



SUSTAINABILITY AND IMPACTS OF COMPUTER-BASED TEST (CBT) VIS-À-VIS THE LEGAL FRAMEWORK IN HIGHER EDUCATION

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Abstract

The advent of computer-based test (CBT), has made remarkable footprint in higher education system in Nigeria. On the contrary, despite the usefulness of CBT, there exist flaws associated with its implementation, such as inadequate availability of computer skilled Lecturers, large number of computer illiterate students who are not well acquainted with the use of mouse, keyboards or other components of the computer. This paper identifies these flaws as negative impacts alongside with the positive impacts. The desire to curtail these flaws and sustain positive impacts in the higher education system, gave rise to this paper. To do this effectively, this paper adopts the doctrinal legal research methodology and researches on the sustainability and impacts of computer-based test (CBT) vis-à-vis the legal framework in higher education. On this premise, this paper recommends vast computer knowledge as part of the criteria for recruitment of Lecturers and admission of students in higher education.

KEYWORDS: Computer-Based Test, Legal Framework, Higher Education.

1. INTRODUCTION

Great Philosophers and thinkers such as Plato and Rousseau wrote much on education.¹ Plato, for instance, viewed education primarily as a process of interaction between the individual and the society in which all the characters of humanity that are embodied in the collective virtue and wisdom, direct the individual's evolutionary process.² A formal education presupposes a formalized educational system involving all the various components of the school system, that is, the teachers, the learners, a programme of study as contained in the curriculum and the clearly spelt out goals or objectives to be met by the formal education system. Formal education, whether in the pre-colonial or modern times is organized along specific lines in terms of the objectives which it is intended to achieve, the curriculum content and implementation.³ Originally, the objectives of the Nigeria formal education system were clearly spelt out in the blue print of the National Policy on Education of 1981 which represent a watershed in policy formulation for the educational development in Nigeria.⁴

In the present time, there are numerous ways of examining students in higher education; they are the traditional pen-paper (essay), Computer-Based Test (CBT), quizzes, oral examinations, multiple choice examinations, among others.⁵ Students are also examined through projects, assignments and presentations.⁶ Thus, the traditional examination is a formal examination which is generally common and administered through printed questions in which students are allowed to

¹ Peretomode V. F., *Sociology of Education: An Introductory Text for Nigerian Students*, 2nd Edn (Klass Publishers, 1994) 33.

² Ibid. at 1

³ Ibid. at 1

⁴ Peretomode V. F., Op. Cit., 35.

⁵ Kamoru Olayiwola U. and Solomon Babatunde O., 'Effect of Computer Bases Test (CBT) Examination on Learning Outcome of Colleges of Education Students in Nigeria' *Mathematics and Computer Science*, Vol. 7, No. 3, (2022) 53. Doi:10.11648/j.mcs.2022073.14 accessed 8 July 2025.

⁶ Ajinaja M., 'The Design and Implementation of Computer Bases Testing System Using Component-Based Software Engineering' *International Journal of Computer Science and Technology* 8 (1) (2017) 58-56.



answer in written form within a stipulated time to a previously unseen questions that are set in advance; and done in designated examination centres with proper invigilation that prevents any form of unlawful communication among students.⁷

With the introduction of Information and Communication Technology (ICT) to the educational learning systems, the methods of examining students have changed from the paper and pen to computer-based test which is one of the recent innovative means of assessing students.⁸ Computer-based test can be described as the use of computer hardware and software to test students on previously taught lessons which consist of multiple choice questions in objective format.⁹ Under this situation, learners read through displayed questions on screen and expected to select the correct option from the list of displayed options.¹⁰ At the back end of the computer-based test customized software, the teacher/tutor has the opportunity to select the correct option and determine allotted point upon which is automatically used to assess the learner's work on submission and this also makes it possible for the learner to immediately see his score in the test.¹¹

Sustainability on the other hand, refers to a situation whereby a developed system of operation is protected and maintained in order to retain its present usefulness and future relevance. The faster evaluation and easy accessibility of the innovated computer-based test (CBT) has made it a useful component of the new technological dispensation in the education system that need sustainability. As earlier noted, computer-based test (CBT) system is a system of assessment administered and graded on a computer rather than using traditional paper and pencil.¹² This indicates a gradual shift from paper and pen assessment work to computer-based evaluation in the higher education system. It is pertinent to state that the innovation and uses of the computer-based test is a global technological development welcomed across primary, secondary, higher education and corporate organizations in data processing and recruitment of staff due to its numerous benefits. Again the use of computer-based test offers benefits such as faster evaluation especially assessment of large number of persons, easy accessibility and data analysis as opposed to the traditional paper and pen work.

Agreeably, paper and pen assessment work has been the old tradition in data analysis and learning system. This requires much man power to be able to meet up with a given assignment or task and where adequate man power cannot be provided, the assessment becomes tedious and stressful with its attendant delay in service delivery. For instance, it is an enormous task for a university Lecturer to conduct a mid-semester's continuous assessment through paper and pen test on 300 number of students offering his course together with the semester's exams which carries heavier burden due to the paper and pen evaluation process. The advantages of faster evaluation of students' performances, easy accessibility, data analysis, amongst others without much stress and delay in service delivery have placed the use of computer-based test on a higher scale of preference over the traditional use of paper and pen.

Unfortunately, the use of computer-based test has not gained full implementation in the higher education sector in Nigeria due to some flaws which this paper identifies as negative impacts in the implementation of computer-based test. Specifically, this paper researches on the sustainability and impacts of the computer-based test vis-à-vis the legal framework in higher education. The convincing desire to curtail or eradicate these flaws in order to sustain the positive impacts in the higher

⁷ Ibid. at 6

⁸ Kamoru Olayiwola U. and Solomon Babatunde O., Op. Cit., 54.

⁹ Ibid. at 8

¹⁰ Ibid. at 8

¹¹ Burns Mary, '15 Benefits of Computer-Based Test' (12 March 2025 elearning Industry). <https://elearningindustry.com/15-benefits-of-computer-based-testing> accessed 16 July 2025.

¹² Rotimi Agbana, 'Punch Newspapers' (23 September 2023) <https://punchng.com> accessed 9 July 2025.



education system, gave rise to this paper. To effectively research and achieve this purpose, this paper is divided into five sections including the introduction. Section two discusses the positive impacts of computer-based test in higher education; section three in the same vein discusses the negative impacts of computer-based test in higher education; section four appraises the relevant legal frameworks on computer-based test while section five concludes the research and makes recommendations.

2. The Positive Impacts of Computer-Based Test in Higher Education

Under this subject head, this paper discusses the positive changes which the innovation and implementation of computer-based test has impacted into the higher education system such as in the universities, colleges of education, polytechnics, etc.

As earlier noted in this paper, computer-based test is a type of examination that is administered on a computer rather than on paper or verbally.¹³ The nature of the examinations usually conducted via computer-based test comprises of multiple-choice questions, fill-in-the blank questions and such other types of questions that can be easily scored by a computer.¹⁴ The computer-based tests are majorly used for standardized testing, certification exams and other types of assessments which exist as a highly reliable alternative to the conventional paper and pen based assessment.¹⁵ It carries all the advantages of conventional assessments together with the advantages of technology, such as automatic grading of answer sheets and single click export of results in excel format.¹⁶

The correlation between the advantages of information communication technology and that of the computer-based test on higher education are inseparable. This involves sharing and distribution of information using computers as a tool, a medium or a resource in the process.¹⁷ Its definition is obviously highlighted in relation to the benefits it offers in the higher educational system to the effect that it involves acquiring, storing, processing and distributing information by electronic means.¹⁸ Needful to say that it encompasses both the process and outcome of applying knowledge to improve human existence.¹⁹

Educationally, the innovation and implementation of computer-based test in the learning system of higher education has made tremendous positive impact that must be sustained especially its advantage of faster evaluation unlike a situation where a Lecturer will have to dissipate so much energy to teach a class of about 200 students or more and also assess them on paper and pen both at mid-semester continuous assessment and during exams. One of the major positive impacts of computer-based tests is that these tests can be graded with a single click and are highly reliable with least chance of malpractice.²⁰ Thus, it is pertinent to state that the question papers of CBTs are stored in a highly secured manner which also prevent the chances of leakage of question papers.²¹ Rightly, the innovation and implementation of the computer-based test for conducting examinations in higher education system is widely welcomed and should be sustained in Nigeria; especially where it involves a very large number of students whereby the students are called at the exam centres for

¹³Eklavvya, 'CBT (Computer Based Test) Exam' (Eklavvya.com Content, 2023) <https://eklavvya.com/content/docs/computer-based-test> accessed 15 July 2025.

¹⁴ Ibid. at 13

¹⁵ Ibid. at 13

¹⁶ Ibid. at 13

¹⁷ Lavelle L. and Nichol J., 'Intelligent Information and Communications Technology for Education and Training in the 21st Century' *British Journal of Education Technology* 31 (2) (2000) 99-107.

¹⁸ Collins S.M.H., *Dictionary of Computing*, 5th Edn. (Peter Collin Publishing, 2004) 125.

¹⁹ Chorofas D.N., 'Science and Technology' (Springer International Publishing, 2015) 109; Ellul J., 'The Technological System' (Seabury Pr, 1980) 23-33 in Abulsalam O. Ajetunmobi, *Information and Communication Technology Law in Nigeria – A Comparative Reader* (Princeton and Associates Publishing Co. Ltd, 2017) 3.

²⁰Eklavvya, 'CBT (Computer Based Test) Exam' (Eklavvya.com Content, 2023) <https://eklavvya.com/content/docs/computer-based-test> accessed 15 July 2025.

²¹ Ibid. at 20



examination, unlike written exams that involve the use of paper and pen.²² Examining students properly and effectively is an integral part of the learning system, and as such, this paper recommends full implementation of computer-based test as a major means of assessing students' abilities and performances in all higher institutions of learning. Conducting examinations on students through the medium of CBT is an effective way of assessing students on what have already been taught by lecturers in the classroom work.

Generally, examination is one of the most widely used means of assessing learning and capability of students.²³ It is an important part of the teaching and learning process of education that allows lecturers to evaluate their students after teaching.²⁴ The rationale is to the effect that examination is used to determine the extent to which course objectives in the education system are achieved.²⁵ Teaching and learning system of education can become efficient when students sit for examination or test in order to measure the extent students have understood the instruction given and also the lecturer can as well assess himself or herself based on the performance of the students.²⁶

2.1 Categories of Computer-Based Test (CBT)

Computer-based testing is broken down into two categories; Linear/Fixed computer-based test and Adaptive computer-based test.²⁷ Computer-based linear and fixed tests are most like paper-based tests in that they use a random method and can be administered to a fixed set of questions to provide a modest security benefits.²⁸ Linear computer-based test could be referred to as a full length examination in which the computer selects a variety of questions for each individual without taking into account their level of performance.²⁹ When an examinee answers a question correctly on computer-based adaptive testing, the test item that follows thereafter is slightly more difficult; and until a question is answered incorrectly, the difficulty of the questions presented to the examinee continues to rise.³⁰ Thus in a computer-adaptive test, each student gets questions that are difficult enough for their abilities and the answer to each question including all previous responses are used by the computer to decide which question will be asked next.³¹ This paper identifies this practice as being very significant to the effect that it helps to reduce or eliminate examination misconduct due to the fact that different questions can be administered to different examinees despite they are in the same exam hall.

2.2 Benefits of CBT in Examining Students of Higher Education

²² Ibid. at 20

²³ Kamoru Olayiwola U. and Solomon Babatunde O., 'Effect of Computer Based Test (CBT) Examination on Learning Outcome of Colleges of Education Students in Nigeria' *Mathematics and Computer Science*, Vol. 7 (3) (2022) 53-58. Doi:10.11648/j.mcs.2022073.14 accessed 8 July 2025.

²⁴ Ibid. at 23

²⁵ Abdulkareem S. and Nathan N., 'Computer Based Test (CBT) System for GST Exams in Adamawa State University' *Mubi, Asian Journal of Research in Computer Science*, 2 (1) (2018) 1-11; Bassey A.B.N., 'Factors Influencing Students' Performance in Computer-Based Testing in Cross River State, Nigeria (Power Supply and Inadequate Computer)' *International Journal of Quantitative and Qualitative Research Methods*, 8 (2) (2020) 25-23.

²⁶ Omemu F., 'Causes of Examination Malpractice in Nigeria Schools' *British Journal of Education* 3 (7) (2015) 34-41.

²⁷ Okah-Tim Elegant Joy, 'Impact of Computer-Based Tests on the Quality of Education in Nigeria' *International Journal of Information Technology and Computer Engineering* ISSN: 2455-5290 Vol.03, (03) (2023) <https://journal.hmjournals.com/index.php/IJITC>, DOI:https://doi.org/10.55529/ijitc.33.6.14 accessed 8 July 2025.

²⁸ Ibid. at 27

²⁹ Alabi A. T. et al, 'The Use of Computer-Based Testing Method for the Conduct of Examinations at the University of Ilorin' *International Journal of Learning and Development*, 2 (3) (2012) 68-80 in Okah-Tim Elegant Joy, Op. Cit. n.27

³⁰ Ibid. at 29

³¹ Ibid. at 29.



The innovation and implementation of computer-based test in examining or assessing students' abilities and performance in higher education has brought so much benefits to the system than the formal educational traditional paper and pen assessment. The traditional paper and pen assessment only evaluates students' cognitive abilities as opposed to e-examination where both cognitive and practical abilities can be evaluated.³² Again, if the e-examination based or e-testing software is well structured and designed, automated assessment can properly and comprehensively assess students in three domains of learning, such as Cognitive, Psychomotor and Affective (CPA).³³

The Nigeria Universities and other tertiary institutions now register and conduct e-examination for their students during semester examinations and also in admission selection test as a result of the numerous benefits of CBT.³⁴ The benefits of computer-based test to the educational system includes;³⁵ precision evaluation through adaptive testing where the next question to be presented could be determined by prior response(s), creation of digital records of students' growth and development which can easily be passed along from grade to grade, greater flexibility with respect to location and timing of examinations, improved reliability because machine marking is much more reliable than human marking, impartial assessment-computerized marking does not know the students and so it neither favour nor witch-hunt any candidate, greater storage efficiency-tens of thousands of answer scripts can be stored on a portal hard disk of server compared to the physical space required for paper scripts, enhances question styles which incorporate interactivity and multimedia, question banks and randomization of questions and response orders to reduce cheating, immediate feedback can be given to the examinee, improved test security due to electronic transmission and encryption, saves time and man power for the test administration and environment conservation as plants used for paper and pen making will be preserved.³⁶

The use of computer-based test in exams also lower long-term cost, that is, in the course of time, computer-based test is going to be cheaper with time once we have all the computer systems in the next 10 to 15 years, nobody will be complaining.³⁷ Again, computer-based test has numerous benefits compared to the traditional use of paper and pen method of assessing students due to its advantages of immediate scoring and feedback for multiple choice questions.³⁸

Assessing students of a class of large numbers is one of the problems facing higher education, particularly when the traditional paper and pen method is being used for exams. Thus, in this new dispensation, there is a global shifting of interest towards the use of computer-based test in academic activities, more importantly in students' assessments.³⁹ More often than not, the introduction of

³² Abubakar A.S. and Adebayo F.O., 'Using Computer Based Test Method for the Conduct of Examination in Nigeria; Prospects, Challenges and Strategies' *Mediterranean Journal of Social Sciences* 5 (2) (2014) 47.

³³ Obiom G. et al, The Automation of Educational Assessment in Nigeria: Challenges and Implications for Pre-Service Teacher Education. 'A Paper presented at the 39th Annual Conference of the International Association for Educational Assessment (IAEA)' Tel-Aviv Israel, (2013).

³⁴ Onyibe C.O., et al, 'Computer Based Testing Technique in Nigeria: Prospect and Challenges' *Journal of Information Engineering and Applications* ISSN2224-5782(print) ISSN2225-0506(online) Vol.5, (10) 2015. www.jiste.org accessed 17 July 2025.

³⁵ Ibid. at 34

³⁶ Ibid. at 34

³⁷ Okoronkwo C., 'Appraising JAMB'S Computer-Based Test' (2015). NANFeatures/Vol.9 (93) (2015) in Okah-Tim Elegant Joy, 'Impact of Computer-Based Tests on the Quality of Education in Nigeria' *International Journal of Information Technology and Computer Engineering* ISSN: 2455-5290 Vol.03, (03) (2023) <https://journal.hmjournals.com/indexphp/IJITC>, DOI:<https://doi.org/10.55529/ijitc.33.6.14> accessed 8 July 2025.

³⁸ Ejim Samson, 'An Over-view of Computer-Based Test' (2018) <https://doi.org/10.13140/RG.2.2.32040.88326>. Accessed 17 July 2025.

³⁹ Ebingbo S.O., et al, 'Perceived Effectiveness of Computer-Based Test Examination Mode for Large Classes Among Undergraduates of Nigeria Universities: Implication for Social work' *Journal of Social Work in Developing Societies* 3 (1) (2021) 62-77.



computer-based test into schools examinations has controlled to a very great extent over examination malpractice in Nigeria education system; this allows schools to set questions across the school curriculum and ensures international best practices in the course of examining students.⁴⁰ The JAMB has long adopted the use of computer-based test exams to eradicate examination malpractice in public examinations.⁴¹

Further on the benefits of computer-based test, this paper recapitulates fifteen benefits of computer-based test as scholarly outlined by Burns Mary.⁴² According to the Author, many online programmes take their assessments offline but computer-based/online assessment offers numerous benefits to online learning programme.⁴³ These benefits are; multiple-test administrations, dynamic and individualized assessments, immediate grading, helps with open-ended assessment, easier feedback, vertically and horizontally aligned assessments, value-added growth measures, uncover students thinking, engaging, analytics for the instructor and learner, greater amount of test items, help learners with disabilities, incorporate other types of technology, improves writing and secure testing.⁴⁴

Sequel to the above, it is pertinent and right to say that the innovation of computer-based test in higher education has many advantages over the formal traditional use of paper and pen for assessing students in higher education such as universities, colleges of education and polytechnics. However, it is rather unfortunate that not all institutions in the higher education sector are fully utilizing the advantages of this innovation due to some militating factors which this paper identifies and examines in the next section as negative impact of computer-based test.

3. The Negative Impact of Computer-Based Test (CBT)

As earlier noted, one notable benefit of computer-based test in higher education is the ability of immediate scoring and grading feedback for multiple choice questions which gives room for authentic assessments because of the use of technology.⁴⁵

That being as it were, there are however negative side-attendant effects or factors militating against the full acceptability and smooth operations of CBT in the higher education sector. For instance, the use of computer-based test requires sufficient facilities, security of software, storage (backup) procedures should there be technological failure, the adequate time for lecturers and students to get familiar with new technologies, tools to meet new challenges as they arise compared to conventional practices.⁴⁶

There are challenges of frequent loss of network connection, malfunctioning of computers already installed for the purpose of computer-based test examinations in the course of examination and insufficient time allocated for the computer-based test examination.⁴⁷ Inadequate ICT

⁴⁰ Kamoru Olayiwola U. and Solomon Babatunde O., OP. Cit. n.23.

⁴¹ Ojerinde D., 'Reducing Examination Malpractice Through Computer Based Testing' (2015). Retrieved from <https://www.guardianonline.com>; Ikechukwu N.B., et al, 'Influence of Computer-Based Test (CBT) on Examination Malpractice in Public Examination' *JOSR Journal of Research and Method in Education* 7 (2) (2017) 80-84.

⁴² Burns Mary, '15 Benefits of Computer-Based Test' (12 March 2025 elearning Industry). <https://elearningindustry.com/15-benefits-of-computer-based-testing> accessed 16 July 2025.

⁴³ Ibid. at 42

⁴⁴ Ibid. at 42

⁴⁵ Ejim Samson, 'An Over-view of Computer-Based Test' (2018) <https://doi.org/10.13140/RG.2.2.32040.88326> accessed 17 July 2025.

⁴⁶ Ibid. at 45

⁴⁷ Oladimeji O.F. and Mwuese B.C.H., 'Computer Based Test: Panacea to Undergraduate Students' Performance in Olabisi Onabanjo University, Ogun State Nigeria' *Educational Research*, 9 (3) (2018) 50-57 <https://dx.doi.org/10.14303/er.2018.219>



infrastructure⁴⁸ is also another factor militating against the smooth operation of CBT in higher institutions. This happens more often than not in computer-based test examination centres with larger number of students taking the exams in small halls.

Another challenge complained of is lack of adequate time and system or software failures that hinder the smooth operations of computer-based test examination in higher institutions.⁴⁹ Implementing computer-based test examination is very demanding and requires high technological know-how due to the fact that it demands a secure testing environment, one that prevents students from seeking answers by scanning their computer hard drives, instant messaging or e-mailing friends or browsing the internet.⁵⁰ The use of ICT for test administration in Nigerian higher institutions is structured towards changing the state of test administration but the integration has not been fully realized and utilized in the nation's higher education sector.⁵¹

Furthermore, in the higher education sector in Nigeria, the computer-based test examination has been introduced but observations have revealed to the effect that most of the Lecturers are not adequately disposed to it and this negative situation has added to other factors militating or confronting the full implementation of computer-based test assessment in higher institutions of Nigeria.⁵² It is therefore necessary to state that, in order to fully implement computer-based test assessment for students in the higher institutions, there is a need to ensure that the Lecturers who are the facilitators of learning are involved and well equipped with the necessary skills and attitudes needed for the process of the new innovative CBT assessment.⁵³

It is pertinent to state that assessment and evaluation of students using CBT by Lecturers who are not ICT compliant may pose a significant danger both on the students' performance and the Lecturers' job satisfaction and adjustment.⁵⁴ The Lecturers must, as a matter of necessity, be exposed to ICT and CBT assessment skills so that they can apply such skills when administering and scoring computer-based technology examinations and tests.⁵⁵

On the above premise, this paper argues that despite the flaws and the various challenges befalling the full implementation of computer-based test in assessing students of higher education system, the benefits it has impacted into the higher education learning system is overwhelming and should be sustained. In this regard, the challenges must be attended to through vast seminars and workshops on computer-based test (CBT) training and the administration of it in conducting examinations. Adequate infrastructures must also be provided to facilitate smooth operation. This will help to minimize or eradicate the negative impacts of computer-based test (CBT).

⁴⁸ Okocha T., et al, 'Students Perception and Acceptance of Computer-Based Testing: A Case Study of Landmark University Students' *Journal of Digital Innovations and Contemporary Research in Science, Engineering and Technology* 5 (1) (2017) 25-32.

⁴⁹ Ebingbo S.O., et al, perceived Effectiveness of Computer-Based Test Examination Mode for Large Classes Among Undergraduates of Nigerian University: Implications for Social Work. *Journal of Social Work in Developing Societies*, 3 (1) (2021) 62-77.

⁵⁰ Onyibe C.O., et al, 'Computer Based Testing Technique in Nigeria: Prospect and Challenges'. *Journal of Information Engineering and Applications*, ISSN2224-5782(print) ISSN2225-0506 (online) Vol.5 (10) (2015) www.jiste.org accessed 17 July 2025.

⁵¹ Ibid. at 50

⁵² Ifeyinwa Osegbo and Vera Nwadinobi, 'Computer-Based Technology (CBT) Assessment Implementation in a Nigerian Higher Institution and a Lecturer's Work Stories: Implication for E-Counselling' *Journal of Advanced Corporate Learning (iJAC)* Vol. 12 (3) (2019) 35.

⁵³ Ibid. at 52

⁵⁴ Ifeyinwa Osegbo and Vera Nwadinobi, 'Computer-Based Technology (CBT) Assessment Implementation in a Nigerian Higher Institution and a Lecturer's Work Stories: Implication for E-Counselling' *Journal of Advanced Corporate Learning (iJAC)* Vol. 12 (3) (2019) 42.

⁵⁵ Ibid. at 54



Having examined the positive and negative impacts of computer-based test in higher education learning system, this paper hereinafter appraises the legal frameworks that directly or indirectly govern the administration of computer-based test in higher education.

4. Legal Frameworks on Computer-Based Test in Higher Education

Scarcely one can find a specific legislation standing alone with legal framework solely on the implementation of computer-based test for higher education examinations or tests. However, there are various education-related legislations especially with regards to data management, security and data processing. These legislations provide for international best practices that indirectly regulate the use of computer-based test in assessing students in the higher education sector.

Some of these relevant education-related legislations are; Nigeria Data Protection Act (NDPA) 2023; Nigeria Data Protection Regulation (NDPR) 2019, Nigeria Data Protection Regulation Implementation Framework 2020, Cybercrime (Prohibition and Prevention Etc) Amendment Act, 2004, National Universities Commission Act (1988)/Cap E3 Laws of the Federation of Nigeria (LFN), 2004, the Education Reform Act 2007, amongst others. These laws govern areas that are related to the security of data processing and as well the aspect of the computer network system which are integral part of the computer-based test (CBT) systems. Thus, this paper hereunder examines the relevant legal frameworks of some of the legislations as follows.

4.1 Education Reform Act, 2007

The Education Reform Act of 2007, hereinafter referred to as the Act, was enacted by the National Assembly of the Federal Republic of Nigeria. The Act established, amongst other regulatory bodies, the Tertiary Education Commission and the National Examination Regulatory Council which are discussed in this section of the paper.

4.1.1 Tertiary Education Commission

The Act merged the National Universities Commission (NUC), the National Board for Technical Education (NBTE) and the National Commission for Colleges of Education (NCCE) into one body to be known as the Tertiary Education Commission, charged with the responsibility of regulating all Federal Government owned tertiary institutions in Nigeria.⁵⁶ The Tertiary Education Commission was established by the Act,⁵⁷ as a body corporate with perpetual succession and a common seal and may acquire, hold and dispose of real and personal property;⁵⁸ sue and be sued;⁵⁹ and so far as is possible for a body corporate, exercise the rights, powers and privileges and incur the liabilities and obligations of a natural person of full age and capacity.⁶⁰

The Commission is charged with, amongst others, the following responsibilities:

- i. To promote research and development in support of the industry in Nigeria.⁶¹
- ii. Improve on the carrying capacity of the universities, particularly given their inability to accommodate a vast number of applicants.⁶²
- iii. To reduce huge overhead cost by consolidating the supervisory agencies (National Universities Commission, the National Board for Technical Education (NBTE) and the National Commission for

⁵⁶ Education Reform Act 2007, s 25.

⁵⁷ Education Reform Act 2007, s 23.

⁵⁸ Education Reform Act 2007, s 23 (2) (a).

⁵⁹ Education Reform Act 2007, s 23 (2) (b).

⁶⁰ Education Reform Act 2007, s 23 (2) (c).

⁶¹ Education Reform Act 2007, s 25 (b).

⁶² Education Reform Act 2007, s 25 (c).



Colleges of Education (NCCE); the Boards of the three Parastatals and 37 Governing Councils, Chief Executives, Registrars and other principal officers.⁶³

iv. To improve funding to universities in areas of infrastructural and instructional facilities, research, scholarly publications and staff training and development through the consolidation of Education Tax Fund intervention.⁶⁴

4.1.2 Functions of the Tertiary Education Commission

The Tertiary Education Commission established under the Act is empowered to carry out the following functions:

i. To take over the functions which were before the commencement of this Act performed by the National Universities Commission (NUC), the National Board for Technical Education (NBTE) and the National Commission for Colleges of Education (NCCE) as they relate only to the training of high-level skilled manpower.⁶⁵

ii. To advise the President, the Governors of the States, through the Minister on the creation of new universities.⁶⁶

iii. To prescribe minimum standards for all universities in the Federation and to accredit their degrees and other academic awards in accordance with guidelines as may be laid down from time to time and approved by the President through the Minister.⁶⁷

iv. To prepare, after consultation with all Governments in Nigeria and the universities, the industry, the National Manpower Board and such other bodies as it considers appropriate short and long term master plans for the balanced and coordinated development of all universities in Nigeria.⁶⁸

v. To make recommendations to the Minister on the regulations necessary to stem the prevalence of all forms of social ills such as examination malpractices, cultism and sexual harassment in tertiary education institutions in Nigeria and ensure that offenders under regulations made by the Minister are prosecuted by the appropriate authority under the appropriate law.⁶⁹

The Act also provided to the effect that the Commission shall have the power to develop and maintain minimum standards in tertiary education institutions in Nigeria.⁷⁰

4.1.3 National Examination Regulatory Council

Section 39 (1) of the Act established the National Examination Regulatory Council (NERC), hereinafter referred to as the Council. The Council, established under the Act is empowered to carry out the following functions:

i. To serve as an umbrella institution responsible for driving the technological convergence of the Examination Bodies.⁷¹

ii. To institute the application of Information and Communication Technology into examination management process in Nigeria with a view to reducing the occurrence of examination malpractices, overlaps, duplication and promote cost savings.⁷²

⁶³ Education Reform Act 2007, s 25 (f).

⁶⁴ Education Reform Act 2007, s 25 (g).

⁶⁵ Education Reform Act 2007, s 30 (1) (a).

⁶⁶ Education Reform Act 2007, s 30 (1) (b).

⁶⁷ Education Reform Act 2007, s 30 (1) (c).

⁶⁸ Education Reform Act 2007, s 30 (1) (d).

⁶⁹ Education Reform Act 2007, s 30 (1) (i).

⁷⁰ Education Reform Act, 2007, s 30 (3).

⁷¹ Education Reform Act, 2007, s 45 (a).

⁷² Education Reform Act, 2007, s 45 (b).



iii. To retain the existing four examination bodies by repealing and re-enacting, incorporating or amending the National Business and Technical Examination Board Act 1993, the National Examination Council Act 2002, West African Examinations Council and the Joint Admissions and Matriculation Board 1978.⁷³

iv. To coordinate the activities of the Examination Bodies in Nigeria.⁷⁴

v. To invest its funds in any form of investments and securities in accordance with the appropriate law.⁷⁵

vi. To develop and enforce a code of conduct for examination conducted by the Examination Bodies established under this Act.⁷⁶

4.2 Nigeria Data Protection Act, 2023

This Nigeria Data Protection Act, 2023, hereinafter referred to as the NDP Act provides legal framework for the protection of personal information, regulation of the processing of personal information and for related matters. The NDP Act was enacted by the National Assembly of the Federal Republic of Nigeria and came into force on the 12th day of June 2023. Parts of the objectives of the NDP Act are:

i. To safeguard the fundamental rights and freedoms and the interests of data subjects as guaranteed under the Constitution of the Federal Republic of Nigeria, 1999 (as amended).⁷⁷

ii. Provide for the regulation of processing of personal data.⁷⁸

iii. Promote data processing practices that safeguard the security of personal data and privacy of data subjects.⁷⁹

iv. Ensure that personal data is processed in a fair, lawful and accountable manner.⁸⁰

v. Protect data subjects' rights and provide means of resource and remedies in the event of the breach of the data subjects' rights.⁸¹

vi. Ensure that data controllers and data processors fulfil their obligations to data subjects.⁸²

The NDP Act also provided for the establishment of an impartial, independent and effective regulatory Commission known as the Nigeria Data Protection Commission (hereinafter referred to as the NDP Commission), to superintend over data protection and privacy issues, supervise data controllers and data processors.⁸³

4.2.1 Function of the NDP Commission

Accordingly, the NDP Commission is empowered under section 5 to perform the following functions:

i. To regulate the deployment of technological and organizational measures to enhance personal data protection.⁸⁴

⁷³ Education Reform Act, 2007, s 45 (c).

⁷⁴ Education Reform Act, 2007, s 45 (d).

⁷⁵ Education Reform Act, 2007, s 45 (e).

⁷⁶ Education Reform Act, 2007, s 45 (f).

⁷⁷ Nigeria Data Protection Act 2023, s 1 (1) (a).

⁷⁸ Nigeria Data Protection Act 2023, s 1 (1) (b).

⁷⁹ Nigeria Data Protection Act 2023, s 1 (1) (c).

⁸⁰ Nigeria Data Protection Act 2023, s 1 (1) (d).

⁸¹ Nigeria Data Protection Act 2023, s 1 (1) (e).

⁸² Nigeria Data Protection Act 2023 s 1 (1) (f).

⁸³ Nigeria Data Protection Act 2023, s 1 (1) (g).

⁸⁴ Nigeria Data Protection Act 2023, s 5 (a).



- ii. Foster the development of personal data protection technologies in accordance with recognized international best practice and applicable international law.⁸⁵
- iii. Accredit, license and register suitable persons to provide data protection compliance services, where necessary.⁸⁶
- iv. Register data controllers and data processors of major importance.⁸⁷
- v. Promote public awareness and understanding of personal data protection, rights and obligations imposed under this Act and the risk to personal data.⁸⁸
- vi. Collaborate with any relevant ministry, department, agency, body, company, firm or person for the attainment of the objectives of this Act.⁸⁹

Following all the above legal frameworks, there is no direct provisions regulating computer-based test assessment in higher education, however, the objectives and the functions of the Commissions are very relevant to the promotion and sustainability of CBT examinations in higher education. Thus, a perusal at the provisions of these legislations revealed that they indirectly regulate the administration of CBT examination with regards to educational funding, data management, data processing, provisions of infrastructural and instructional facilities.

Section 30 of the Education Reform Act makes provisions for the training of high-level skilled manpower. If this provision is properly implemented, the challenge of lack of skilled Lecturers or supervisors in computer-based test will be remedied. The Act provides a platform of training for Lecturers and other personnel in the higher education sector to be trained in computer-based technology. The section also provides for enforcement to eradicate all forms of social ills such as examination malpractices. Similar provision is made under section 45 (b) of the Act. One of the benefits of CBT examination are the eradication of examination malpractices among students.

Furthermore, the Nigeria Data Protection Act made provisions for the protection and security of data which indirectly regulate the protection of the computer-based test data processing in such a fair, lawful and accountable manner. These related legislations give legal efficacy and proficiency to the administration of computer-based test assessment in higher education learning system in Nigeria. A proper and effective enforcement of all these legal provisions vis-à-vis the administration of computer-based test assessment in higher education, there will be a sustainability for the numerous benefits of CBT examinations.

5. CONCLUSION

The innovation and implementation of computer-based test in the assessment of students in higher education system is of great significance. Computer-based test assessment has a global recognition, owing to the fact that existence has become technological-based on planet earth. Computer-based test is part of the new technologies invented to meet new challenges as they arise compared to conventional practices of the use of paper and pen in assessing students. Notwithstanding the negative impacts arising from the implementation of computer-based test assessments, there are overwhelming benefits impacted into the higher educational system which must be explored in the education sector.

⁸⁵ Nigeria Data Protection Act 2023, s 5 (b).

⁸⁶ Nigeria Data Protection Act 2023, s 5 (c).

⁸⁷ Nigeria Data Protection Act 2023, s 5 (d).

⁸⁸ Nigeria Data Protection Act 2023, s 5 (f).

⁸⁹ Nigeria Data Protection Act 2023, Section 5 (h).



This paper concludes that the negative impacts or challenges associated with the use of computer-based tests such as; lack of adequate CBT facilities or ICT infrastructure, frequent loss of network connection, malfunctioning of CBT installed computers in the course of exams, security of software, storage (back-up) procedures in case of technological failure, lack of skilled-knowledge of computer among Lecturers and students are not death sentence to deter people from exploring the full benefits of computer based test. The challenges can be eradicated, following the recommendations of this paper.

Sequel to the above, this paper makes the following recommendations:

Computer literacy should be made a compulsory part of the criteria for recruitment of Lecturers and admission of students into the higher education learning system.

All institutions of higher learning should organize a regular seminars and workshops on computer-based test and information communication technology for both Lecturers and Students.

There should be adequate funding from the Governments to promote smooth operations of computer-based test assessments as provided for under section 30 (1) paragraphs (e) and (f) of the Education Reform Act.

Governments at both Federal and State levels should enact a Legislation directly on the administration of Computer-Based Test (CBT) assessment to regulate all examinations in higher education, such as the Universities, Polytechnics and Colleges of Education in Nigeria.

Institutions at the basic education and higher education sectors should carry out a regular orientation programme on the use and benefits of computer-based test as well as information and communication technology in the society.

Examining students properly and effectively is an integral part of the learning system, and as such, this paper recommends full implementation and sustainability of computer-based test as a major means of assessing students' abilities and performances in all higher institutions of learning.


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