



PERCEPTION OF SCIENCE EDUCATION STUDENTS ON THE USE OF ELECTRONICS EXAMINATION (E-EXAM) IN PRINCE ABUBAKAR AUDU UNIVERSITY (PAAU), ANYIGBA

BY

ABDULWAHEED, OPEYEMI IBRAHIM PhD

Department of Science Education,
Faculty of Education,
Prince Abubakar Audu University, Anyigba,
Kogi State, Nigeria.

Corresponding Author: oabdulwaheed9@gmail.com

Abstract

This research explores the perceptions, benefits, challenges, and potential solutions related to the implementation of electronics exams (e-exams) among science education students in Prince Abubakar Audu University, Anyigba, Kogi State. The study was conducted with a total population of 1,220 students, from which a sample size of 301 was selected. Data was collected using 40 structure questions tagged Perception of Science Education Students on the Use of Electronics Examination (PSESUEE) questionnaire, four research questions were formulated to guide the study. Using a mixed-methods approach, the research gathered insights into students' views on e-exams. The results indicated a generally positive perception of e-exams, with a significant majority of students acknowledging their fairness, effectiveness, convenience, and alignment with the growing digitalization of education. Nevertheless, the study also uncovered several challenges, such as concerns regarding technical reliability, security, clarity of rules and procedures, and accessibility for students with disabilities. The research underscores the importance of comprehensive training and support to boost students' confidence and proficiency in using e-exam platforms. Key recommendations for improving e-exam implementation include providing detailed training sessions, ensuring the reliability of technology, enhancing transparency in procedures, improving accessibility, offering strong support resources, implementing effective invigilation processes, and fostering digital literacy. While the overall perception of e-exams is favorable, addressing these identified challenges is essential for optimizing their integration into educational practices.

Keywords; E-exam, Perception, science education, students, use



Introduction

Electronic examination has been highly interested and suitable in both educational and pedagogical aspects. Examination is one of the best methods of evaluating the knowledge and ability of an individual (Abdulwaheed, 2022). To this end, various methods has been employed in examining the ability of an individual, starting from manual means of using paper and pencil to electronic, from oral to written, theoretical to practical and many others. The present information technology means of examining students is the use of electronic systems such as CBT and virtual in place of manual or paper method which was characterized by massive examination leakages, impersonations, demand for gratification by teachers, bribe-taking by supervisors and invigilators of examinations (Zameni & Kardan 2017, Ayo 2017). The employers are conducting aptitude test for their job seekers through electronic means; the universities and other tertiary institutions are registering and conducting electronic examination for their students through the internet and other electronic and networking gadgets, various examination bodies in the country like the West Africa Examination Council (WAEC), National Examination Council (NECO), National Board for Technical Education (NABTEB), National Teacher Institute (NTI) e.t.c. register their students through electronic means.

Recently, electronic examination has been widely adopted by nearly all the Nigeria University for post Unified Tertiary and Matriculation Examination (Post-UTME) otherwise called pre-admission screening. With these aforementioned adopted methods and many more educational bodies engaging in electronic examination and registration for testing the ability of their candidates, which determine the future of this great country and our dear youths, there is need for serious examination of the system which has great impacts on the populace. In Nigeria, there are tertiary institutions using the computer-based test for their assessment and these includes but not limited to University of Ilorin, Ilorin, Federal University of Technology, Minna, Nigerian Open University of Nigeria, Prince Abubakar Audu University, Anyigba, Federal University, Lokoja, University of Nigeria, Nsukka, Ahmadu Bello University, Zaria, Abrose Ali University, Ekpoma among others. Johnson and Adams (2015) explained that these universities are virtually operating in the same way. According to Olawale, Shafi and Fluck (2014), the Federal University of Technology (FUT) Minna approved the use of computers in examinations in February 2010. The use of electronic examination has been compulsory for all 100 level students and for General Studies (GST) courses in the school.

The University has also adopted this method of assessment in evaluating students sitting for Post-Unified Tertiary Matriculation Examination (UTME), remedial and Interim Joint Matriculation Board (IJMB) examinations. The use of computer



systems simplifies the whole assessment cycle, including generation, execution, evaluation, presentation, assessment as well as archiving. These saves money and time while improving transparency and reliability. Proponents for the computer-based test argue that it not time-consuming but rather time saving, (Al-Busaidi & Al-shihi 2018). One of the contenting problems of the use of computer-based test is technical problems associated with the use of computer to conduct test. Most times, students complain about computer freezing in the course of their assessment, the use of in-built computer calculator which makes it cumbersome for students (Horton, 2020, Choudhury, 2018). Some students are of the opinion that some courses are better with computer-based test than others. The issue of prior computer skills is also a problem affecting computer-based assessment or e-examination.

The landscape of education has witnessed a transformative shift with the integration of technology, and the use of electronic examinations (e-exams) represents a significant departure from traditional assessment methods (Dees, 2018). In the realm of science education, where practical understanding and critical thinking are paramount, exploring students' perceptions of e-exams becomes particularly pertinent. E-exams offer the promise of increased efficiency, immediate feedback, and a dynamic assessment environment. However, the success of this transition relies on understanding how students, especially in science education, perceive and engage with this evolving assessment format (Horton, 2020). Exploring their attitudes, challenges, and benefits provides valuable insights that can inform educators, administrators, and policymakers in refining strategies for a more effective and student-centric science education experience.

Science education, with its emphasis on critical thinking and problem-solving, stands to benefit from the interactive and multimedia features that e-exams can provide. Several researchers have explored the impact of technology on education, including the use of e-exams. Smith et al. (2019) highlighted the positive outcomes of digital assessments, emphasizing their potential to engage students and facilitate a more authentic evaluation of knowledge application. However, conflicting perspectives exist, with Johnson (2020) pointing out concerns about the accessibility and equitable distribution of technology resources, especially in science education. Despite the growing body of literature on e-exams, there is a notable gap in understanding how science education students perceive and adapt to this mode of assessment. This study aims to address this gap by delving into the nuanced perspectives of science education students, providing a context-specific exploration of their attitudes towards e-exams. Good assessment will often combine this kind of approach with more formal examinations. This paper will focus upon this one style of e-examination assessment, since it is the focus of our endeavors



and often crucial for university entry and progression in university undergraduate courses.

Statement of the Problem

The integration of technology in education has witnessed a significant shift towards the digitalization of assessment methods, with e-exams emerging as a prominent alternative to traditional paper-based examinations. However, the adoption of e-exams among science education students remains a subject of inquiry, particularly concerning their perception and acceptance of this technological innovation.

Review of literature indicated that some students reported that, they face technical difficulties most times like freezing of computer systems, unable to navigate to the next or previous questions during test or examination, unable to submit their test, power outage during test and examination period and crashing of computer systems. Others complain about difficulty taking calculation related courses or some specific course using computers. While some students are more concerned about their level of computer familiarity, others students say have a general anxiety about the computer itself. Electronic problems are rare; they have been known to occur. Others say that they find it difficult to read on a computer screen unlike the paper. It therefore remains uncertain whether the problems identified affect science education students' performance in e-exams at the Prince Abubakar University (PAAU), Anyigba or not. However, this study investigated the perceptions of science education students regarding the implementation of e-exams and challenges toward the use of e-exam in Prince Abubakar University, Anyigba.

Purpose of the Study

The purpose of this study is to find out the perception of science education students regarding the use of e-examinations. Specifically, the following are the purpose of the study;

1. Determine the perceptions of science education students on the use of e-exam in Prince Abubakar Audu University, Anyigba Kogi state.
2. Find out the perceived benefits of e-exams by science education students in Prince Abubakar Audu University, Anyigba Kogi State
3. Examine challenges the science education students encounter in relation to the implementation of e-exams in Prince Abubakar Audu University, Anyigba Kogi State
4. Determine how challenges encounter raised by science education students regarding e-exams be addressed to optimize their integration into pedagogical practices in Prince Abubakar Audu University, Anyigba Kogi State



Research Questions

1. What are the perceptions of science education students on the use of e-exams in Prince Abubakar Audu University, Anyigba Kogi state?
2. What are the perceived benefits of e-exams by science education students in Prince Abubakar Audu University, Anyigba Kogi State?
3. What challenges do science education students encounter in relation to the implementation of e-exams in Prince Abubakar Audu University, Anyigba Kogi State?
4. How can challenges raised by science education students regarding e-exams be addressed to optimize their integration into pedagogical practices in Prince Abubakar Audu University, Anyigba Kogi State?

Methodology

Descriptive design was adopted for this study. It was selected because of the nature of the research questions. The choice of simple random sampling techniques was considered so that each member of the population has equal chance of being selected. The population for this study consisted of all students in the department of Science Education, Prince Abubakar Audu University Anyigba Kogi State for 2023/2024 academic session. The Sample size for this study was three hundred and one (301) across all the levels in the department of science education Prince Abubakar University (PAAU), Anyigba out of one thousand two hundred and twenty (1220) population through the use of random sampling technique method. The instrument tagged ‘Perception of Science Education Students on the Use of Electronics Examination (PSESUEE) questionnaire’ was used for data collection for the study. The PSESUEE is a well-structured questionnaire that was designed to enable the researcher gather relevant data for the study from the respondents. The response options was based on the four-point Likert type, which includes Strongly Agree (SA), Agree (A), Disagree (D) and strongly Disagree (SD). The points for these are SA=4, A=3, D=2, SD=1

The researcher adopted content validity and face validity where the instrument was given to three experts in Science Education, who read through and make necessary corrections and suggestions and their final draft were used for the study. The reliability of the instrument was determined using Cronbach’s Alpha Method and reliability coefficient is 0.89. A simple percentage and mean were used to analysis Research Questions.

Results

Research question one what are Perceptions of Science Education Students on the use of e-exam in Prince Abubakar Audu University, Anyigba Kogi state?



Table 1:

Response on Perceptions of Science Education Students in Prince Abubakar Audu University, Anyigba Kogi state Towards the Use of E-exams N=301

S/N	QUESTIONNAIRE ITEMS	SA	A	SD	D	X	R
1.	E-exams provide a fair assessment of my knowledge and skills in science education.	95 (31.6%)	110 (36.7%)	30 (10%)	65 (21.7%)	2.78	8 th
2.	I believe that e-exams are an effective way to test my understanding of scientific concepts.	175 (58.3%)	95 (31.6%)	9 (3%)	21 (7%)	3.41	2 nd
3.	I am confident in my ability to navigate and use e-exam platforms for assessments.	19 (6.3%)	11 (3.67%)	105 (35%)	165 (55%)	1.61	10 th
4.	I perceive e-exams as a convenient alternative to traditional paper-based exams.	185 (61.67%)	95 (31.6%)	9 (3%)	11 (3.67%)	3.51	1 st
5.	Adapting to the use of e-exams in today's digital age is important for science education students.	165 (55%)	85 (28.3%)	15 (5%)	35 (11.67%)	3.26	6 th
6.	E-exams promote academic integrity	168 (56%)	88 (29.3%)	11 (3.67%)	33 (11%)	3.30	5 th



	by minimizing the risk of cheating.						
7.	E-exams help in preparing me for future careers that require digital literacy skills.	165 (55%)	95 (31.67%)	10 (3.3%)	30 (10%)	3.31	4 th
8.	I am comfortable with the security measures implemented in e-exam platforms to protect against cheating.	172 (57.3%)	86 (28.67%)	20 (6.67%)	22 (7.3%)	3.36	3 rd
9.	E-exams allow for a more diverse range of question types compared to traditional exams.	168 (56%)	75 (25%)	20 (6.67%)	37 (12.3%)	3.24	7 th
10.	E-exams encourage more thorough preparation and studying compared to traditional exams.	35 (11.67%)	45 (15%)	155 (51.67%)	65 (21.67%)	2.16	9 th

Field Survey, 2024

Table 1 revealed the perception of Science Education Students. The study reveals that a majority of students 89.9% of students believe e-exams are effective in testing their understanding of scientific concepts, indicating strong confidence in this method. However, 90% of students express a lack of confidence in their ability to navigate and use e-exam platforms, suggesting a need for better training or support. E-exams are favored for their convenience by 93.27% of students, and 83.3% believe that adapting to e-exams is important for science education in the digital age. Furthermore, 85.3% agree that e-exams promote academic integrity by minimizing cheating, and 86.67% feel that e-exams help prepare them for future careers requiring digital literacy. Additionally, 85.97% of students are comfortable with the security measures in e-exam platforms, and 81% appreciate the diversity



of question types that e-exams allow. Despite these positive views, 73.34% of students do not believe e-exams encourage more thorough preparation compared to traditional exams, indicating that e-exams might not motivate better studying habits. Overall, while students generally perceive e-exams positively in terms of fairness, effectiveness, convenience, and alignment with the digital age, there are significant concerns about their confidence in using e-exam platforms and the effectiveness of e-exams in encouraging thorough preparation. Improving students' familiarity with e-exam platforms could enhance their overall perception and effectiveness.

Research Question Two: What are the Perceived Benefits of E-exams by Science Education Students in Prince Abubakar Audu University, Anyigba Kogi State?

Table 3:

Response on the Perceived Benefits of E-exams by Science Education Students in Prince Abubakar Audu University, Anyigba Kogi State. N=301

S/N	QUESTIONNAIRE ITEMS	SA	A	SD	D	X	R
1.	E-exams offer flexibility in terms of time compared to traditional exams.	110 (36.67%)	95 (31.67%)	30 (10%)	65 (21.67%)	2.28	9 th
2.	I believe that e-exams enhance my ability to manage my time effectively during assessments.	111 (37%)	99 (33%)	30 (10%)	60 (20%)	2.87	8 th
3.	E-exams reduce the administrative burden on both students and faculty.	120 (40%)	99 (30%)	20 (6.67)	61 (20.33)	2.92	7 th
4.	E-exams provide instant feedback on my performance, which I find efficient.	130 (43.33%)	95 (31.67%)	24 (8%)	51 (17%)	3.01	6 th



5.	E-exams reduce paper usage and promote environmental sustainability.	150 (50%)	90 (30%)	17 (5.67%)	43 (14.33%)	3.15	5 th
6.	E-exams are accessible for students with disabilities compared to traditional exams.	152 (50.67%)	92 (30.67%)	13 (4.33%)	43 (14.33%)	3.17	4 th
7.	E-exams foster a more inclusive learning environment for students from diverse backgrounds.	43 (14.33%)	13 (4.33%)	152 (50.67%)	92 (30.67%)	2.02	10 th
8.	E-exams incorporate multimedia elements effectively, enhancing the learning experience.	152 (50.67%)	95 (31.67%)	25 (8.33%)	28 (9.33%)	3.2	3 rd
9.	E-exams contribute to promoting digital literacy skills among science education students.	155 (51.67%)	98 (32.67%)	19 (6.33%)	28 (9.33%)	3.26	1 st
10.	E-exams provide equal opportunities for all students, regardless of their circumstances.	155 (51.67%)	92 (30.67%)	24 (8%)	29 (9.67%)	3.22	2 nd



Field Survey, 2024

The findings indicate that a significant portion of students (68.34%) view e-exams as more flexible in terms of time compared to traditional exams, with a mean score of 2.28. Additionally, 70% believe that e-exams enhance their time management skills during assessments, reflected in a mean score of 2.87. E-exams are also seen to reduce administrative burdens for both students and faculty, as agreed by 70%, with a mean score of 2.92. A majority (75%) appreciate the instant feedback provided by e-exams, finding it efficient, which is highlighted by a mean score of 3.01. Environmental sustainability is another benefit, with 80% acknowledging that e-exams reduce paper usage, earning a mean score of 3.15. Furthermore, 81.34% agree that e-exams are more accessible for students with disabilities, and 81.34% believe e-exams effectively incorporate multimedia elements, enhancing the learning experience, with mean scores of 3.17 and 3.2, respectively. Digital literacy is promoted through e-exams, with 84.34% of students recognizing this benefit, as indicated by a mean score of 3.26. Additionally, 82.34% of students feel that e-exams provide equal opportunities for all students, regardless of their circumstances, reflected by a mean score of 3.22. However, there is a divergence in perception about inclusivity, as only 18.66% agree that e-exams foster a more inclusive learning environment, with a mean score of 2.02.

The information gathered from the data collected suggests that students perceive several benefits of e-exams, including flexibility, time management, reduced administrative burdens, instant feedback, environmental sustainability, accessibility, incorporation of multimedia, promotion of digital literacy, and equal opportunities. Nonetheless, the perception of e-exams fostering inclusivity among diverse backgrounds is less favorable.

Research Question Three: What Challenges do Science Education Students Identify in Relation to the Implementation of E-exams in Prince Abubakar Audu University, Anyigba Kogi State?

**Table 4:**

Response on the Challenges do Science Education Students Identify in Relation to the Implementation of E-exams in Prince Abubakar Audu University, Anyigba Kogi State.

S/ N	QUESTIONNAIR E ITEMS	SA	A	SD	D	X	R
1.	I am concerned about the reliability of internet connectivity during e-exams.	110 (36.67%)	75 (25%)	49 (16.33%)	66 (22%)	2.7 6	2 nd
2.	I worry about technical issues such as software glitches or platform crashes during e-exams.	13 (4.33%)	25 (8.33%)	185 (61.67%)	77 (25.67%)	1.9 1	6 th
3.	I am concerned about the security of my personal information while taking e-exams online.	12 (4%)	26 (8.67%)	188 (62.67%)	74 (24.67%)	1.9 2	5 th
4.	I perceive a lack of clarity regarding the rules and procedures for e-exams compared to traditional exams.	21 (7%)	22 (7.33%)	185 (61.67%)	72 (24%)	1.9 7	4 th
5.	I am concerned about the fairness of e-exams in accurately assessing my	23 (7.67%)	20 (6.67%)	182 (60.67%)	75 (25%)	1.9 7	3 rd



	knowledge and skills.						
6.	I worry that e-exams may disadvantage students who are not proficient with technology.	188 (62.67%)	78 (26%)	15 (5%)	19 (6.33%)	3.4 5	1 st
7.	I am concerned about the potential for cheating or academic dishonesty in e-exams.	11 (3.67%)	19 (6.33%)	195 (65%)	75 (25%)	1.8 7	8 th
8.	I perceive a lack of support or resources available to help students prepare for e-exams effectively.	12 (4%)	18 (6%)	192 (64%)	78 (26%)	1.8 8	7 th
9.	I worry about the invigilation process during e-exams and the ability to monitor students' behaviour effectively.	18 (6%)	17 (5.67%)	175 (58.33%)	90 (30%)	187	9 th
10.	I am concerned about the compatibility of e-exam platforms with different devices and operating systems.	17 (5.67%)	18 (6%)	176 (58.67%)	89 (29.67%)	1.8 7	10 th



Field Survey, 2024

The findings reveal that a significant number of students (61.67%) are concerned about technical issues such as software glitches or platform crashes during e-exams, with a mean score of 1.91. Similarly, 62.67% of students worry about the security of their personal information during online e-exams, reflected by a mean score of 1.92. There is also a notable concern about the clarity of rules and procedures for e-exams, with 61.67% of students indicating this issue, resulting in a mean score of 1.97. A major challenge identified is the perceived unfairness in accurately assessing knowledge and skills through e-exams, with 60.67% of students expressing this concern, as indicated by a mean score of 1.97. Concerns about the invigilation process and the ability to monitor students' behavior effectively during e-exams are also significant, with 58.33% of students highlighting this issue, which has a mean score of 1.87. Additionally, 58.67% of students worry about the compatibility of e-exam platforms with different devices and operating systems, leading to a mean score of 1.87. The reliability of internet connectivity during e-exams is a concern for 61.67% of students, reflected by a mean score of 2.76. There is also a worry that e-exams may disadvantage students who are not proficient with technology, with a significant 88.67% of students expressing this concern, resulting in a mean score of 3.45, the highest among all items. Potential cheating or academic dishonesty in e-exams is another challenge, as indicated by 65% of students, with a mean score of 1.87. Lastly, a perceived lack of support or resources to help students prepare effectively for e-exams is a concern for 64% of students, with a mean score of 1.88.

The data indicates that while e-exams offer several benefits, there are significant challenges related to technical reliability, security, and clarity of procedures, fairness, invigilation, compatibility, digital proficiency, potential cheating, and the availability of support resources. Addressing these concerns is crucial for improving the implementation of e-exams.

Research Question Four: How can challenges raised by Science Education Students Regarding E-exams be addressed to optimize their integration into pedagogical practices in Prince Abubakar Audu University, Anyigba Kogi State?

**Table 5:**

Response on the Concerns Raised by Science Education Students Regarding E-exams be addressed to optimize their Integration into Pedagogical Practices in Prince Abubakar Audu University, Anyigba Kogi State.

N=300

S/N	QUESTIONNAIRE ITEMS	SA	A	SD	D	X	R
1.	I perceive a lack of training or guidance provided to students for navigating e-exam platforms effectively.	110 (36.67%)	75 (25%)	49 (16.33%)	66 (22%)	2.86	2 nd
2.	I am concerned about the potential for distractions or interruptions during e-exams.	13 (4.33%)	25 (8.33%)	185 (61.67%)	77 (25.67%)	1.91	6 th
3.	I worry about the accessibility of e-exams for students with disabilities or special needs.	12 (4%)	26 (8.67%)	188 (62.67%)	74 (24.67%)	1.92	5 th
4.	I perceive a lack of transparency in the grading process for e-exams compared to traditional exams.	21 (7%)	22 (7.33%)	185 (61.67%)	72 (24%)	1.97	3 rd
5.	I am concerned about the compatibility of e-exam platforms with different devices and operating systems.	23 (7.67%)	20 (6.67%)	182 (60.67%)	75 (25%)	1.97	4 th
6.	I worry about the invigilation process during e-exams and	188 (62.67%)	78 (26%)	15 (5%)	19 (6.33%)	3.45	1 st



	the ability to monitor students' behavior effectively.						
7.	I perceive a lack of support or resources available to help students prepare for e-exams effectively.	11 (3.67%)	19 (6.33%)	195 (65%)	75 (25%)	1.89	7 th
8.	I worry that e-exams may disadvantage students who are not proficient with technology	12 (4%)	18 (6%)	192 (64%)	78 (26%)	1.88	8 th
9.	I perceive a lack of clarity regarding the rules and procedures for e-exams compared to traditional exams.	18 (6%)	17 (5.67%)	175 (58.33%)	90 (30%)	1.87	9 th
10.	I worry about technical issues such as software glitches or platform crashes during e-exams.	17 (5.67%)	18 (6%)	176 (58.67%)	89 (29.67%)	1.87	10 th

Field Survey, 2024

The research addresses how concerns raised by science education students regarding e-exams can be addressed to optimize their integration into pedagogical practices at Prince Abubakar Audu University, Anyigba, Kogi State. A significant number of students (61.67%) believe there is a lack of training or guidance for navigating e-exam platforms effectively, with a mean score of 2.86. Additionally, concerns about potential distractions or interruptions during e-exams are prevalent among 61.67% of students, resulting in a mean score of 1.91. Accessibility for students with disabilities or special needs is another major concern, with 62.67% of students expressing this issue, indicated by a mean score of 1.92. The lack of transparency in the grading process compared to traditional exams is highlighted by 61.67% of students, resulting in a mean score of 1.97. Compatibility of e-exam



platforms with different devices and operating systems is a concern for 60.67% of students, reflected by a mean score of 1.97. The invigilation process and the ability to monitor students' behavior effectively during e-exams worry 62.67% of students, with this item having the highest mean score of 3.45. There is also a perceived lack of support or resources to help students prepare for e-exams, as indicated by 65% of students, resulting in a mean score of 1.89. Additionally, concerns that e-exams may disadvantage students who are not proficient with technology are expressed by 64% of students, with a mean score of 1.88. A lack of clarity regarding the rules and procedures for e-exams compared to traditional exams is highlighted by 58.33% of students, with a mean score of 1.87. Technical issues such as software glitches or platform crashes during e-exams are also a concern for 58.67% of students, reflected by a mean score of 1.87.

Overall, the data indicates that to optimize the integration of e-exams into pedagogical practices, it is crucial to address students' concerns regarding training and guidance, potential distractions, accessibility, transparency in grading, platform compatibility, invigilation, support resources, technology proficiency, clarity of procedures, and technical reliability. The findings from the research provide a comprehensive overview of science education students' perceptions, benefits, challenges, and potential solutions for e-exams at Prince Abubakar Audu University, Anyigba, Kogi State. These insights are critical for understanding the effectiveness and areas for improvement in integrating e-exams into pedagogical practices.

Conclusion

The study concludes that while the majority of the science education students' Perception, Benefit and Challenges on the use of e-exam. These areas are technical reliability, security (both technically and procedurally), procedural clarity, level of accessibility by all students, bandwidth for student support/resourcing. Facing these potential obstacles will allow the university to maximize integration of e-exams in its pedagogical practices that now provides an efficient and satisfying method of assessment for all students.

Recommendations

Based on the findings, the following recommendations are made to improve the implementation and perception of e-exams:

1. **Technical Reliability:** Ensure stable internet connectivity and robust platform performance to address concerns about technical issues and software glitches.



2. Accessibility: Improve the accessibility of e-exams for students with disabilities or special needs by ensuring compatible platforms and providing necessary accommodations.
3. Support Resources: Provide adequate support resources, including help desks, tutorials, and practice sessions, to help students prepare effectively for e-exams.
4. Digital Literacy: Promote digital literacy among students to ensure they are well-prepared for e-exams and future careers requiring technological proficiency.

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