

Research Article

The standard measurement in online learning: a rubric as a focus on teaching-learning practices to move up quality education

Tasnia Farzana^{1*}

¹ Department of English, Cox's Bazar International University, Bangladesh
Correspondence: tasnif31@gmail.com

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Abstract: The main objective of this paper is to facilitate the 21st century's quality assurance for learning and distance learning to measure learning outcomes and enable students to achieve skills and knowledge in global transformative education. Technologies in education have provided a common platform for transforming education into online learning practices throughout the global COVID-19 affliction. Accordingly, the transformation of modern technologies in education has opened up many challenges and reliability issues in teaching and learning processes. The paper highlights the rethinking of rubric perceptions, uses, and design in learning, including online learning, in an interactive way to promote quality education. The research methodology involved a systematic review of the literature and data analysis synthesized using both qualitative and quantitative techniques. Rubrics, as an influential assessment instrument in learning, have been applied along with standardizing the quality of students in higher education for almost three decades globally. This study is significant in focusing on the rubric, the practical instrument, which is helpful for great accomplishments and challenging skills, and creativity in tertiary education. Well-designed and carefully designed rubrics and e-rubrics help students become more rational judges of the quality of their work by identifying the essential criteria and targeting the goals and learning outcomes of education. Rubrics enhance students' competency to communicate their ideas effectively, which correlates with the standard of sustainable quality education. Further examination of the rubric is needed to identify the challenges of reliability and authenticity in digital education.

Keywords: rubric, online education, quality education, transformative education, rubric design, online assessment

1. Introduction

This paper aims to improve quality assurance in distance learning for the twenty-first century by using rubrics for practical skills and creativity to evaluate student outcomes and empower them in global transformative education. The purpose of education in the twenty-first century is to provide students with the knowledge and confidence they need to use their skills in the real world. Due to the wealth of information at their disposal, 21st-century skills place a greater emphasis on comprehending, communicating, and successfully using the information (Education in the 21st Century, 2022). The COVID-19 pandemic has led to a rapid shift to digital learning in higher education worldwide which has interrupted training and education (5 Reasons Why, 2023). Online education has replaced traditional classroom instruction, requiring academic institutions to adapt to unforeseen disasters (Almahasees et al., 2021). The internet and new technology have significantly altered traditional education, with the epidemic expected to accelerate technical advancement and digital transformation by 2020 (Krishnamurthy, 2020). Before the COVID-19 pandemic, social meetings in educational institutions were seen as potential viral promotion opportunities. Traditional methods were replaced with online instruction, but e-learning remains the best option due to its spatial distance, despite potential challenges and student dissatisfaction. (Lizzano et al., 2020). This essay aims to highlight the value of using rubrics as an efficient tool for online learning in Bangladeshi higher education.

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1.1. The advantages of online and distance learning

The COVID-19 pandemic led to the replacement of traditional approaches with online learning, as social gatherings were believed to be opportunities for virus spread (Maatuk et al., 2022). According to Aboagy et al. (2020), it is a formal educational system that uses electronic resources and permits instruction to occur inside or outside of the classroom (Maatuk et al., 2022). Online distance learning offers students access to high-quality education anytime and anywhere, transforming the educational system and accelerating the digital transformation (García-Morales et al., 2021). Despite challenges, online learning remains the best alternative to prevent disease spread as it guarantees spatial distance. Online education programs are at the forefront of the stage, enabling continued learning and development of 21st-century skills in the young generation. (Allen & Seaman, 2013; Everhart et al., 2016; Morcke et al., 2013; NCES, 2016). Despite challenges, online learning remains the best alternative to prevent disease spread as it guarantees spatial distance.

1.2. Assessment in Distance and Online Education

Assessment is the source of value for every instructional system: what is evaluated in a course or program is typically linked to value, and what is valued becomes the activity's main focus (Swan et al., 2012). In the contemporary epidemic, various online teaching and assessment systems have emerged and are successful. The evaluation process is extremely important because it marks the end of the entire educational process (García-Morales et al., 2021).

Researchers and educators have researched assessment in online pedagogy with an emphasis on the outcomes' measurability for legitimacy and accreditation. New assessment techniques and unfamiliar materials are part of the change to online delivery (Bauer & Anderson, 2000; Hartley & Collins-Brown, 1999). Online tests may increase pedagogy and organizational efficiency, according to current theory. The goal and type of the assessment determine the website and course(s) that will be hosted as part of a student-centered, technology-mediated learning and teaching approach. Asynchronous, interactive learning is provided by online delivery, which has advantages for both students and academics (Hricko & Howell, 2006; O'Rourke 2010). Assessment is both formative and summative, hence assessment practices must be created in a way that takes this into account. Assessment is not simply a measurement of the student's "tank of acquired knowledge". The online environment is ideal for this type of assessment because it is relatively simple to give students access to a variety of self-assessments and because students can take formative assessments in their own time without elaborate security or the need for invigilation (Dennick et al., 2009). Formative assessment involves assessing students directly in the context of their learning to give them feedback on their progress. The differences between formative and summative assessment and conventional offline approaches present difficulties for scholarship and practice. Different terminologies, such as online learning, e-learning, virtual learning, networked learning, web-based and computer-mediated learning, and technology-assisted distance learning, have complicated the evolution of online learning (Barker 1999; Goodyear 2002; Graham et al., 1999; MacDonald 2002; Twigg 2001). The technological transformation of education requires significant changes in teaching methodology, fundamental competencies, and evaluation systems (Jensen, 2019). Universities in virtual environments must transition from lecture-based learning to problem-based learning, involving students actively (Marinoni et al., 2020). This shift will significantly impact the learning process, requiring a reevaluation of students' skills and competencies as well as methods for assessing learning outcomes (Jensen, 2019).

1.3. Challenges and reliability issues in distance, and online learning assessment

According to several theories in the literature, cheating, and plagiarism are intrinsically more likely when delivered online. The challenges of online learning include issues with user trustworthiness and the security of online learning programs, in addition to other challenges that are always connected to the misuse of technology and online examinations may solely feature objective questions (Gautam, 2020; Mukhtar et al., 2020).

There are other problems with the online tests, which might only contain objective questions, and further, they challenge the other testing methods and reliability issues in transformative and online education. It is more challenging to obtain valid assessment measures in an online, asynchronous course if the instructor and students do not interact face-to-face. Other creative ways of evaluating the success of student learning outcomes must be considered if exam proctoring is not a possibility (Arnold, 2012). Two of the most prevalent and contentious problems in literature are cheating and plagiarism. While plagiarism is defined as “the reproduction and presentation of others’ work, without acknowledgment, or the attempt to receive credit for the ideas or words of others”, “cheating refers to “all dishonest and unauthorized actions” on the part of students (Hricko & Howell, 2006, p. 25 & p. 27). Due to the lack of in-person interaction between students and teachers, assessing students’ motives for online learning can be difficult. Online tests have problems with user security, reliability, and technological abuse, which reduces their effectiveness and trustworthiness. These problems add to the possible dangers of online learning (Gautam, 2020; Mukhtar et al., 2020). Distance and online education demand significant control over learning, making it challenging for teachers and universities to assess outcomes. Examiners verify task authenticity and academic integrity using technologies, time constraints, anti-plagiarism systems, and creative tasks. University professors play a dual role as examiners and administrators, ensuring student work accuracy and academic integrity (Melnychenko & Zheliaskova, 2021).

Universities should promote participation, fact-based decision-making, and transparent evaluation of results to transition from outdated systems. According to Sim et al. (2001), the paradigm shift in education over the past ten years has incorporated both pedagogy (moving from instructive to constructivist) and technology (moving from classroom to online). There are some "must haves" for successful online evaluations, including but not limited to the following: Assessment tools should match the delivery method, which is becoming more learner-centered. Simply moving assessment tools from traditional modes to online doesn't guarantee that students will be able to demonstrate learning or that examiner will be able to confirm that they have accomplished course objectives, according to Drummond (2003).

2. Research Focus

2.1. *Assessment Tool Rubric is the highlight*

Rubrics are an essential teaching tool for all instructors, but they are crucial for online courses in particular. By creating rubrics that specify the various levels of student success, instructors may grade assignments more swiftly and simply. They can use these tools to better communicate expectations, increase involvement, and foster self-evaluation (The Benefits of Rubrics, 2016) Rubrics have been introduced into many, if not most, online courses as a result of the rise in online education. But the Quality Matters online guidelines (Pollacia & McCallister, 2009; Sener, 2006) and the best practice recommendations for enhancing student assessment (Grant & Thornton, 2007) both stipulate the use of rubrics. In addition to learning assessment, the paper highly recommends the use of rubric aspects that facilitate problems and reliability issues in online and transformative learning. Rubrics have been a crucial assessment tool in higher education for over three decades, standardizing student performance (Dirlam & Byrne, 1978; Popham, 1997).

This study focuses on rubrics, which help students develop skills, creativity, and success in tertiary education, to identify authenticity and dependability issues in digital education. By highlighting essential criteria and educational objectives, rubrics help students develop logical judgments and improve communication skills. The rubric’ emphasis on giving feedback while skills are being developed rather than giving a mark as a representation of knowledge acquired causes assessment procedures to change used a rubric to evaluate the student’s mastery of these higher-order cognitive skills. Students’ scores increased 3.5 times over their pre-rubric performance after the implementation of this rubric (Kelly-Riley et al., 2001).

2.2. *The benefits of using rubrics in online assessment*

According to Allen and Tanner (2006), Ragupathi and Lee (2020), a well-crafted rubric provides a clear framework for activities, expectations, and emphasizes specific elements. It is essential for teaching and learning, as it encourages self-evaluation, improves peer and self-review analysis, and enables faster assignment grading and identifying weak areas. Teachers can use rubrics for teaching opportunities and feedback.

1. A well-crafted rubric communicates educational objectives, making evaluation procedures flawless, impartial, and consistent (Wolf & Stevens, 2007). It helps students become logical judges of work quality and is helpful for teachers in assessment by providing fair grading, feedback, and challenging work (Andrade, 2005; Guskey, 2003).

2. According to Moskal (2000), rubrics eliminate subjectivity in impression marking, promoting rational, objective scoring, increased consistency, valid judgment of complex competencies, and learning promotion (Jonsson & Svingby, 2007).

3. Rubrics are essential for higher education institutions to transition from traditional evaluation processes to competency-based, authentic assessment (Chowdhury, 2019; Dochy et al., 2006; Suskie, 2018). They provide benefits in understanding learners' advantages and disadvantages, and align with specific learning goals and competency level (Guskey, 2003).

4. Rubrics provide specific criteria for individual student learning outcomes, aiding the OBE process and enhancing online learning (Gupta & Gupta, 2021). Contemporary digital rubrics enhance interaction, improve teaching-learning processes, and meet global standards for high-quality education (Menéndez-Varela & Gregori-Giralt, 2016; Moril et al., 2012).

5. By avoiding time-consuming activities, improving students' communication skills, and delivering fair evaluation through thorough exercises, rubrics enhance teaching and learning relationships (Jaidev, 2011; Nkhoma et al., 2020). They help to increase self-assessment learning and encourage a learner-centered approach by empowering students to evaluate and comment on their own and one another's work (Ragupathi & Lee, 2020).

6. Rubrics enhance students' self-efficacy by identifying essential cognitive skills needed for project completion. They promote learning regulation, enabling students to plan and analyze their work (Janssen et al., 2015). Rubrics help students understand expectations, grading, and instructors' expectations, making them crucial for those lacking experience in specific tasks or expressions (Bresciani et al., 2004).

Additionally, rubrics encourage reflection on expectations and instructional strategies among teachers and students. Students can learn self-discipline and gain understanding of their learning styles (Luft, 1999).

2.3 Types of Rubrics

Rubrics can be broken down into four major categories: analytic, holistic, general, and task-specific, for evaluating students' work. The major rubric categories are given below.

2.3.1. Analytic Rubric

Themes: To evaluate the various relevant requirements separately and thoroughly handle them, an analytical rubric is used. Each criterion in the analytical rubric is used to determine a score on the several illustrative scales (Brookhart, 2013). Analytical rubrics categorise a task's performance and provide comments on its strong and weak points (Tedick, 2002). As a result, learning plans are more directly tied to learning goals (Truemper, 2004). Research papers, longer projects, and assignments that require complex thinking and problem-solving benefit most from analytical rubrics because they individually list the many categories for each evaluation component.

Rating Scale of Analytic Rubric: The analytical rubric offers a thorough scoring system that accounts for performance or scores on each category separately.

Best of Use: Analytical rubrics use a multiplier to evaluate skills independently, promoting consistency and reliability in grading. They can be used by teachers to create summative assessments at the end of a unit or course (Suskie, 2018).

Advantages: Detailed feedback on students' performance: Analytical rubrics are the "gold standard" of rubrics, providing detailed feedback on students' strengths, weaknesses, and skills. They facilitate teaching and learning by providing useful feedback, similar to a diagnostic method. As it evaluates each skill and competency, the analytical rubric promotes self- and peer-learning as well as reaching a minimal level of competency (Gupta & Gupta, 2021).

Correlate learning objectives: Several task requirements can be ranked in an analytical rubric according to how crucial they are to accomplishing the learning objectives (Hannagin & Hannafin, 2010).

Fair grading and consistency: According to Nkhoma et al. (2020), analytical rubrics increase the reliability and consistency of the grading of particular criteria for each performance level.

Analytical rubrics encourage self-evaluations and a student-centered perspective, which support the quality assessment of educational programmes (Crumly & Dietz, 2014; Grudnitski, 1997; Wright, 2011).

Limitations: Analytic rubrics can lead to biased grading due to overuse of criteria, which may not be uniformly applied by all raters. This can concentrate on lower-level abilities, avoiding higher understanding and knowledge measurement (Jae & Cowling, 2009; Kahneman, 2003; Rosenzweig, 2014). Additionally, creating thorough scores and skill-based rubrics can be time-consuming.

2.3.2. Holistic Rubric

Themes: According to a single descriptive scale, a holistic rubric assesses all of the requirements for a task (Brookhart, 2013). The instructor does not rate a task using the holistic rubric in sections; rather, all of the criteria are evaluated collectively (Nikto, 2001). Holistic rubrics, for instance, can be helpful for a work with linked requirements or a single learning objective. For instance, artistic creations, literary works, engineering designs, projects, oral presentations, broad posts, portfolios, and so forth. The emphasis is on overall quality, proficiency, or knowledge of certain subject or abilities (Mertler, 2001), and it will be effective for big group scoring (Young, 2013).

Rating Scale of Holistic Rubric: A comprehensive holistic rubric tracks the many degrees of overall skill on a single, comprehensive evaluation system that includes mechanics, organisation, and clarity.

Best of Use: Holistic rubrics are suitable for minor evaluations and identifying errors in excellent tasks (Brookhart, 2013). They are suitable for ambiguous or unclear responses when pupils are asked to respond (Chase, 1999). Holistic rubrics are suitable for tasks with excellent overall quality (Nikto, 2001). Holistic rubrics are useful for quick and broad evaluation of performance criteria in written assignments (Nkhoma, Nkhoma, Thomas, & Le, 2020). They help assess clarity, structure, content, and presentation, making it easier to assess students' aptitude for specific tasks (Nkhoma et al., 2020). Holistic rubrics correlate and evaluate the process effectively, as distinct or individual criteria may not accurately indicate coherence or lack cohesion in task assessments (Brookhart, 2013).

Advantages: Holistic rubrics increase reliability and validity by requiring fewer judgment calls and consistent application by various raters (Nkhoma et al., 2020). They enable honest evaluations by measuring performance's effect (Brookhart, 2013). Holistic rubrics speed up scoring by reducing decision-making and encouraging interconnectedness, promoting goal integration through various aspects, as suggested by Nitko and Brookhart (2007).

Limitations: Holistic rubric lacks specific feedback for development areas and overlaps standards, causing overweighting of criteria in holistic scoring (Chase, 1999). Assessment of holistic characteristics concurrently requires weighing various components equally, as the rubric assesses all characteristics simultaneously (Nkhoma et al., 2020; Gulikers et al. 2004).

2.3.3. General Rubric

Themes: General rubrics are statements of criteria that are common to many activities and can be used to a variety of assignments with related learning objectives. General rubrics evaluate several criteria independently, just like analytical rubrics do. The generic rubrics can be beneficial for oral communication skills, teamwork, self-evaluation, peer review, and teamwork in a variety of academic courses.

Rating Scale of General Rubric: Similar to how analytical rubrics examine multiple criteria independently, general rubrics do the same.

Best of Use: For students with fundamental skills and teachers who are having trouble creating new rubrics, general rubrics are advised (Brookhart, 2013). At the start of the assignment, they support self-regulatory processes and help students communicate their behaviours, improving their approach and overall learning experience (Jonsson & Svingby, 2007).

Advantages: General rubrics enhance consistency in assessment, encourage focus on learning outcomes, and develop competence in learning objectives for multiple tasks. They provide students with knowledge and abilities, inspire newcomers, and help them handle challenging situations. These methods contribute to successful learning outcomes and overall success (Bawden & Robinson, 2009; Moreno, 2004). Mastery of general skills involves using a rubric to measure essential criteria, allowing students to develop skills like writing and problem-solving, enabling teachers to monitor progress and save time (Popham 1997; Oakleaf 2007).

Limitations: Essentially, less uncomfortable for a growth mindset: General rubrics' inclination to be useless for exceptional accomplishments, challenging abilities, and creativity.

2.3.4. Task-specific Rubric

Themes: According to Brookhart (2013), “specific characteristics of the evoked performance” are examined individually when using a task-specific rubric to evaluate a single task (Gupta & Gupta, 2021). To accurately fill out the relevant parts of task-specific rubrics, students must successfully go from an elementary to a more specialised level of knowledge. Task-specific rubrics are advantageous for assessments that provide precise performance standards for a particular work, such as a final exam, a project, or a research proposal.

Rating Scale of Task-specific Rubric: A single task is evaluated using a task-specific rubric, and various generated performance components are assessed separately.

Best of Use: When evaluating the aptitude of particular facts, equations, techniques, or procedures, knowledge and consistency of scoring are essential. In a broad context, such as state-level accountability evaluations at the municipal, state, or federal level, task-specific testing is beneficial in high-stakes exams with major consequences for test takers (Arter & McTighe, 2001; Nkhoma et al., 2000).

Advantages: An advanced task-specific rubric is recommended for quality assurance, reliability, and consistency in assessment (Taggart et al., 2001). According to Arter and McTighe (2001) it can transform subjective evaluation processes into clear, consistent, and valid strategies. Task-specific rubrics also promote authentic assessment and visualization of learning targets, ensuring that students are able to achieve educational goals. Task-specific rubrics help students score higher and achieve further achievements, making them cost-effective for large-scale assessment with a large number of students (Howell, 2011; Howell, 2014).

Limitations: A task-specific rubric is time-consuming and requires investment in effort. It also limits students’ skills by limiting specific criteria and assessing open-ended tasks, making it challenging for assessors to meet them (Bawden & Robinson, 2009; Gulikers et al. 2004).

2.4. Essential Components of a Rubric

Rubrics are increasingly popular in educational settings as they support learning complex skills in 21st-century settings (Lowe et al., 2015). Three aspects of creating a rubric are highlighted in Popham’s article performance descriptors, criteria, and targeted learning goals (Popham, 1997). The matrix shape of the design, meanwhile, might not be the most crucial aspect to comprehend. Instead of only using rubrics as an assessment tool, focusing on these elements may improve learning and motivational outcomes for students (Brookhart & Chen, 2015). The rules for developing grading standards and rubric quality scales based on sources of literature and personal experience are examined in this article.

Performance criteria in row headings: The text describes performance criteria in row headings, describing assignments and standards, abilities, information, and conduct.

Rating scale in column headings: In column headers with a rating scale, it lists proficiency levels and grades for each type of assignment.

Performance level descriptors within each cell of the table: Criteria descriptions are written in consistent language, and the order of best to worst categories is indicated using observable and measurable behavior.

2.5. Guidelines for Building a Solid and Trustworthy Rubric

Despite the different types of rubrics, there are certain common procedures in the exercises for constructing each form of rubric. A strong and trustworthy rubric includes the following guidelines:

1. Establishing learning task objectives is the initial step in rubric development, ensuring learners meet expectations through easy interaction between teachers and instructional styles (Arter & McTighe, 2001; Stiggins, 2001; Wiggins & McTighe, 2005).
2. Select appropriate rubric type for assignment activity, starting with a standard collection of commonly used rubric types (Stiggins, 2001).
3. Interactively designing rubrics with target students enhances understanding of grading techniques by involving students in discussing performance strengths and weaknesses, and developing criteria for effective grading (Andrade, 2001; Huba & Freed, 2000).
4. Adopt and adapt stages are useful for developing rubrics, allowing for use without adjustments, and modifying performance-level descriptors to match teachers’ expectations (Crusan, 2010).
5. Test and improve rubric by applying it to student work for peer and individual evaluation, enabling teachers to assess students’ understanding and teaching methods.
6. Collaboratively sharing the rubric with teachers will help ensure that the rubric is valid and that teachers receive feedback on student performance that is tied to the rubric.

7. A good rubric uses detailed, descriptive language that aids students in improving their work and comprehending requirements. In order for students to effectively communicate their ideas, the rubric structure must be straightforward and constant throughout the entire process (Rubric Best Practises, Examples, and Templates).

8. To properly assess if the criteria have been effective, it is necessary to continuously track how well “the scale was functioning and in which parts” (Janssen et al., 2015; Wiggins & McTighe, 2005).

3. Materials and Methods

This study used both quantitative and qualitative (interview) research approaches to collect and analyse numerical data. To provide technical support and to save time and effort, the researchers employed statistical processing to examine data for educational research. The purpose of the study was to evaluate teachers' and students' perceptions on the use of rubrics to enhance university level online teaching strategies in Bangladesh. According to the study's findings, 15 faculty members and 33 graduate students from a private institution in Bangladesh who were enrolled in the fourth-year honours program's eighth semester participated in the quantitative analysis. Only three teachers utilise rubrics in their online classrooms and are proficient with their fundamental ideas, according to the paper interview part.

4. Findings and Results

4.1. Quantitative Results

33 graduate students in the fourth year honours program's eighth semester who participated in the study claimed they were aware of the various marking standards applied in their classes, according to the study's findings. Given that analytical and task-specific rubrics were made available to them from the first day of class. The researcher frequently reminded students of the available rubrics before an assignment was submitted and then again along with feedback on a graded assignment, it is not surprising that students reported being aware of the course rubrics. It is significant to notice that students didn't answer this question until the conclusion of the semester, despite the researcher's constant reminders about the course rubrics. The comprehension of the course rubrics could be the subject of future research.

The instructional rubric for the initial peer assessments was then given to the students, and the researcher had an online session to clearly outline the criteria of the rubric. By using the rubric to grade the initial peer assessments, the researcher was able to teach the students how to review and remark using rubrics. The online session was recorded and posted as a resource for the students' future use. The researcher made it very obvious what the peer assessments were for, how they related to the semester exams, and what the learning goals were for the course.

Features of the rubric are complemented with feedback on written and assignment activities from 33 students. online learning assessments. Six segments about the respondents' personal experiences and knowledge about the use of rubrics in online education were included in the survey.

4.1.1. Rubrics help organize tasks, free attention, and clarify instructor expectations for crucial facts

Using rubrics to manage assignments, free up time for other activities, and make clear what the instructors want in terms of major points was agreed upon by 91% of respondents, according to the research findings. However, 9% of respondents in the segments disagreed with the segment's item (Figure 1).

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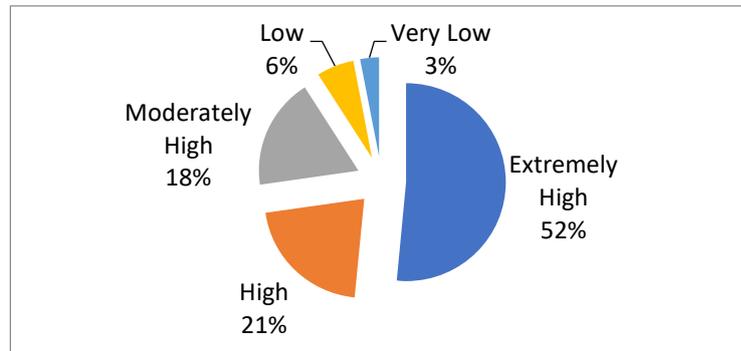


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Organiza-
tasks, free
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4.1.2. *The use of a rubric simplifies assignment structure, addresses odd terminology, and saves time on unimportant details*

According to the research, 94% of participants believed that using rubrics makes assignment structure simpler, deals with unusual vocabulary, and saves time on irrelevant issues. However, 6% of respondents in the segments disagreed with the segment’s item (Figure 2).

The
rubric simplifies assignment structure, addresses odd terminology, and saves
time on unimportant details

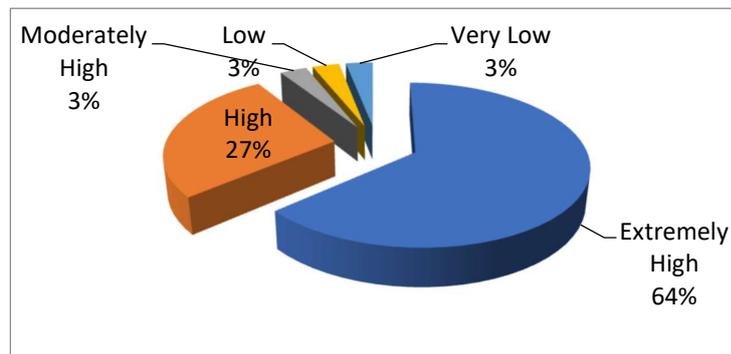
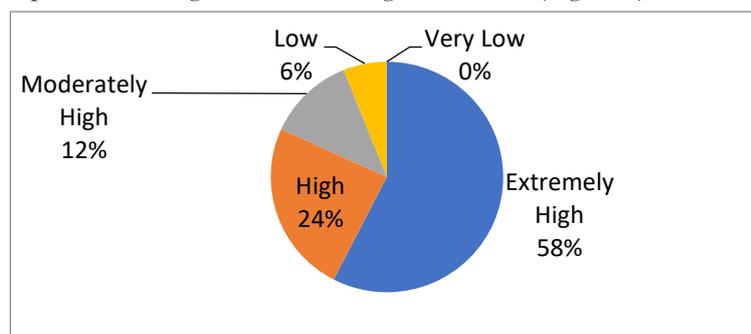


Figure 2.
use of a

4.1.3. *Rubrics help identify shortcomings and flaws in assignments, enabling self-reflection and re-analysis*

According to the research, 94% of participants believed that using rubrics helps students detect problems and errors in their work, allowing for self-reflection and re-analysis. However, 6% of respondents disagreed with the segment’s item (Figure 3).

Fig-
ure 3. Identification of shortcomings and flaws in assignments, enabling self-
reflection and re-analysis



4.1.4. Utilizing a rubric, specific comments, and an accurate assessment with scoring standards, the work was carefully improved

Here, the research’s findings indicate that 91% of respondents agreed that the work was thoroughly revised using a rubric, precise remarks, and an accurate assessment with scoring standards. Nevertheless, 9% of respondents in the segments disagreed with the segment’s item (Figure 4).

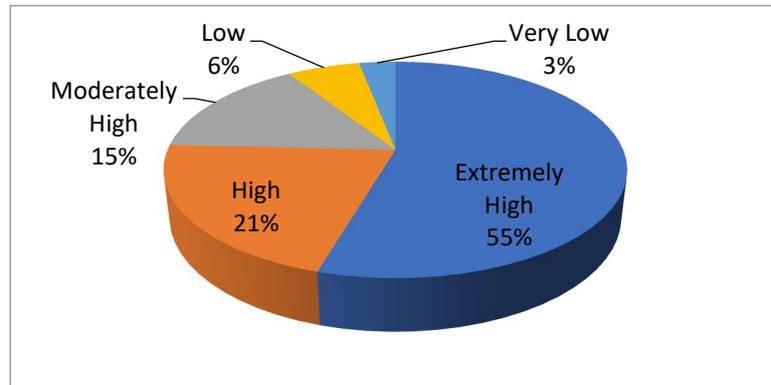


Figure 4. Utilizing a rubric, specific comments, and an accurate assessment with scoring standards

4.1. 5. Rubrics enhance performance, productivity, and bridge the gap between academic work and employer expectations

The study’s findings indicate that all respondents (100%) agreed that rubrics help students perform better, are more productive, and help students meet the demands of employers. However, in segments, 0% respondents disagreed with item. (Figure 5).

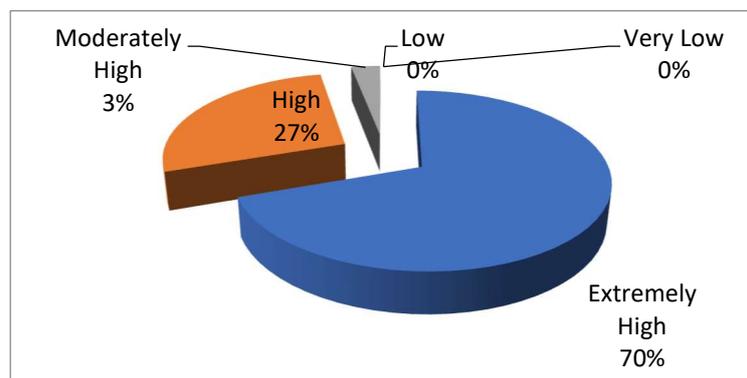
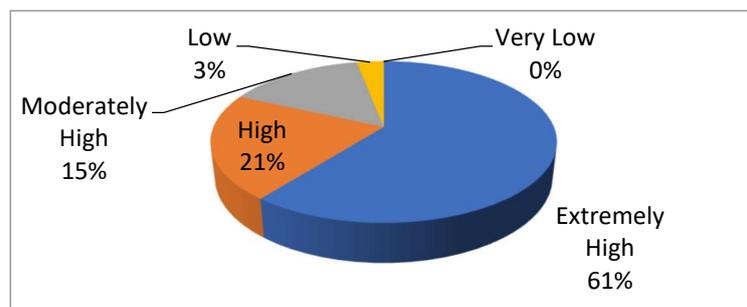


Figure 5. Rubrics enhance performance, productivity, and bridge the gap between academic work and employer expectations

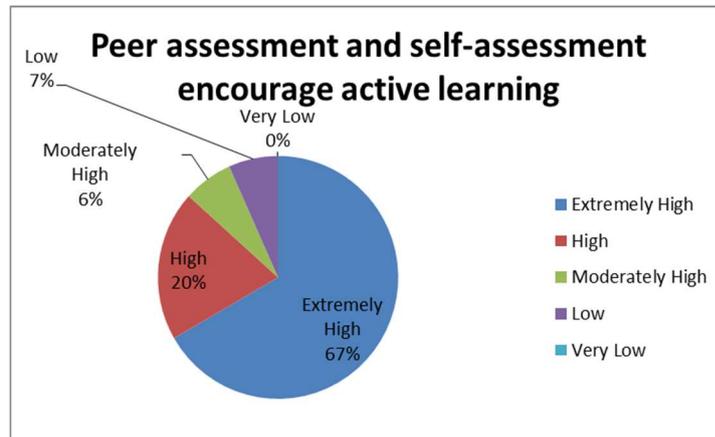
4.1.6. Rubric reduces prejudice in grading, enhances critical thinking skills through self-assessment and peer review

97% of respondents according to research, that rubric lessens prejudice in and improves thinking through self-peer-review. However, 3% of respondents disagreed with the segment’s item (Figure 6).



agreed, the using a grading critical abilities and

Figure 6. rubric to prejudice enhances thinking through and peer 4.1.8. questions personal and the usage of



Use of reduce in grading, critical skills self-assessment review Seven about their experiences knowledge of rubrics in

online education were included in the survey for 15 teachers

4.1.8.1. Peer assessment and self-assessment encourage active learning

According to the study, 93% of participants agreed that using rubrics to facilitate peer and self assessment tools promotes active learning. However, 7% of the segment respondents disagreed with the segment’s item (Figure 7).

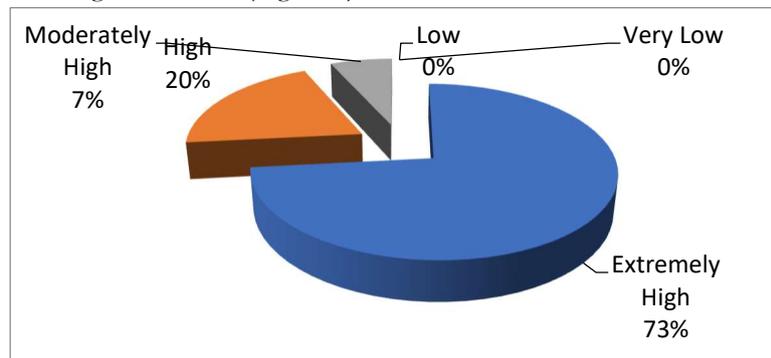


Figure 7. Peer assessment and self-assessment encourage active learning

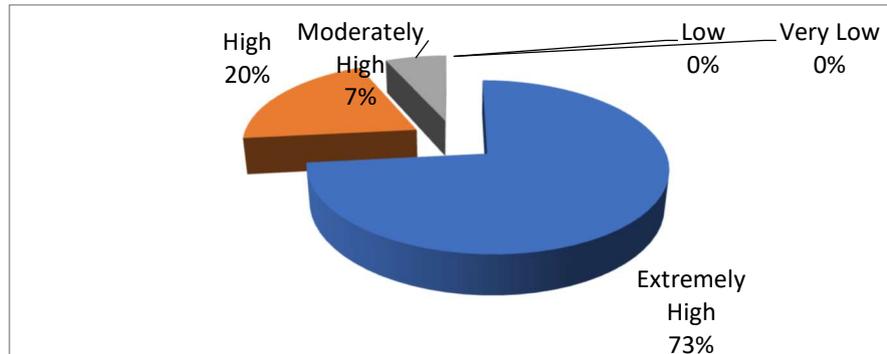
4.1.8.2. Innovative teaching with technology and rubrics encourages learner engagement

According to the research’s findings, all respondents (100%) agreed that employing rubrics promotes learner engagement and supports innovative teaching with technology. Despite this, 0% of respondents in the Segments disagreed with the statement. (Figure 8).

Figure 8. Innovative teaching with technology and rubrics encourages learner engagement

4.1.8.3. Course evaluation and feedback by rubrics communicate high expectations

93% of respondents agreed, as evidenced by the research’s findings, that employing rubrics for course evaluation and feedback communicates high expectations. However, 7% of re-

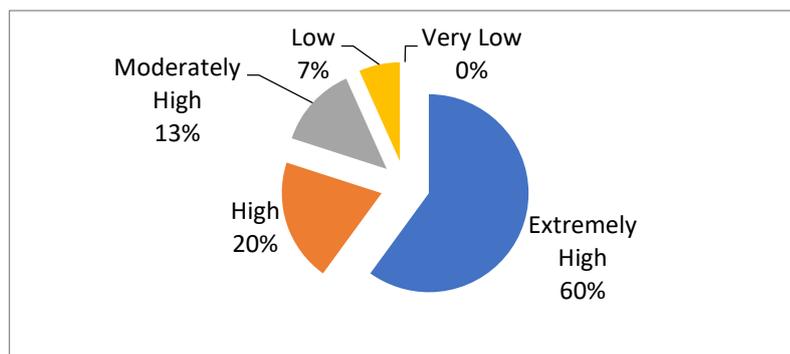


spondents disagreed with the segment’s item (Figure 9).

Figure 9. Course evaluation and feedback by rubrics communicate high expectations

4.1.8.4. Assessments become fair and unbiased

According to the research, all respondents (100%) agreed that utilising a rubric makes assessments more impartial and fair. However, in the segments, 0% of respondents disagreed with the item (Figure 10).



Rubric
diverse talents and ways of learning

Figure 10. Assessment become fair and unbiased
4.1.8.5. supports respectfully

According to the research findings, all respondents (100%) agreed that using rubrics fosters respect for the various learning styles and talents of students. However, in the segments, 0% of respondents disagreed (Figure 11).

Figure 11. Rubric Support of rubric for diverse talents and ways of learning

4.1.8.6. Rubric use increases the risk of malpractice and increases the amount of self-spirit

Here, the research findings shows 87% respondents agreed that using rubric increases the risk of malpractice and increases the amount of self-spirit. Nevertheless, 13% respondents disagreed with the item in the segments (Figure 12).

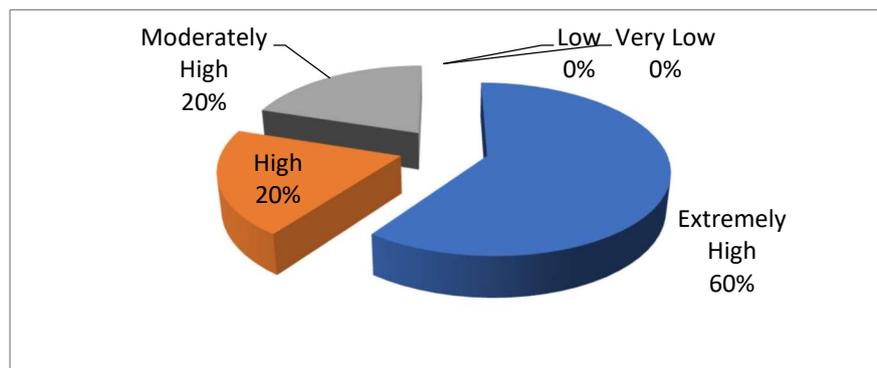
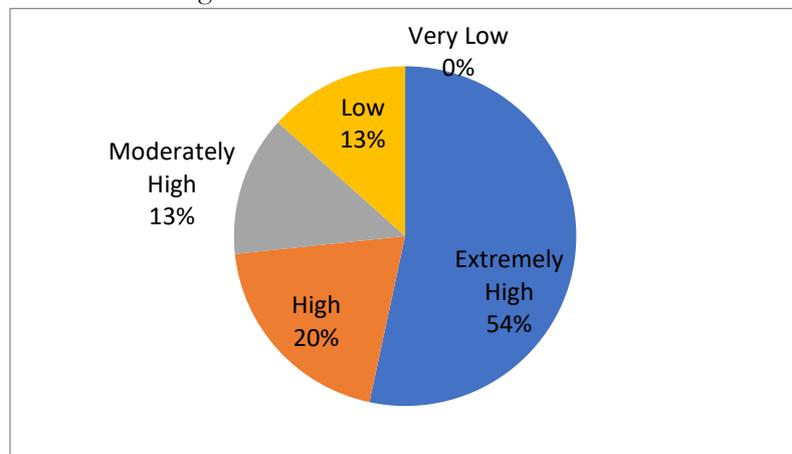


Figure 12. Use of rubric increases the risk of malpractice and self-spirit

4.1.8.7. Course design and distribution model between teachers and learners encourage contact between students and teachers

In this case, the research’s findings indicate that 93% of respondents agreed that using rubrics to help with course design and the distribution model between teachers and students encourages interaction between

ertheless, of respondents segments disagreed the segment’s item (Figure 13).



them. Nev- 7% in the with

Figure 13. Course design and distribution and learners

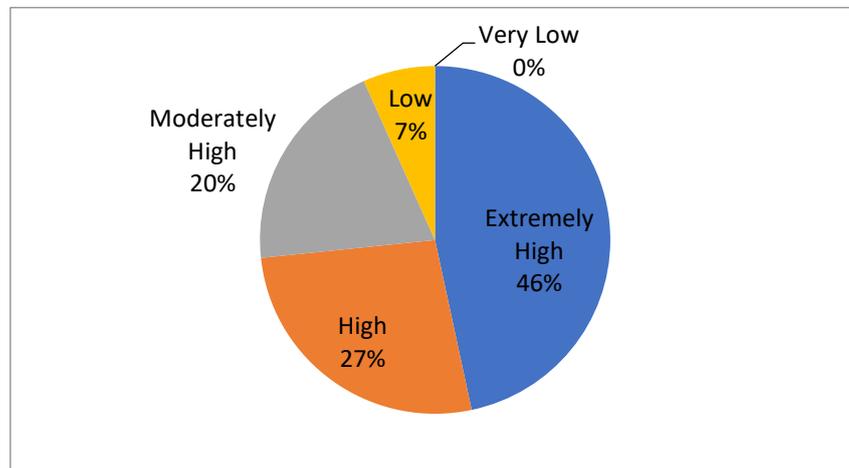


Figure 13. Course design and distribution and learners

4.2. Qualitative Results

The qualitative part revealed during the paper interview, only three teachers who utilise rubrics in their online classes and are familiar with their fundamental concepts showed interest in this section of the interview (Table 1).

Table 1. Interview responses of the participants

Themes	Participant 1	Participant 2	Participant 3
1. How did you become interested in assessment tools rubrics for online instruction?	“The use of rubrics can mediate improved performance in several ways, including lowering anxiety, assisting with the feedback process, enhancing student self-efficacy, and promoting student self-regulation.”	“The aspect of the rubrics has significance that could lead to better interactions between teachers and students. Rubric disrupt disempowering power relations between students and lecturers as they enable students to participate more actively in the assessment process.”	“Students using rubrics for self-assessment and showed that this not only helps in their understanding of how they learn but also improves their understanding of the relationship between assessment and learning, highlighting the significance of involving the learner more intentionally in assessment practices.”
2. What are your opinions of using rubrics to make online learning more effective?	“The effective usage of rubrics for online education won’t be as effective without holding adequate training workshops. The proper usage of rubrics must be continuously monitored, and there must be adequate training workshops for faculty members to comprehend the philosophy and assessment processes.”	“The teaching resource The Bangladeshi setting presents Rubric with a number of difficulties, such as content-based laws and regulations, conventional teaching methods, and insufficient facilities. If instructors are not adequately taught to implement the assessment policy in the classroom, they find it to be troublesome. The content-based curriculum is created using conventional methods, and	“Adequate training workshops are crucial for effective use of rubrics in online education. Monitoring and training are essential for faculty members to understand philosophy and assessment processes. Challenges include large class sizes, infrastructure, and inadequate information structure.”

teachers place a strong emphasis on the future development of statements, goals, and objects.”

The results and summary of Table 1, Question 1, from three teachers illustrate that Rubrics can improve performance by lowering anxiety, assisting feedback, enhancing self-efficacy, and promoting self-regulation. They also disrupt power relations between students and lecturers, enabling active participation in the assessment process. Students using rubrics for self-assessment improve their understanding of learning and the relationship between assessment and learning, emphasizing the importance of intentionally involving learners in assessment practices.

The answers to and description of Table 1, Question 2, from three teachers show that sufficient training sessions are necessary for the use of rubrics in online education to be successful. These trainings aid faculty members in their understanding of philosophy and evaluation procedures. Large class sizes, poor infrastructure, and an information structure are problems. The environment in Bangladesh provides difficulties such content-based rules, traditional educational techniques, and inadequate facilities. For assessment policies to be effectively implemented, instructors must get adequate training.

5. Discussion

The key finding demonstrated that, in accordance with the students' extremely favourable feedback, rubric-based instructions was an effective evaluation technique, and students' performance improved as a result. According to teachers' perspectives, the main finding indicated that rubric-based education was a successful assessment method, and students' performance improved after its adoption.

As a result, employing rubric-based instruction to teach the online course was effective in improving evaluation and performance because the research findings showed that students' scores increased as soon as the scoring rules were put into place.

The findings were in line with those of Wolf & Stevens (2007), Andrade (2005), Guskey (2003), Jonsson and Svingby (2007), Gupta and Gupta (2021), who reported that rubrics promote learning regulation by enabling students to plan and analyse their work and are helpful for teachers in assessment by providing fair grading, feedback, and challenging work.

According to research conducted by both students and teachers, rubrics are crucial tools for arranging tasks, highlighting crucial information, and dealing with specific language. They help identify flaws, revise work, and offer constructive criticism. Rubrics improve performance, bridge the gap between academic work and employers' expectations, and reduce bias in grading. They also lower anxiety, provide feedback, enhance self-efficacy, and promote self-regulation. Rubrics also disrupt power relations between students and lecturers, enabling active participation in the assessment process. Students using rubrics for self-assessment improve their understanding of learning and the relationship between assessment and learning, emphasizing the importance of intentionally involving learners in assessment practices.

In reality, a lack of opportunities to use rubrics was one of the obstacles that Bangladeshi students were facing, and one of the reasons Bangladeshi higher learning students did not want to learn was that the teaching methodology and assessment procedure in both online and classroom settings were not interesting. Three teachers emphasize the need for adequate training sessions for effective rubric use in online education. Faculty members benefit from better understanding of philosophy and evaluation practices. Bangladesh faces challenges like content-based education, conventional teaching methods, and subpar facilities.

As a result, the current study can offer a deeper comprehension of the rubric as a potent instruction and systematic guidance for using it to qualify online learning in a way that supports improving online learning performance in higher education in Bangladesh. The future of Bangladeshi undergraduate students' online learning might be brighter and better satisfy the demands for quality education in the workplace with the use of a well-designed and scientific rubric.

6. Conclusion and Recommendations

For Bangladeshi tertiary education, rubrics are an authentic evaluation instrument that places a strong emphasis on self-directed learning, learning objectives, and consistency. By evaluating students, peers, and teaching assistants, they can save time and effort. By promoting high-quality education, streamlining online education, and boosting assessment validity and reliability, rubrics can enhance programmes and courses. A discipline-specific rubric bank should be developed at the national level, and annual adjustments should be made based on the outcomes to guarantee effective implementation. National resources should be generated by standardised training and development programmes, and there should be national seminars for developing rubrics and exchanging information. Before creating and utilising rubrics in education, a guidelines manual should be developed.

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