A Comparative Analysis of Traditional and Online Assessments: Perceptions and Performance of Undergraduate Students

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ARTICLE INFO	ABSTRACT
	This study aims to conduct a comparative analysis of traditional and online assessments and examine the perceptions and performance of undergraduate students towards these assessment methods. The study holds significance because it provides valuable insights into the effectiveness and appropriateness of these assessments, considering the recent surge in online education and assessments of undergraduates. An online survey questionnaire divided into three sections was used as a research tool used for data collection, addressing the advantages/disadvantages, perceptions, and performance of students. The sample population consisted of 120 students from three universities: GC Women University Sialkot, Punjab University, and Government Murray College. The findings reveal the traditional assessment methods are better than online which make positive impact on the performance of undergraduate students. This study contributes to the existing literature and provides recommendations to improve assessment practices in universities to ensure valid measurement of knowledge and abilities. Overall, the research provides significant knowledge into students' experiences and directs institutions towards improving evaluation procedures to meet the needs of learners.

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1.   Introduction

Assessment is a vital component of the teaching and learning process as it provides feedback to students and instructors about their progress and achievement of learning outcomes (Gulbahar & Guven, 2008). In-person, paper-based tests, exams, and assignments are the form of traditional assessment methods. However, with the prevalent use of technology in education online assessments have emerged as a viable alternative to traditional assessments. Online assessments can take different forms, including quizzes, exams, essays, and assignments, and are often delivered through a learning management system (LMS) or other online platforms.

The increasing use of online instruction and assessment in higher education institutions, which is being fostered by technical improvements and the COVID-19 pandemic, necessitates a critical analysis of its effectiveness and suitability in comparison to more conventional methods. Online tests provide flexibility and improved accessibility, but it is still important to determine how they affect student learning outcomes and how well they support educational goals. Additionally, for shaping pedagogical practices and policy creation, it is critical to gather knowledge of undergraduate students' perspectives of traditional and online assessments.

Despite the increasing importance of online assessment, there is still a study gap when it comes to comparing these approaches, particularly in the undergraduate setting, and the effects on student perceptions and performance. The main objective of this study is to bridge this gap by rigorously analyzing both traditional and online assessments, identifying their benefits and drawbacks, and determining how they affect the academic performance of undergraduate students in the 2019–2023 cohort. By offering evidence-based insights on the applicability and

efficacy of various assessment methods in higher education, the study's findings will add to the body of existing knowledge. In the end, this research attempts to assist educational institutions and policymakers in improving their evaluation procedures to guarantee relevant and reliable results.

This study is significant and valuable for several reasons. Firstly, it provides on the efficacy and appropriateness of traditional and online assessments in the context of Pakistani universities. Given the recent spike in online education and assessments, it is critical to gauge their suitability for the challenges and opportunities present in the Pakistani educational system. Second, this study adds to the existing knowledge on comparative analysis of assessment methodologies and students' views and performance, particularly in the Pakistani setting. While previous studies have explored these topics in other contexts, making this study a significant addition to the current literature. Finally, the findings of this study have ramifications for Pakistani universities and policymakers. This study can help to build assessment policies and practices that are appropriate and effective in the Pakistani context by highlighting the problems and opportunities connected with traditional and online assessments.

The Transactional Distance Theory (TDT) was used as a theoretical framework to compare the two types of assessments: traditional and online. TDT investigates how instructional design and manner of instruction affect the psychological and communicative gap between students and teachers. The study investigates how transactional distance affects students' perceptions and performance in conventional and online evaluations by using TDT. This framework offers a comprehension of the benefits, drawbacks, and difficulties linked to each assessment technique, and finally guides recommendations for enhancing assessment procedures at Pakistani colleges. The study seeks to provide a thorough analysis of traditional and online evaluations and their effects on undergraduate students' perceptions and performance in terms of model specifications. Select variables and measuring techniques are used in the model to capture factors such as student involvement, feedback, objectivity, flexibility, and the usage of multimedia in assessments. The model requirements also address issues with technical hurdles, internet connectivity, security, and cultural considerations in light of the unique environment of Pakistani universities and the difficulties they encounter in adopting online examinations. The study seeks to incorporate these factors to offer recommendations for improving assessment procedures in Pakistani higher education institutions as well as important insights into assessment practices. The purpose of this study is to address the following research questions:

- How do traditional and online assessments compare regarding their advantages and disadvantages?
- What are the perceptions of Pakistani university students towards traditional and online assessment?
- What impact do traditional and online examinations have on student performance?

The study is organized systematically to comprehensively analyze the topic. It begins with an introduction providing background information, Problem of the statement, objectives, significance followed by research questions. The methodology section outlines the research approach and data collection methods, while the results and discussion section presents the findings. Finally, the study concludes with a summary of the key findings and potential recommendations. This organization ensures a logical flow of information and a comprehensive exploration of the perceptions and performance of undergraduate students in traditional and online assessments.

2.   Literature Review

Assessment is critical in evaluating students' academic progress and shaping instructional decisions. Traditional examinations have long served as the primary mode of assessment in higher education, but as technology evolves, online assessments are becoming more common. Taking insights from the above given theory, literature is reviewed. Farooq, Rathore, and Mansoor (2020) conducted a theoretical research concerning about the challenges, COVID-19 pandemic has posed in countries like Pakistan, which lack the infrastructure for online learning. The results highlighted various face obstacles such as inadequate training, internet connectivity issues, student engagement, online assessments, and understanding the dynamics of online education. Overcoming these challenges requires collaboration, institutional support, leveraging

free online resources, and innovative solutions. On the other hand, Guangul, Suhail, Khalit, and Khidhir (2020) focused on the engagement and performance results accompanying traditional and online assessments. In light of their research, online tests offered chances for interactive learning, engagement, and quick feedback, all of which had a beneficial effect on students' performance. The study emphasized the value of interactive online assessment tools for improving the educational experiences of students.

Daniel (2020) explored the perceptions of undergraduate students towards online assessments in the context of Pakistani universities. Their findings revealed that students viewed online exams were convenient and effective because they did not need the physical presence and offered scheduling and geographical freedom. But there were also issues with cheating and technical difficulties. Mumtaz, Saqulain, and Mumtaz (2021) conducted a study to highlight the impact and challenges raised by the transition from conventional to online academics and how to handle them from the perspective of developing nations like Pakistan. The outcomes indicate that lockout and the switch from traditional face-to-face instruction to online instruction had an impact on both the physical and mental well-being of the students. This made psychological stress, worry, and depression more common among university students. Pokhrel and Chhetri (2021) examined the advantages and disadvantages of online education from the viewpoint of the students. The analysis's findings indicate that distraction and loss of attention, psychological problems, and management challenges are the main causes of students' discontent with online learning. Whereas, addressing the impact of online assessment on undergraduate student well-being, Singh et al. (2022) used a mixed-methods approach to study how online learning and evaluation affect undergraduate students' well-being, employing a quantitative survey and 10 focus groups. The results show that although some students claim that online learning and evaluation involve more work than traditional methods, other students embrace the more flexibility that online learning and assessment provide. Slack and Priestley (2022) asserted that the students were more confident and comfortable in online learning and assessments as compared to traditional classroom settings. Similarly, Paul asserted that traditional assessment is inflexible, rigid, and impractical while online assessments are more effective with various interesting ways.

In the light of the above mentioned researches, gap is visible in the undertaken study, as related to the perceptions and performance of undergraduate students. While previous studies have examined the advantages and disadvantages of these assessment methods, there is a lack of consensus on their overall effectiveness and appropriateness. The perceptions of students towards traditional and online assessments have been explored to some extent, but there is a need for more in-depth investigation in the Pakistani context, taking into account factors such as cultural beliefs and access to technology. A lack of comprehensive investigations aimed at whether these methods accurately measure knowledge and skills and are by the intended learning results is present in the Pakistani context, although certain research has evaluated the impact of these assessments on student performance. Identifying potential performance-influencing elements, such as cheating tendencies or technology constraints, is essential for creating solutions to these problems.

This study focuses on the views and performance of undergraduate students in Pakistan and conducts a careful comparison examination of traditional and online exams to overcome these conceptual gaps. This study aims to offer a thorough understanding of the effectiveness and suitability of these assessment methods by using a quantitative data collection strategy. This research will add to the body of knowledge by examining students' perspectives and experiences and their impact on their academic achievement. It will also offer insightful advice for improving assessment practices in undergraduate education. The findings of the present research will not only add to the corpus of knowledge on the subject but will also have applications for Pakistani educational institutions, enabling them to create more efficient and meaningful assessments that meet the needs and expectations of their students.

3.   Research Methodology

This research used a descriptive quantitative method. A survey questionnaire, consisting of three sections, was utilized for data collection. For the sample study, 120 English department students from session 2019 to 2023 were selected from three different Universities: Government College Women University, Punjab University, and Government Murray College. A sample of forty GCWUS students completed the paper questionnaire, while the remaining 80 participants, 40

from each were recruited via an online survey. The researchers were able to collect data from a more diverse set of participants by using both paper-based and online survey methodologies, increasing the validity and generalizability of the findings. This study investigates the variables related to the comparative analysis of traditional and online assessments among undergraduate students. The assessment method is the independent variable, and the academic performance and student perceptions of these methods are the dependent variables. The study will consider these variables to understand assessment practices in undergraduate education and inform educational initiatives in Pakistan. The items in the study were designed to analyze the advantages/disadvantages of traditional and online assessments and to investigate Pakistani university students' perceptions and performance in both types of assessments.

4.   Results and Discussion

The questionnaire responses were divided into three categories, with the first section concentrating on the benefits and drawbacks of both traditional and online assessments. The second half of this research study sought to examine how undergraduates perceived the two types of assessment; and the third section, which served as the study's main focus, sought to highlight the effects of both traditional and online evaluation on students' academic achievement. The Likert scale was used to determine whether participants in this study agreed or disagreed with numerous statements on both traditional and online exams and whether participants in this study agreed or disagreed with statements on both traditional and online exams. Section one of the survey deals with the participants' preferences and opinions regarding conventional and online assessments by using the Likert scale as shown below in table 1.

Table 1: Representing Comparative Analysis of Traditional and Online Assessments

Research Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Traditional assessments provide reliable measurement of knowledge and skills as compared to online Assessment.	50%	20%	10%	15%	5%
Online assessments offer greater convenience compared to traditional assessments.	7.5%	12.5%	10%	25%	45%
Traditional assessments are time-consuming for both students and instructors.	60%	12%	20%	8%	0%
Traditional assessments are more valid in measuring students' understanding of the subject matter.	50%	30%	10%	8%	2%
Online assessments provide more immediate feedback to students, aiding in their learning process.	10.3%	26%	50%	7.7%	0%
Online assessments reduce the risk of cheating among students.	10%	30%	25%	30%	5%

The Table 1 shows the contrast to how students evaluated conventional and online exams. The results indicate that the majority of participants strongly agreed or agreed that traditional assessments offer an accurate way to measure knowledge and skills. It conveys that pupils believe in the reliability of conventional techniques of evaluation. However, a sizeable portion of respondents strongly agrees or agree that it took much time from both students and instructors. This brings up a possible issue for students who might feel burdened by the time needed for traditional examinations.

On the other hand, a sizable portion of participants agreed or strongly agreed that online evaluations are more convenient than traditional examinations. It implies that students finish online tests at their convenience since they are viewed as being more flexible and accessible. Regarding the usefulness of online tests in minimizing student cheating, there was a debate, nevertheless. It leads to an inquiry about the reliability and security of online testing systems. Overall, regarding validity and dependability, students overwhelmingly favor traditional assessments. On the other hand, section two of the survey deals with the undergraduates' perceptions about online and traditional assessments as shown below in table 2.

Table 2: Representing Undergraduates' Perceptions about Online and Traditional Assessment

Research items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am comfortable with the format and requirements of traditional assessments.	50%	35%	8%	5%	2%
I am comfortable with the format and requirements of online assessments.	10%	32.5%	30%	25%	2.5%
Traditional assessments effectively measure my knowledge and skills in the subject area.	60%	27	2	10	1%
Online assessments effectively measure my knowledge and skills in the subject area.	15%	20%	15%	30%	20%
Traditional assessments align well with my learning style and preferences.	20%	35%	10%	32.5	2.5%
Online assessments align well with my learning style and preferences.	7.5%	22.5%	25%	40%	5%
Research items	Every time	Occasionally	Rarely	Never	Other
How often do you encounter issues with traditional assessments (e.g. unclear instructions, ambiguous questions)?	7.3%	34.1%	51.3%	2.4%	4.9%
How often do you encounter technical issues while taking online assessments?	56.1%	34.1	5%	2.4%	2.4%

This section reveals participants' comfort levels with traditional and online assessments and examine how well these assessment techniques fit with the course's goals and learning results. The results show that participants are more at ease taking conventional exams. While a significant number of respondents indicated that they were at ease with the structure and specifications of traditional assessments. However, some students could be hesitant or encounter difficulties with the styles of online assessments. Traditional evaluations were thought to be well-aligned with course objectives and learning outcomes, showing that students think these assessments adequately capture the intended learning aims. To guarantee that online assessments accurately reflect the desired learning outcomes, adjustments may be required, as the sense of alignment with online assessments was more moderate.

The statistics showed that a sizable percentage of respondents said they almost always experienced technical difficulties when taking online tests. This implies that there can be underlying issues or restrictions with the technological infrastructure or online assessment systems. In contrast, a substantially smaller percentage of respondents had difficulty with traditional evaluations almost every time, suggesting a reduced incidence of concerns with unclear instructions or ambiguous questions. These results demonstrate that pupils are more accustomed to the format and alignment of traditional exams. It also emphasizes the importance of addressing technical issues in online assessments to ensure a smooth and effective assessment experience for students. On the other hand, section three of the survey deals with the impact of traditional and online assessments on undergraduates' performance as shown below in table 3.

Table 3: Representing Impact of Traditional and Online Assessments on Students' Performance

Research items	1 Hours	2-3 Hrs	4-5 Hrs	>5 Hrs	<1 Hrs
How much time do you usually spend preparing for traditional assessments?	10%	62.5%	15%	10%	2.5%
How much time do you usually spend preparing for online assessments?	45%	37%	5%	11%	2%
Research items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Traditional assessments have a positive impact on my academic performance	22.5%	57.5%	17%	1%	2%

Online assessments have a positive impact on my academic performance.	8%	14%	17%	34%	10%
Traditional assessments provide fair and unbiased grading.	25%	35%	20%	15%	5%
Online assessments provide fair and unbiased grading.	23%	30%	15%	20%	12%
Research items	Traditional	Online	Both	Subject-dependent	Not Sure
Which type of assessment do you prefer overall?	60%	28%	8%	3%	1%

This section examined the amount of time participants devoted to studying for both traditional and online exams, as well as the perceived impact of these assessments on their academic success. The results show that students reported spending more time preparing for regular exams than for online exams. This implies that students may need to dedicate themselves to more work and preparation for standardized tests. In terms of the effect on academic performance, a larger percentage of participants agreed or strongly agreed that traditional exams have a good impact as compared to online assessments. This shows that students might believe that traditional examinations are more useful for boosting their academic achievement. The results could be compared with Slack and Priestley (2022) and Farooq et al. (2020); respectively Slack reflected the assessments could be better through digital tools where students feel confident and comfortable, while the second research reflected only few tools could be feasible for online assessments, otherwise it does not make good impact on students' learning.

Overall, the evaluation of these three components offers insightful information about undergraduates' perceptions and interaction with both traditional and online tests. It outlines the benefits and drawbacks of each assessment technique, as well as concerns about time usage, practicality, alignment with learning objectives, and effects on academic performance. These findings will assist educational institutions to enhance their assessment methods so that they better match the requirements and expectations of their students while also ensuring that their knowledge and skills are being measured legitimately and reliably.

5.   Conclusion and Recommendations

This research study compared traditional and online assessments as well as investigated undergraduate students' views and performance in the Pakistani context. The results highlighted the benefits of traditional assessment, including in-person exams and assignments, such as prompt feedback, objective alignment, and a familiarity factor. The flexibility, ease, and multimedia possibilities of online assessments, such as quizzes and exams sent through learning management systems, were appreciated. However, the study also identified obstacles with online exams, including technological issues, erratic internet connectivity, and worries about security and reliability. Traditional assessments make a good impact on learning goals. Cultural factors, such as a preference for in-person interactions and skepticism about the legitimacy of online assessments, also had an impact on students' perceptions.

This study adds to the scant literature on this subject in Pakistan by offering insightful information about evaluation procedures in Pakistani universities. In light of the findings from the research, there are some recommendations to improve assessment practices in Pakistani universities. These include providing faculty with training and support in developing online assessments that accurately measure learning outcomes and prevent cheating, ensuring clear instructions and rubrics for grading consistency, and considering a blended approach that combines the strengths of both traditional and online assessments. Resources and infrastructure investments are also made to ensure equitable access to technology and internet connectivity. The importance of ongoing study and evaluation in adjusting assessment practices to changing requirements and technology developments was also emphasized. Implementing these recommendations can enhance the overall educational experience and assessment validity. Future studies can build on the findings by using more extensive sampling, analyzing the efficacy of treatments to address problems, examining the long-term consequences of evaluation techniques, and investigating the influence of cultural factors. The results of these studies will help Pakistani universities to improve their assessment procedures and educational standards.

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