Nursing Students' Perceived Value of Computer-Based Test for Licensure Examination in Akwa-Ibom

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DOI: 10.56201/ijmepr.v8.no6.2024.pg149.160

Abstract
The purpose of the study was to determine how nursing students in Akwa Ibom felt about computer-based tests used for license exams. The research employed a descriptive design. To direct the investigation, a single goal and set of hypotheses were created. 218 (n1=139, n2=79) final-year individuals who had used CBT in their exams made up the sample size. Data were gathered by having respondents complete a self-created questionnaire on their own. Compiling, coding, and entering the data into SPSS version 25 allowed for analysis. The t-test was utilized to test the hypotheses, and means and standard deviation were employed as descriptive statistics to examine the objective. The results showed that, with mean scores of n1–3.45, n2-3.41, student nurses and midwives had a favorable opinion of the usefulness of using a computer-based test for licensure in Akwa-Ibom. Because the p-values for the hypotheses were more than the 0.05 level of significance, the results indicated that there was no significant difference in the perception of the value of CBT for the licensure examination between student nurses and student midwives. It was determined that nursing students' opinions of the computer-based test's worth for Akwa-Ibom licensing exams were positive. It was therefore advised that students be trained, that there be enough computers that are in working order, and that the problems of power outages during CBT be addressed.

Keywords: *Nursing Students, Perception, value, Computer-Based Test*

INTRODUCTION

Computer-based testing (CBT) is defined by Mercer and Metti (2021) as computer-assisted or internet-based assessment delivery that replaces pen and paper methods. This feature enables the administration of such an exam online. It is a productive and successful way to conduct extensive online exams. According to Obioma et al. (2013), computer-based tests are now the preferred method of measuring education in a number of academic subjects. Information technology has affected the entire academic scene, according to Okocha (2017), and many institutions worldwide have embraced these technologies' benefits.
Computer-based testing is a consequence of educational technologies that aim to give teachers and students feedback on the entire learning process, and it has revolutionized the educational environment dramatically by advancing pedagogy and learning. A computer-based test is defined by Obioma et al. (2013) as an assessment or exam that is administered by a computer on a distinct or exclusive network or by other technology devices that are connected to the internet or the World Wide Web, with the majority of them using multiple choice questions (MCQ). Teachers can use this system to plan, coordinate, administer, and document surveys, exams, and assessments.

Computer-based tests are more than just another method of giving exams; they represent a qualitative shift away from more traditional approaches like paper-based testing. Perceptions play a major role in shaping our experiences, opinions, and actions. According to Wolfe (2019), a few elements of sensation and perception are the brain's foundations for perception, visual and auditory perception, and the impact of experience on perception. Nursing students' perceptions of computer-based exams can vary based on their individual preferences and prior experiences. Several aspects, such as ease and flexibility, resource accessibility, and environmental considerations, impact nursing students' perceptions of computer-based exams (OECD, 2015 & Papastergiou, 2018). A computer-based test has many advantages, such as flexible scheduling, immediate scoring, security, and guaranteeing the integrity of the test. According to Okocha (2017), computer-based testing is thought to be a solution to the main problems that the testing industry is now facing. A study by Ebimgbo et al. (2021) claims that in recent years, there has been a global upsurge in interest in the use of computer-based tests in academic activities like student assessments. Additionally, they stated that computer-based tests have made it possible for most American colleges to handle academic course administration in addition to administering exams. According to Kobal and Jiang (2018), the approval of computer-based tests in Australia permits teachers to support any student who is not performing as expected and gives guardians access to the students' performance and other academic-related activities. While certain African nations, such as South Africa, and certain North African nations, such as Morocco and Algeria, are at the forefront of incorporating ICT into educational activities, they are lagging behind in the adoption of computer-based tests for both education and learning.

In Nigeria, the Unified Tertiary Matriculation Board (UTME) has conducted all of its exams using computer-based testing since 2015, when the JAMB Executive Registrar made the announcement. He added that the goal of the computer-based test was to completely eradicate exam cheating, as this has been a major barrier to the nation's ability to administer public exams (Vanguard, 2012 cited in Aliyu & Adebayo, 2012). The Nigerian educational system's use of computer-based tests is a cutting-edge assessment of instructional materials with a promising future, particularly when implemented (Azor & Ogwu 2019). Several testing organizations have accepted the use of computer-based exams (Bala, 2018). Additionally, post-primary schools and higher education institutions in Nigeria, including universities and polytechnics, have embraced the use of computer-based tests to evaluate student achievement. In spite of ICT obstacles, Samson and Okon (2015) claim that the usage of computer-based tests helps students participate in a fair and reasonable manner. Additionally, this will largely improve the chances of accomplishing the Sustainable Development Goals (SDGs), which center on enabling everyone to acquire a higher level of education (United Nations, 2015).
According to a research by Ebimgbo et al. (2021), many Nigerian universities have switched to using computer-based tests to administer certain exams. According to the survey, Covenant University and the University of Ilorin were the first two universities to use computer-based tests in their evaluation procedures. Subsequently, computer-based exams were used by other universities around the nation to evaluate its students, including the University of Lagos, the Federal University of Technology, Minna, the University of Ibadan, Obafemi Awolowo University, Ile Ife, and the National Open University of Nigeria (NOUN). On January 15, 2018,

computer-based tests were instituted at the University of Nigeria, Nsukka, with the goal of requiring computer-based testing for all exams involving more than 250 students. First-year students were the ones who implemented it, which helped the university graduate more students by decreasing the issue of missing scripts and results. According to Ozumba (2018), the administrator felt that implementing a computer-based test style of examination was necessary in light of this growth.

Although the concept of computer-based testing is not new, there isn't enough research on its application in nursing and midwifery examinations, despite its advantages. However, Hooper (2022) states that nursing students can take the computer-adaptive National Council Licensure Examination for Registered Nurse (NCLEX-RN) after completing their undergraduate nursing degree. Passing this exam is necessary before a Registered Nurse (RN) can begin practicing. The research indicates that the limited availability of computers has hindered the widespread use of computer-based assessments in undergraduate nursing programs in Canada. However, the NCLEX-RN's computer-adaptable format led to its adoption in 2015. In addition, KCR Consultants (2021) has unveiled the NMC Computer-based test (CBT), a new pattern. To make sure that everyone satisfies the requirements for delivering care in the UK, further testing requirements have been developed for nurses and midwives who received their training from institutions outside of the European Economic Area. These individuals wish to earn a UK registration. Ghana's Nursing and Midwifery Council (NMC) has initiated an online exam for nursing or midwifery accreditation, according to Christmals and Gross (2019).

Research on the usage of computer-based tests in Nursing Council Examinations is scarce worldwide. Most importantly, no research has been done on this topic; it is a novel idea according to the Nigerian Nursing and Midwifery Council. As a result, the topics of perceived value, obstacles, and facilitators in the adoption of computer-based testing remain unexplored. But the Nigerian Medical Council has declared that all professional examinations given by the Midwifery and Nursing Council of Nigeria will now be computer-based. During its 58th General Meeting, which took place on June 23–24, 2022, the NMCN board approved the digitalization of the organization's professional examination and scoring procedure, ensuring that it aligns with global best practices and all services provided by NMCN. (NMCN, 2022). This study is justified by the fact that, although being adopted by many academic institutions, computer-based testing is a novel concept in Nigerian Nursing and Midwifery Examinations, and not much research has been done in this area. There is no investigation of the perspectives of barriers, facilitators, and value. This produces a void that warrants further investigation. Additionally, this study examined the views of nursing students in Akwa Ibom who took part in the new phase of the computer-based test for licensure examination, with respect to what could encourage the use of computer-based tests, potential obstacles, and values associated with computer-based testing. From the perspective of the students, this study will identify elements that will facilitate the use of the computer-based test since its inception with the NMCN, thereby contributing to its development and serving as a source of reference material for future research. Students' accounts will therefore be the most reliable source of information regarding its viability because it is still in the early stages and will provide insight into what is effective and what needs to be addressed again. This work will therefore

contribute to closing this gap in the literature. The Nursing and Midwifery Council of Nigeria and three hundred training institutions are present in Nigeria at the moment. Professional Examinations: All exam locations around the nation hold concurrent professional examinations. Every two years, there are two exams for both midwifery and nursing. The only centrally administered professional test in Nigeria is the Professional Nursing Examination, which draws a sizable number of applicants for each session. Which selects examiners for each Center from throughout the nation's educational institutions. These jobs necessitate a great deal of interpersonal communication, the movement of people and products, and the avoidance of examiners' and markers' homes. These factors add to the difficulty of nursing professional exams. The researcher has also encountered a number of difficulties while traveling a great distance for the purpose of invigilating and marking license examinations; these include checking in a notably large number of students and posting the answer scripts every day following each exam, particularly in areas without a nearby courier service. Despite the relaxation of the COVID-19 lockdown, it is still problematic for people in the Eastern region to stay at home on Mondays. Furthermore, while computer-based assessments are still in their formative years, pupils The aforementioned information inspires the researcher to evaluate how Akwa-Ibom nursing students see the value of the computer-based exam for licensure.

Aim and objectives of the study

The study aimed to assess Nursing students' perception of value of Computer-Based Test for licensure Examination in Akwa -Ibom.

Objectives to:

1. Assess the Nursing students' perception of value of computer-based test adoption for licensure examination in Akwa- Ibom.

Hypotheses

1. There is no significant difference between student nurses and student midwives' perception of values of computer-based test for licensure examination in Akwa Ibom.

METHODOLOGY

For the study, the researcher used a descriptive design. A descriptive study involves the methodical gathering and presenting of data in order to unearth new information and provide a comprehensive picture of how Akwa-Ibom nursing students perceive the benefits, obstacles, and usefulness of computer-based exams for licensure. The target population for this study consisted of all students enrolled in Akwa Ibom state's nursing and midwifery institutions, as well as midwives. There were 609 students at the time of the study. 218 final-year students who had taken the computer-based licensing exam for their nursing and midwifery professional exams during their study term made up the sample. Data was gathered by having each responder personally complete a questionnaire that they had created themselves. In order to administer the questionnaire to the necessary respondents, the researcher visited the schools to gain authorization from the relevant authorities. Research assistants assisted in distributing the questionnaires to the selected pupils in their individual schools. A total of 218 questionnaires were distributed, collected upon completion, and

utilized for data analysis and coding. An independently created questionnaire served as the research tool, gathering data on the value, perceived facilitators, and obstacles associated with computer-based assessments for licensing exams. We collected the completed surveys on-site. Compiling, coding, and entering the data into the statistical package for social sciences (SPSS) version 25 allowed for analysis. Categorical variables were created using statistics based on percentages and frequencies. Descriptive statistics like means and standard deviation were used to analyze the study questions. The t-test was utilized to assess the hypotheses. We have presented the data in tables and graphs to ensure clarity.

RESULTS

Socio-demographic characteristics

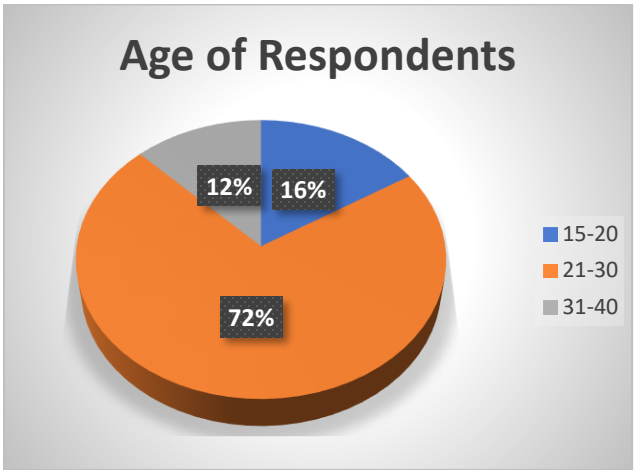

Figure 1: Age range

The descriptive analysis on years in age showed that those within 15-20 years were 35 representing 15.6 %, those on the age range of 21-30 were 156 representing 69.3% while those within the age bracket 31-40 years were 27 representing 12.0%.

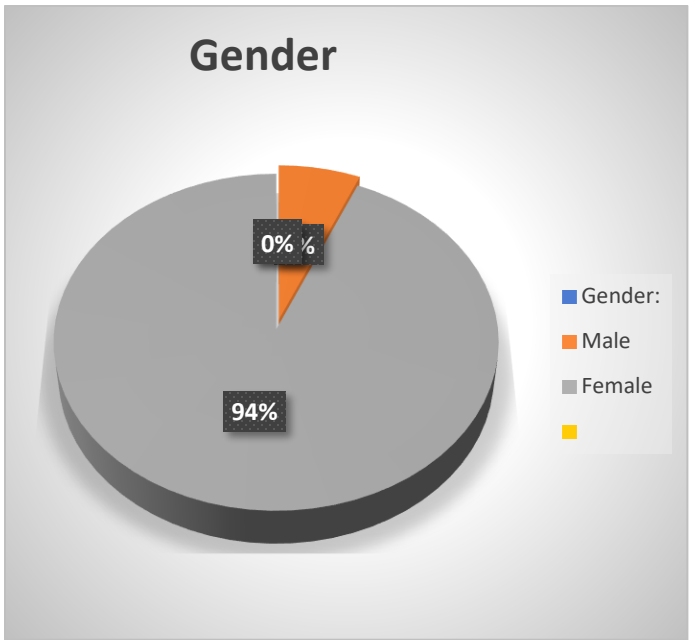

Figure 2: Gender

Result on gender showed that males were 14, representing 6.7% while females were 204 representing 93.3%.

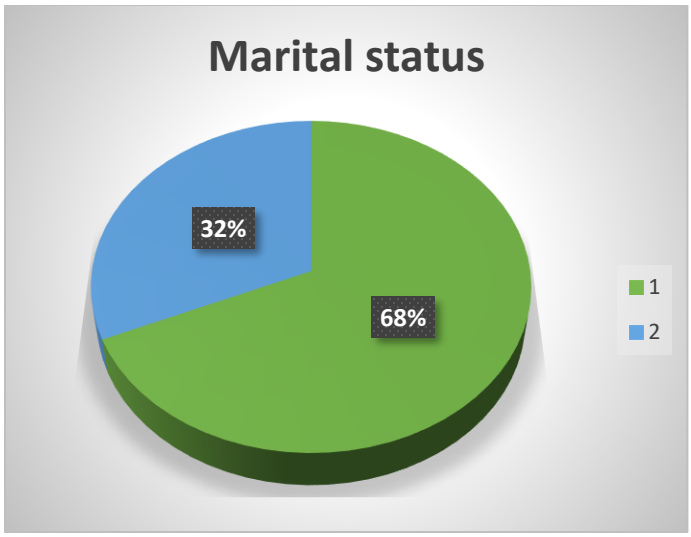

Figure 3: Marital status

On marital status the result showed that singles were 183 representing 84.4%, while married were 35 representing 15.6% none were divorced and widowed.

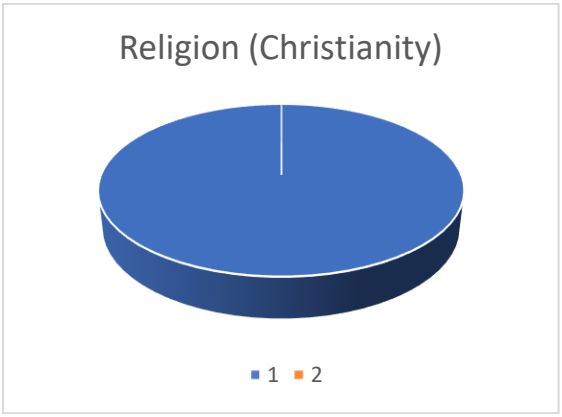

Figure 4: Religion

On religion the whole sample size were all Christian making 100% rate.

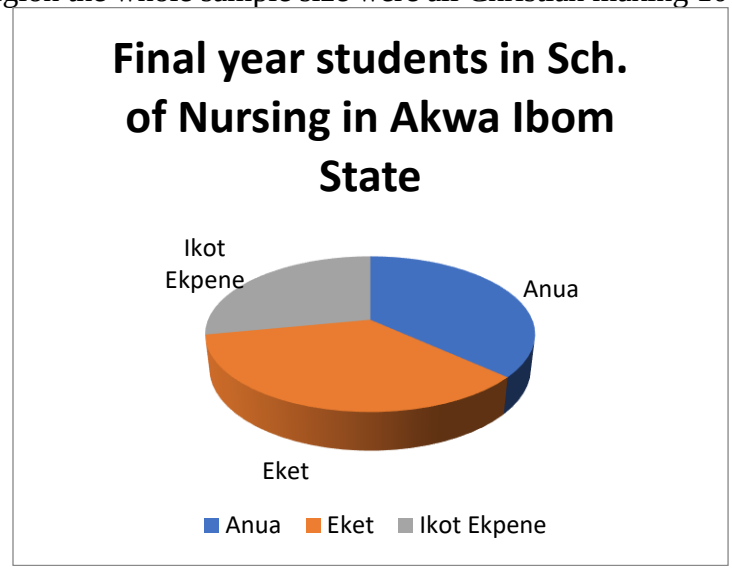

Figure 5: Final year student nurses

For the final year students, Nurses from Anua stood at 51, representing 36.6%, their counterpart at Eket were 49 representing 35.3% while those at Ikot Ekpene were 39 representing 28.1%.

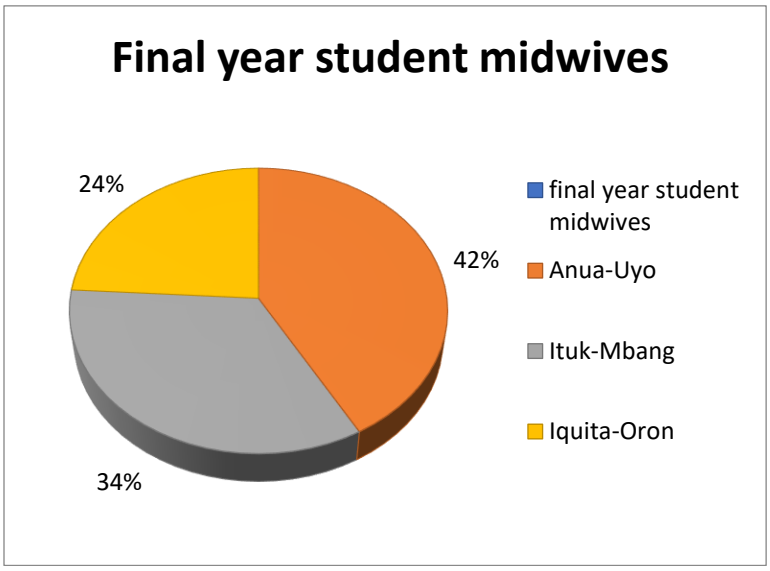

Figure 6: Final year student midwives

For the final year student midwives from Anua-Uyo stood at 33, representing 42%, their counterpart at Ituk-Mbang were 27 representing 34% while those at Oron were 19 representing 24%.

Table 1: Mean summary of the nursing students' perception of value of computer-based test use for licensure examination in Akwa-Ibom.

S/N	Perceived value of computer-based test adoption for licensure examination	X_1 %	SD	X_2 %	SD	Remark
1	Computer-based test is better than Paper based test.	3.46 (63.87%)	.64	3.45 (64.45%)	.63	Positive
2.	Computer-based test is easy to use and credible.	2.46 (51.67%)	.64	2.43 (52.00%)	.65	Positive
3.	Computer-based test is not more convenient than paper-based test.	3.30 (62.90%)	.63	3.27 (63.78%)	.63	Positive
4.	I like the adoption of computer-based test for the NMC examination.	3.45 (63.45%)	.61	3.41 (64.89%)	.61	Positive
5.	Computer-based test reduces missing scripts and stress.	2.41(51.67%)	.61	2.43 (52.78%)	.65	Positive
6.	Computer-based test does not allow for review questions and answers.	2.64 (52.56%)	.70	2.63 (53.87%)	.71	Positive
7.	Computer-based test is credible mode of examination.	2.82 (54.78%)	.81	2.83 (55.76%)	.82	Positive
8.	Computer-based test is not effective in the final examination.	3.49 (64.78%)	.52	3.51 (65.89%)	.50	Positive

9.	I cannot express my points well in computer-based test.	3.57 (65.76%)	.61	3.59 (66.08%)	.61	Positive
10.	Computer-based test gives immediate result than paper-based test.	2.89 (55.67%)	.78	3.16 (60.67%)	.66	Positive
	GRAND TOTAL	**3.04**		**3.07**		Positive

The result in table 1, indicates the mean score on the perceived values in the use of Computer-Based Test in licensure examination in Akwa-Ibom. As shown in the table, 'I cannot express my point well in CBT n_1-3.57, n-3.59; CBT is not effective in the final exams n_1-3.49, n_2- 3.51; CBT is better than paper-based test n_1-3.46, n_2- 3.45; I like the adoption of CBT for NMC examination n_1-3.45, n_2-3.41. A grand mean score of 3.04 for students 'nurses (n_1) and 3.07 grand mean for students' midwives (n_2) were recorded for all the items. All these grand means were above the cut-off point of 2.50. This indicates that student Nurses and Midwives had a positive perception of value that Computer-Based Test be adopted in licensure in Akwa-Ibom.

Table 2 t-test analysis of mean responses of student nurses and midwives on value to Computer-Based Test

Variables	n	X	SD	df	t-cal	p-value	decision
student nurses	139	**3.04**	1.95				
				126	.040	968	Not significant
student Midwives	79	**3.07**	1.96				

*note: ** p-value not significant@ 0.05level of significance. The null hypothesis is accepted.*

The result in Table 2 reveals that the calculated t =. 040.., p =. 968 @ 126 degree of freedom. Therefore, since the p value is greater than 0.05 level of significance, the null hypothesis which states there is no significant difference in the mean responses of students' nurses and students' midwives on the perceived value in the adoption of Computer-Based Test in licensure examinations is accepted. This implies that both student nurses and students' midwives' responses indicate positive perception of the value in the adoption of Computer-Based Test in licensure examinations in Akwa Ibom.

Discussion of Findings

The outcome demonstrated that the nursing student's opinion of the advantages of using computer-based testing for the Akwa-Ibom licensing examination was good. The findings showed that student nurses and midwives thought computer-based tests were a reliable method of assessment, easy to use, and allowed for review of questions and answers. They also thought it was a good idea for Akwa-Ibom to adopt computer-based tests for licensure exams. Some, meanwhile, claimed that CBT was unable to adequately convey some themes. The results corroborate Kundu and Bej's (2021) study, which found that students' perceptions in areas like perceived utility and simplicity of use were superior. These final results corroborate the findings of Bawa and Bashur (2022), who found that students felt positively about computer-based assessments offered in higher education. The research findings demonstrating the inability to adequately summarize points are in line with those of Adeyomi et al. (2021), who discovered that the majority of engineering students preferred

the paper-based evaluation method and that they were dissatisfied with the computer-based examination strategy. The findings of this study are consistent with those of Olbata and Ndun (2021), who found that students believed computer-based testing offered benefits such as exposing them to new situations and teaching them computer skills. The results of this study also support the findings of Rabiu et al. (2020), who argued that computer-based exams are an engaging exam format that simplify test-taking for undergraduate students. The study's findings are consistent with those of Bandele (2019), who found that students had a positive attitude toward the computer-based test for the general studies assessment and that the test's objectives were successfully met. Additionally, in line with Barros's (2018) research, which disclosed students' opinions, computer-based exams ought to be preferred over paper-based ones. The results of the study, however, do not align with those of a study by Hooper (2020), which showed that the majority of respondents believed that computer-based tests had drawbacks. According to a study by Christmal & Gross (2019), participants also felt that computer-based exams were necessary since they reduced test-taking malpractice, decreased the cost of the exam, and increased students' interest in ICT. It is also crucial for this study to conclude that student nurses and midwives felt it was important to use computer-based tests for Akwa-Ibom license exams.

Conclusion

According to the study's findings, student nurses and midwives felt that using a computer-based test for license exams in Akwa-Ibom was made easier by having a laptop and proper instruction, among other things. Additionally, the student nurses and midwives positively identified the existence of obstacles to the implementation of computer-based tests, including limited ICT infrastructure, computer illiteracy, and inadequate electrical supplies. Additionally, they had a favorable opinion of the benefits of using computer-based tests rather than paper-based ones, however the Akwa-Ibom language makes it difficult to communicate certain issues regarding license exams.

Recommendations

The study's conclusions lead to the following recommendations:

1) It is also necessary to give students instant feedback on their exam results by projecting their scores onto the screen, since this will facilitate their self-evaluation.
2) Teachers should not give up on becoming computer literate in order to give their students the necessary technological help. Additionally, this will improve students' favorable perceptions and help them do better on exams.
3) To acquaint themselves with the CBT process, nursing students ought to experience a mock CBT prior to their licensure exam.
4) For computer-based test licensure examinations, the Nursing and Midwifery Council and school heads must provide a suitable atmosphere and a sufficient number of operational computers.

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