to implement the Rubric.

6. Discussion

The implementation of Rubrics in Bangladesh universities is still in its early phases, with the formulation of learning outcomes and alignment of learning outcomes to program and course outcomes at a lower level. The study also highlights the importance of understanding the philosophy of Rubrics to ensure the successful implementation of OBE.

6.1. Perceptions of teachers and learners at Bangladeshi universities towards rubrics

The study reveals that Bangladeshi teachers and students have positive attitudes towards the implementation of rubrics. The Bangladeshi teachers and learners have positive beliefs, feelings, readiness, and acceptance levels towards the implementation of the rubric to support OBE. However, almost half of the respondents still do not fully understand the instructional guideline Rubric philosophy, possibly due to not participating in any training workshops related to assessment policy and the OBE method.

The participants believe that Rubric is an effective and flexible approach for teaching and learning compared to traditional content-based approaches. They are willing to shift from traditional content-based teaching, learning, and assessment policies to this modern one. However, without organising enough training workshops, the practical implementation of rubrics and outcome-based education will not be as useful.

The participants in this quantitative results showed their knowledge and attitudes about rubric-related matters, indicating their willingness and readiness to implement it in their classrooms. However, they emphasise that the transition should take place gradually, focusing first on the mindset of students, teachers, and administrative staff to be mentally prepared for the change.

The successful implementation of OBE requires enough training workshops for faculty members to understand the philosophy and assessment procedures, as well as continuous monitoring through the proper use of Rubrics. Mogashoa (2013) also mentioned that a lack of enough training for teachers can lead to the process's failure. Therefore, despite the positive attitudes of the participants, it is still necessary for them to have been trained with enough knowledge and understanding in terms of both theoretical frameworks and practical implementation measures to ensure equal consideration and application of theory and practise.

6.2. The challenges of implementing Rubrics in the Bangladeshi context

The instructional tool Rubric faces several challenges in the Bangladesh context, including content-based rules and policies, traditional classroom procedures, and limited facilities. Teachers believe that the assessment policy is problematic if teachers are not fully trained to implement it in the classrooms. The content-based curriculum is designed based on traditional procedures, and teachers emphasize the development of statements, goals, and objects in the future.

Limited or no facilities in classrooms, such as medium-speed internet, electricity, projectors, and chairs, hinder teachers' readiness to plan and utilize OBE activities. Mogashoa (2013) emphasized the need for adequate resources to lead the model to its successful status.

Large classroom sizes, lack of infrastructure, and insufficient information structure are also significant obstacles to implementing the Rubric to get the OBE model most effective.

Additionally, many institutions have not developed course and learning outcomes based on POs, which are not included in course policies for aligning teaching and learning activities with assessment procedures. The adaptation from the traditional content-based system to the OBE system will impact the quality of education and help institutions produce capable graduates based on market and societal needs.

7. Contribution to the quality assurance in higher education

The typical strategy for ensuring quality in higher education is that an institution's course design processes are thoroughly examined using blended outcome-based education with rubrics, which take into account orientation, content, instructional design, use of technology, the student experience, and other areas pertinent to creating and delivering a blended learning course. Since it is expected that the core components of OBE and rubrics are similar, the creation of this tool will allow universities to guarantee that the caliber of the courses they make or utilise will be evaluated in a uniform and thorough manner. The rubric for higher education is focused on ascertaining quality

assurance at the course level. Institutional readiness for implementing this tool as an institutional quality assurance tool will help ensure quality education. The intended use of the rubric is to facilitate outcome-based education, and this tool should be utilised during all stages of course conceptualisation, design, implementation, monitoring, and revision.

The findings are pertinent to both students and teachers when looking at best practices when using rubrics. The study highlights that whether a rubric is effective at improving student performance depends on three crucial factors: user perception, rubric design, and intended use. Additionally, variables used to create rubrics should be optimised based on reliable data and an understanding of the desired educational context. Educators will be better able to maximise students' learning chances with this knowledge.

8. Conclusion

Rubric is an authentic assessment tool for Bangladeshi tertiary education, focusing on self-directed learning, learning objectives, and consistency. Rubrics should be promoted as reliable tools for transparent performance evaluation by institutions. Rubrics can save time and energy by assessing students, peers, and teaching assistants. As a learning and assessment standard, general rubrics for frequently utilised abilities might be produced and published on the state website. The findings of the research show how using rubrics can improve programmes and courses by encouraging students to pursue high-quality education, assessing students in ways other than traditional testing, and fostering outcome-based education. It simplifies outcome-based education, assists students in selecting successful learning strategies, and enhances assessment validity and reliability. Both practitioners and scholars can benefit from this study's comprehensive recognition of rubric design, its advantages, and its implementation in OBE.

9. Recommendations

Rubrics is clearly in its early stages in the Bangladeshi setting, but in order to get to its later implementation phases, there needs to be much more concentration and dedication at the governmental and corporate levels. The participants in this study offered the following recommendations to be taken into account in the Bangladeshi context throughout the policymaking process for OBE in order to ensure that the rubrics are implemented effectively:

1. Establishing a discipline-specific rubric bank should be done at the national level by a department or body that is in charge of sustaining and promoting standards for technical and higher education. Based on the outcomes of its use, the rubric has to be revised annually. There should be held national seminars for creating rubrics and exchanging knowledge. Resources ought to be developed nationally through standardised training and development initiatives. For institutions and universities that are geographically distributed, resource personnel should be accessible. Before developing and utilising rubrics in education, a guidelines manual should be written.

2. The use of rubrics should be used to achieve a variety of learning and assessment-related objectives, including metacognitive, reflective writing, research, issue analysis, interpersonal skill development, communication, presentation, safety, research, professional ethics, hygiene, and aesthetic abilities. The use of rubrics as trustworthy tools for transparently evaluating performance against established criteria should be encouraged by institutions when holding competitions, conferences, and seminars for students and teachers (Katawazai, 2021).

3. Rubrics can be used to assess students by themselves, their peers, and teaching assistants, saving specialists' time and energy. As a learning and assessment standard, general rubrics for frequently used abilities can be developed and publicised on the state website.

4. Programme, department, and institute level analysis of completed rubrics can enhance the curriculum, assessment standards, and support services. The use of rubrics, their analysis, and the production of reports for professors are tasks that can be assigned to teaching assistants. It is important to offer teachers and students enough time and resources to apply rubrics for a variety of objectives.

5. Implementing rubrics at elementary and secondary levels is crucial for students to progress to higher education. Cities with poor communication and technological abilities may expose college students to

OBE techniques they are not cognitively prepared for. Students should develop fundamental group work, communication skills, and fundamental technology knowledge before enrolling in tertiary school.

6. To reduce lecturer workloads, the Ministry of Higher Education should determine teaching obligations and responsibilities, specifying the number of classes each member should teach. Universities should implement Rubrics immediately and emphasise it, and the government should take initiatives for successful use of OBE in classes.

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