

Digitalization and National Commission for Colleges of Education in Nigeria

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Abstract. *The study discussed the benefits of digitization of National Commission for Colleges of Education in Nigeria. The study revealed that improvement in the operation, support effective accreditation programme aid effective decision making, effective data management, data security and reduction in operation cost are the benefits of digitization of National Commission for Colleges of Education in Nigeria. Based on the findings, the study suggests the following: increment in the budgetary allocation for the implementation of digitization of National Commission for Colleges of Education project. Government should provide necessary support to the commission to ensure the realization of the project of digitization of National Commission for Colleges of Education by setting up committee to supervise the commission for the programme. Private institutions, religious institutions and international organizations should support the commission with supply of digital infrastructure facilities and capacity building programme for staff of the commission.*

Key words: *Digitization, Digitization of the National Commission for Colleges of Education, National Commission for Colleges of Education.*

1.0 Introduction

Colleges of Education are mandated to produce teachers alone; they are not expected to produce other caliber of professionals. In other words, teacher education is the sole responsibility of Colleges of Education. As a result, government shall continue to give major emphasis in all of its planning and development. Colleges of Education provide the minimum qualification (Nigeria certificate in Education [NCE]) for entry into the teaching profession in Nigeria. To achieve the goal of teacher education, the NPE (2004) conditioned that Colleges of Education are expected to produce highly motivated, conscientious and efficient classroom teachers for all levels of Nigeria's educational system; encourage the furtherance of the spirit of enquiry and creativity in teachers; help teachers to fit into the social life of the community and the society at large and enhance their commitment to national goals; provide teachers with the intellectual and professional background adequate for their

assignment and make them adaptable to change; and enhance teacher's commitment to the teaching profession, Ololube (2016).

To ensure full realization of the objectives and goals of Colleges of Education in Nigeria, the federal government of Nigeria established National Commission for Colleges of Education, Olaleye & Oyewole (2016). The National Commission for Colleges of Education is a parastatal of the FME established January 17th 1989 by Decree 3 (as amended by Act No. 11 of 1993). The establishment of the Commission was a resultant effect of the utmost importance accorded to quality teacher education by the Federal Government of Nigeria. Since its inception, the Commission has continuously pursued the goals of quality assurance in teacher education. It has continuously reviewed and standardized the curriculum of colleges of education in the country through programme accreditation, which is carried out once in five years for all the 28 federal colleges of education, 48 state colleges of education, 152 private colleges of education, 7 other NCE Awarding Institutions and 11 Polytechnics that runs NCE programmes under the Commission.

The National Commission for Colleges of Education was established by Decree (now Act) 3 of 17th January, 1989 (Amended Act 12 of 1993) as a completion of tripod of excellence in the supervision of higher education in the country. The establishment of the commission was a resultant effect of the utmost importance accorded to quality teacher education by the Federal Government of Nigeria. Since inception, the Commission has continuously pursued goals of quality assurance in teacher education. The pride of the commission is based on the seminal philosophy in the National Policy on Education (NAPE) which states that "no education can rise above the quality of its teachers. For over one and a half decade of its existence, the commission had ensured that teacher education contributed immeasurably into national development. In pursuit of its objectives, the commission had standardized and continuously reviewed the curriculum of the Colleges of Education. This constant review of the curriculum had strengthened the capacity of Nigeria Certificate in Education (NCE) graduates. After the laying down of minimum requirements for the Colleges of Education, the Commission had gone ahead to accredit their courses. The accreditation of the courses is carried out once in five years.

The core functions of National Commission for Colleges of Education according to Ogunode and Samuel (2022) includes;

(a) Advises Federal Government on:

- (i) all aspects of teacher education falling outside the universities and polytechnics;
- (ii) establishment and location of colleges of education;
- (iii) financial requirements of federal colleges of education;
- (iv) periodic review of terms and conditions of service of personnel in colleges of education.

(b) Executive functions include:

- (i) preparation of periodic master plan for a balanced and coordinated development of colleges of education;
- (ii) receipt and disbursement of federal grants to federal colleges of education;
- (iii) establishment and maintenance of minimum standards for all programmes of Teacher Education and accrediting their certificate and awards.

1.2 Theoretical Framework

The systems approach was adopted for the study. The systems approach to educational institutions such as National Commission for Colleges of Education looks at the institutions as a system in the same way. The approach sees the educational institutions as a series of systems and subsystems that interact with one another to create the overall educational system. In practical, a system refers to a cohesive collection of resources, activities and information. In the systems approach to educational management, resources are more focused on achieving a collective goal for an education rather than operational output.

The systems theory of educational management asserts that any organization is a single, unified system of interrelated parts or subsystems. Each part of the overall system is dependent on the others and cannot function optimally without them. Therefore, if factors are present that adversely affect one subsystem within an organization, it's likely these factors may adversely affect other subsystems, too. This can result in impacts on the entire system to a certain extent. This framework presents an organization as a natural ecosystem, where each element is interdependent.

In the application, various components of a system such as technology, human resource, facilities, supervision, training, funding etc interact with each other regularly, which is true in an educational institution like NCCE, although this can happen in different ways. For example, a human resources department is a subsystem of the commission and probably interacts with every other subsystem. The same principle applies to the human resources department, although the nature of its interactions can vary. For example, the academic programme department might interact with the ICT (digital) department to arrange hardware use, with Education Support and International Partnerships for support and partnerships, with Planning Research and Statistics for data, with the Finance & Supply department to manage salaries and with the Information and Communication Services department to devise press releases. So, every department and component are very important in the realization of the NCCE' mandate. Based on this, the government should ensure NCCE are provided with adequate human and materials resources to support full digitization of National Commission for Colleges of Education in Nigeria.

2.0 Review of Literature

2.1 Concept of Digitization and Digitization of the National Commission for Colleges of Education

Digitization is the transfer of information from a physical format to a digital environment, which is particularly relevant in the business world. Digitalization concisely as “the action and effect of digitalizing”, with this verb having two meanings. The first, “to record data in digital form” and the second, “to convert or encode into digits data or information of a continuous nature, such as a photographic image, a document or a book”. Thus, an example of digitization would be the transfer of a company's files to the cloud, abandoning the physical storage of files, dossiers or notebooks. Digitalization refers to the conversion of the physical into digital, while digital transformation implies a fundamental change in the business model, Telefinica (2023; Caleb (2022).

The digitization of the National Commission for Colleges of Education is a process of transitioning the commission's operations from physical to digital. This includes converting documents, records, and processes into electronic form, as well as utilizing technology to streamline administrative tasks and enhance communication and collaboration among stakeholders. Digitization allows for greater efficiency and accessibility of information, ultimately improving the overall functioning of the commission. It also enables better data analysis and decision-making, Bello (2023). Several national and international policy frameworks support this digital shift. For example, the Nigerian National Policy on Education, the Digital Protocol Network, the National Digital Policy launched by the World Economic Forum, and the United Nations' 2030 Agenda for Sustainable Development all promote technology integration in education. Additionally, the National Policy on Information and Communication Technology (ICT) in School Education emphasizes digital learning as a key pathway for equipping students with labor market- relevant skills, Adegboyega, Asemota & Edinoh (2025).

3.0 Method

This paper discussed digitalization of National Commission for Colleges of Education in Nigeria. Among other things discussed was the concept of digitalization, digitalization of National Commission for Colleges of Education and its benefits. The study used secondary data. The content analysis method was adopted for the selection of data. The data were collected from the following sources review of published articles from reputable international journals such as CEON, Elsevier, Hindawi, JSTOR, IEEE, Learn Techlib SAGE, Nebraska and Springer amongst others (adapted from Ogunode, & Ndayebom (2023).

4.0 Result and Discussion on Benefits of Digitization of National Commission for Colleges of Education in Nigeria

A) Improvement in operation

The digitization of information has significantly impacted the education sector in Nigeria, particularly in regards to the establishment of the National Commission for Colleges of Education (NCCE). The NCCE serves as the regulatory body for colleges of education in Nigeria, ensuring the quality and standardization of teacher education programs across the country. Through the use of digital tools and platforms, the NCCE has been able to streamline processes and improve the efficiency of its operations, resulting in a more effective and transparent education system. Abubakar, (20222); Ogunode & Ndayebom, (2023); and Ogunode, Ayoko, and Orifah, (2023) noted that saving time when consulting data is another of the advantages of digitisation. This is especially important in professional profiles that may have to make these queries on a recurring basis, since the time not invested in this task will be very high throughout the working day, which can also be devoted to other tasks. Thus, productivity will also be improved, Bello (2023); Caleb, (2022).

B) Support effective accreditation programme

Accreditation according to Ogunode, Abdulrazak, and Abubakar, (2023) is a planned and systematic process meant for assessment and checking of a programme or institutions with a set out standard and requirements weather the programme or institutions meet with the set standard to be given a status of recognition for a period of time. The objective of accreditation includes; to ensure quality assurance, to prevent corruption practices and promote accountability in educational institutions, to promote quality education and maintained quality status in schools; to aid implementation of education policies. The National Commission for Colleges of Education is a parastatal of the FME established for regulating all NCE Awarding institutions and Colleges of Education in Nigeria. The digitalization of the National Commission for Colleges of Education can fully support accreditation, resource inspection, and verification processes of the Commission. Accreditation digitization is the process of transferring traditional paper-based accreditation systems into digital formats. This can include digitizing paper forms, streamlining accreditation processes through online portals, or creating digital databases of accredited entities. With the increasing use of technology in academia, digitalizing accreditation is becoming a more prevalent practice. This not only helps with efficiency and organization, but also allows for easier access to accreditation information and data analysis. By implementing digitalization, higher education institutions can ensure a more streamlined and transparent accreditation process. Digitalization of accreditation is the process of integrating modern technology and digital tools into academic programs accreditation process. This includes using digital resources for accreditation process, as well as automating administrative tasks such as, data collection verifying of resources, numbering and scoring of resources presented. The goal of digital accreditation is to enhance fast and efficient accreditation process, improved resources verification and improve the overall efficiency and effectiveness of accreditation. By incorporating digital tools and resources, accreditation institutions are able to keep up with the rapidly evolving landscape of technology and provide tertiary institutions with the reliable and efficient processes, Ogunode, et al (2025).

C) Aid effective decision making

Digitalization of the National Commission for Colleges of Education in Nigeria will greatly benefited the education sector in the country. By digitizing the commission, there will been an improvement in the efficiency and accessibility of educational resources and information. This would to better decision-making processes and enhanced collaboration among various educational institutions. Digitalization of the National Commission for Colleges of Education in Nigeria will facilitate:

Immediate Access to Information: digitalization allows decision makers (NCCE) to access the information they need instantly, eliminating the time that would be spent searching for physical documents on students, staff, programme and finances.

Data Analysis: Once information is in digital format, Staff of NCCE analysed them using specialised tools and software. This allows trends, pattern and insights to be identified that would not be evident by manually reviewing physical documents.

Information Integration: Digitised documents can be integrated with other school systems, such as academic staff data management or student data planning systems. This integration provides a more complete and holistic view of the business situation.

History and Record Keeping: digitalization allows an orderly and easily accessible historical record to be maintained. This is essential for evaluating past performance, comparing data and making decision based on trends over time.

Enhanced Collaboration: Digital documents can be shared and reviewed by multiple stakeholders simultaneously, facilitating collaborating and collective decision making.

Reduced Errors: Digitalization and automation of processes reduces the possibility of human error, meaning decisions are based on more accurate and reliable data.

Rapid Response: In situations requiring urgent decisions, having immediate access to digitised documents and data allows different units and department in the commission to respond quickly to problems and take advantages of opportunities.

Future Vision: With advanced analytical tools, businesses can make projections and simulations based on their data, which aids strategic planning and decision making.

Transparency: Digitalization can improve transparency in academic record and students' information for decision making, as all stakeholders can have access to the same information and understand how a certain conclusion was reached.

Compliance and audit: Decision-making also involves ensuring that regulations and standards are complied with. Digitised documents facilitate this process by allowing for fast review of document and audits, Ogunode, Abdulrazak, & Abubakar (2023).

D) Improve in the quality of data collection and analysis

Data collection, storage and management for decision making is another crucial function of the National Commission for Colleges of Education in Nigeria. Mayulu, and Tricahyadinata, (2024) and Elhoseny, Metawa, & Hassanien. (2016) maintained that the automation system in accreditation facilitates online data collection through digital questionnaires filled out by the institution's accreditation team. This process allows institutions to collect data quickly and accurately, thereby reducing the possibility of data input errors that often occur in manual processes and accurate data is an important foundation for valid evaluations. Also, Ogunode, et al 2025 concluded that through the use of digital tools and platforms, regulating institutions are able to gather and analyze data more efficiently, making the accreditation process more accurate and timely. This trend has been seen as a positive step towards modernizing the higher education system in Nigeria. With the implementation of digitalization in accreditation, institutions are able to easily carry out accreditation by tracking, supervision, inspecting, verifying and monitor academic program resources and data sent in by institutions. This process will aid fast and aid data-driven decisions making that will to enhance the quality of accreditation in the various tertiary institution. Also, digitalization of accreditation allows for more transparency and accountability in the accreditation process, leading to a more credible and reliable system. Digitalization can support effective data collection and distribution in institutions, Venkatapur, Akshay, Kulkarni, Preethi & Shreesha (2023).

E) Data Security

It is the core function of National Commission for Colleges of Education in Nigeria to protect and secure stored data of students, staff and academic programme of the Colleges of Education in Nigeria. Digitalization of National Commission for Colleges of Education in Nigeria can aid effective data security. Anugom (2016) noted that most educational institutions experience direct physical risks (such as damp, deterioration due to the passage of time or more extreme and less likely cases such as fire or flooding) when it comes to damage to materials, disappear with storage in external

memories and/or in the cloud. By allowing remote access to information, greater security measures can be offered, as well as knowing who can and cannot access these documents. Also in relation to this issue, one of the advantages is that it facilitates access from different locations without having to access the information remotely. Digitalization offers multiple layers of security that often exceed the protection capabilities of physical documents. Digitalization of National Commission for Colleges of Education according to **Lionch, (2023)** will aid:

Access Control: Digital systems allow specific permission and access level to be set. This means that only authorised persons can access, modify or delete specific documents.

Encryption: Digital documents can be encrypted to ensure that even if someone gains unauthorised access, they cannot read or use the information without the appropriate decryption key.

Backup and Recovery: Digitised documents can be backed up to multiple location or to the cloud. In the event of system failures, natural disasters or any other incident, information can be recovered quickly.

Auditing and Logging: Digital document management systems often have logging capabilities that track who accessed a document, when and what changes were made. This is invaluable for transparency and accountability.

Disaster Protection: While a fire, flood or other disaster could destroy physical documents, digital documents, especially those stored in the cloud, are protected against these risks.

Security Updates and Patches: Software systems used to store digitised document are regularly updated to address vulnerability and improve security.

Reduced Risk of Loss or Theft: Unlike physical documents, which can be easily stolen, lost or damaged, digital documents are protected against common risks, **Lionch (2023)**. Data security according to Mayulu, and Tricahyadinata, (2024) is a major concern in accreditation automation systems. Implementing encryption and two-factor authentication protects sensitive information from unauthorized access. Security is very important to maintain the integrity of accreditation data and build trust among stakeholders because a secure system prevents potential misuse of data that could harm an institution's reputation. Strong data protection enables institutions to guarantee that the information provided to the public is accurate and reliable. A sense of security for all parties involved in the accreditation process will be created and better monitoring of data access will be the benefit of the automation system. The use of strict access controls ensures only authorized individuals can access sensitive information. This creates a safer environment for managing accreditation data. The automation system periodically performs security audits to ensure data remains protected. The audit carried out will help identify potential security gaps that need to be fixed.

F) Reduction in operation cost

The National Commission for Colleges of Education digitalization can result in cost saving measures for the commission, as physical paperwork and administrative tasks can be significantly reduced. Overall, the digitalization of the National Commission for Colleges of Education in Nigeria can lead to a positive impact on the education sector, leading to improved outcomes and opportunities for students, educators, and policymakers. Digitalization of the commission will reduce the operational and administrative expenses that results from the transition from paper-based to digital based systems. This according to **Lionch, (2023)** cost reduction can be manifested in the commission through:

Material Savings: By digitalization, commission will reduce or eliminate the need to buy papers, inks, folders, binders, filing cabinets and other supplies related to physical documentation.

Reduced Storage Space: Physical documents require space for storage, whether in filing cabinets, on shelves or even in dedicated warehouses. By digitalization, this space is freed up and can be reused or disposed of, which can translate into significant saving, especially in the areas where operation cost is high.

Reduced Postage Costs: Sending invoices and physical documents by post or courier has a cost. By digitalization and sending these documents electronically, these costs are eliminated.

Management Efficiency: Searching, retrieving and managing digitised documents is faster and more efficient than with physical documents. This can reduce the man-hours required and therefore the associated labour costs.

Loss Reduction: Physical documents can be lost, damaged or destroyed, which could incur replacement costs or even legal penalties. Digital documents, if properly managed, have less risk of loss and can be backed up for greater security.

Process Automation: Digitalization allows the automation of certain processes, such as invoice approval or account reconciliation. This can reduce the need for manual intervention and thus the associated costs, **Lionch (2023); Telefinica (2023).**

4.1 Finding

The study revealed that, there will be improvement in the operation, support effective accreditation programme, aid effective decision making, effective data management, data security and reduction in operation cost are the benefits of digitization of National Commission for Colleges of Education in Nigeria.

4.2 Conclusion and Recommendations

The study discussed the benefits of digitizing National Commission for Colleges of Education in Nigeria. The study revealed that, there will be improvement in the operation, effective decision making, effective data management, data security and reduction in operation cost are the benefits of digitization of National Commission for Colleges of Education in Nigeria.

Based on the findings, the study suggests the following: increment in the budgetary allocation for the implementation of digitization of National Commission for Colleges of Education project. Government should provide necessary support to the commission to ensure the realization of the project of digitization of National Commission for Colleges of Education by setting up committee to supervise the commission for the programme. Private institutions, religious institutions and international organizations should support the commission with supply of digital infrastructure facilities and capacity building programme for staff of the commission.

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