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DIGITALIZATION AS AN EFFECTIVE KEY TO SUSTAINABLE AND FUNCTIONAL SKILLS IN BUSINESS EDUCATION: AN ARGUMENTATIVE REVIEW

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Abstract

This paper examines the role of digitalization in updating functional skills within business education, arguing that it is the primary mechanism for ensuring graduates remain employable in a technology-driven economy. As business operations increasingly rely on automation, cloud platforms, and data analytics, traditional curricular risk producing graduates with outdated competencies. The study contends that digitalization addresses this gap in two interconnected ways. First, it transforms core functional areas – office technology and Management, Accounting, Marketing, and Entrepreneurship by embedding digital tools and workflows into coursework. This enable students to develop practical skills aligned with current industry standard. Secondly, it supports the development of sustainable skills by shifting education toward continuous adaptable learning. Through e-learning platforms, AI-assisted instruction, and modular digital content, students cultivate digital literacy, problem-solving and self-directed learning abilities that remain transferable across roles and career stages. The paper also engages with critical perspectives that highlight potential drawbacks, including unequal access to technology, platform dependency, and the risk of eroding foundational analytical skills. It responds that these challenges are manageable through inclusive infrastructure, emphasis on transferable digital concepts over proficiency in any single software and pedagogical designs that use technology to argument rather than replace critical reasoning. The paper concluded that deliberate, inclusive digitalization is necessary for business education to remain relevant, equitable and responsive to the demands of the green and digital transitions. It recommended among others that tertiary institutions should run regular ICT/digital upskilling programmes for business educators as to enable them to model the digital tools students will use in industry.

Keywords: Digitalization, Sustainable Skills, Functional Skills, Business Education.

Introduction

The 21st century has witnessed a fundamental shift in how work is performed, driven by rapid advancements in digital technologies. Terms like automation, cloud computing, data analytics, e-commerce, and artificial intelligence are no longer confined to technology firms; they now define operational standards across office administration and management, finance, marketing and entrepreneurship. This shift has created a widening gap between the skills taught in traditional business programmes and the skills demanded by modern industry.

Business education in Nigeria is anchored on four core areas: Office Technology and Management (OTM), Accounting, Marketing and Entrepreneurship. Historically, these programmes have emphasized theoretical knowledge and manual processes – typewriting, handwritten ledgers, face-to-face sales, and paper-based business plans. While these foundations remain relevant, employers increasingly report that graduates lack the functional, digital skills required to perform immediately on the job.

This is supported by the result of the research carried out by Bhatti, Alyahya, Aishiha, Qureshi, Juhari and Aldossary (2023) which revealed that there are gaps in employability skills – digital skills, organizational skills, problem-solving skills, communication skills and team skills among business education graduates.

Digitalization

Digitalization refers to the integration of digital technologies into all aspects of teaching, learning and professional practice to change how value is created and delivered. Davenport and Bain (2019) described digitalization as the integration of digital technologies into all aspects of an organization, resulting in fundamental changes to how it operates and delivers value.

According to Margetts, John, Reissfelder and Hale in Mamman (2024), digitalization is the process of converting analogue information into digital form, enabling the manipulation, storage, and transmission of data through digital devices and networks. Otomiewo and Amahi (2024), added that digitalization in education is the integration of different types of technologies in the educational sector that help promote better and wider knowledge, in a fast and easy way and most importantly, accessible by everyone. In business education, digitalization means moving beyond teaching about technology to using technology as the primary medium for skill acquisition and assessment. The central argument is that digitalization is not an optional supplement but a prerequisite for sustainable and functional business education.

Sustainable Skills

Sustainable skills are those skills that remain relevant despite economic and technological changes. Sustainability Directory, defined sustainable skills as the essential abilities needed to navigate and contribute to a sustainable future. It can also be described as skills and attitudes that enables successful task performance and problem solving with respect to real-world sustainability problems, challenges and opportunities (Wiek, Withycombe, and Redman, 2011) Skills tied to specific software versions or manual processes quickly become obsolete. In contrast, digital literacy, data adaptability to new platforms are transferable across industries and time.

Functional Skills

Functional skills are those skills that enable a graduate to perform real workplace tasks from day one. Ofqual (2019), asserts that functional skills are practical skills in English, Mathematics and ICT that allow individuals to operate confidently, effectively, and independently in life and work. They are designed to enable leaners to apply skills in real-life contexts, solve problems and transfer learning to new situations.

A graduate of business education who can explain marketing theory but cannot fun a meta advertisements campaign, or who understands accounting principles but cannot process transactions on QuickBooks or FIRS e-tax, is not functionally prepared. Without digitalization, business education risks producing graduates who are "knowledge-rich but skill-poor". With digitalization, the same curriculum can produce graduates who are immediately employable, entrepreneurial and adaptable to change and evolving industries.

Digitalization Across the Four Core Areas of Business Education

Office Technology and Management (OTM): Office technology and management has shifted from secretarial and shorthand training to digital office management. Modern office operates on Microsoft 365, Google workspace, and virtual collaboration platforms like Zoom and Teams. Functional OTM graduates must model document collaboration, digital record keeping, e-filing, and virtual meeting management. This is supported by Ile (2023) who asserts that digital tools bridge gap between classroom instructions and workplace practice. Sustainability here means training students to manage information digitally, reducing reliance on paper systems that are costly and inefficient.

Accounting: Accounting is one of the most digitized professions. Tax filing, payroll, auditing, and financial reporting in Nigeria now occur on platforms like FIRS e-Tax, QuickBooks, and Zoho Books. Functional accounting education requires students to prepare financial statements, reconcile accounts, and file returns using these tools. Study by Sawyer and Otamiri (2024) revealed that digital tools significantly improves accounting education

delivery. Sustainable accounting skills are those centered on data analysis, excel automation, and cloud accounting, which remains relevant even as specific software changes.

Marketing: Marketing has moved from traditional media to digital and data-driven channels. Search engine optimization (SEO), social media advertising, email marketing, customer relationship management (CRM), and analytics are core competencies. Functional marketing education involves running live campaigns on meta advertisements manager and Google advertisement, analyzing campaign data on Google Analytics, and creating content using Canva and Capcut. Research carried out by Isiyaku, Kanu and Uzoamaka (2025) confirm that business education students exposed to graphic design tools like Canva showed statistically significantly improvement in both design skills and employability perceptions.

Entrepreneurship: Digitalization has lowered the barrier to starting and scaling a business. This is the reason Zubair, Olawepo and Adegbenjo (2026), noted that relationships exist between entrepreneurship and digital skills acquisition. Modern entrepreneurs use digital tools for market research, e-commerce, digital payments and online branding. Functional entrepreneurship education must teach students to build and test business models using digital tools, manage online operations and leverage social media for customer acquisition. Sustainability comes from equipping students to launch and run businesses with minimal capital by leveraging digital infrastructure.

Challenges of Business Education Programme

Business education programme is meant to produce graduates with functional skills for immediate workplace performance. However, many graduates still lack the digital and practical competencies demanded by modern offices, leading to a persistent skills mismatch between training and industry needs. This gap raises questions about how business education can be restructured to remain relevant.

Currently, many business education programme face challenges such as limited access to technology, and lecturers who teach tools they do not actively use. This creates a cycle where graduates require extensive on-the-job training, reducing their competitiveness and the perceived value of business education. In support to these, findings of the study by Mahadih and Afulah (2025) revealed that inadequate digital infrastructure, lack of tailored instructional design, and minimal cultural – contextual adaptation are major obstacles to delivery of executive e-learning for business program.

Additionally, limited training for instructors in digital pedagogy contributes to low interactivity and learner disengagement. This is also similar with the findings of the research carried out by Kennedy (2022) which shows that lecturer related challenges, facilities related challenges, ergonomics-related challenges, internet connectivity related challenges posed challenges to ICT utilization in teaching and learning of business education in Colleges of Education in South East, Nigeria.

An argumentative review of the literature and industry reports shows that institutions that embed digital tools into teaching and assessment produce graduate with higher employability, stronger entrepreneurial outcomes, and greater resilience to economic shocks. Digitalization is therefore not merely a teaching method; it is a strategy for ensuring that business education remains relevant, responsive, and impactful.

This review argues that for business education to remain sustainable and produce functionally competent graduates, digitalization must be embedded across Office Technology and Management (OTM), Accounting, Marketing, and Entrepreneurship. It will examine evidence on how digital tools are transforming each area, identify gaps in current practice, and make the case that lecturers must model these tools in the classroom to bridge the gap between academia and industry.

Digitalization Updates Functional Skills by Replacing Outdated Manual Processes with Digital Tools

Digitalization transforms accounting from manual recordkeeping into data-driven financial management. Traditional bookkeeping and ledger posting have been largely replaced by cloud accounting software and automation tools that handle data entry, reconciliation, and reporting. This shift requires business education students to develop skills in data analytics, spreadsheet modeling, and digital finance platforms. The change is supported by industry data. ACCA (2020) survey of 4,264 finance professionals found that 89% consider digital skills necessary or very necessary in their roles. Without these updated competencies, business education graduates risk producing work that is slower, error-prone and misaligned with modern workplace expectations.

In marketing and office administration, digitalization shifts the focus toward digital communication and data literacy. Functional skills now include managing social media campaigns, creating digital content, analyzing customer data and using collaborative tools like Teams. Research carried out in Bayelsa by Akpotohwo (2025) showed that digital marketing and social media skills significantly influence the job performance of business education graduates. Similarly, employers in Malaysia ranked information and data literacy and digital content creation among the highest-demand skills for entry level graduates (Tee, Ling, Ijada, Bee and Chee, 2024). This means business education program must prioritize ICT application and digital communication alongside traditional office management tasks.

For entrepreneurship and employability, digitalization creates new pathways and expectations. Graduates are expected to analyze problems, make data-based decisions, and collaborate in digital environments. A study in South East Nigeria by Agu and Umeh (2024) confirmed that digitalization of instructional delivery directly predicts the acquisition of computer and internet skills among business education students. The result is greater career flexibility: graduates can pursue e-commerce, digital projects, or independent ventures rather than relying solely on formal employment. If business education ignores this shift, it widens the gap between what is taught and what the labour market demands.

Digitalization Builds Sustainable Skills by Enabling Continuous Adaptation and Lifelong Learning

Digitalization makes skills sustainable by shifting business education from static, one-off training to ward continuous, adaptable learning. As automation takes over routine tasks, the skills that remain valuable are those that allow graduates to learn, unlearn, and reapply knowledge in new contexts. Digital tools such as e-learning platforms, AI tutors, and cloud based applications enable students to update their competencies quickly and at their pace, preventing skills from becoming obsolete. The World Economic Forum (2021), notes that digital upskilling is a core part of social sustainability because it ensures the workforce remains relevant and employable as technology evolves. ILO (2026), report argues that digitalization and the green transition are rewriting the skills landscape, and that lifelong learning systems are essential for resilience in a changing labour market.

Furthermore, data from PWC (2025), Global AI Jobs Barometer, shows that workers with AI and digital skills earn a 56% wage premium and are in higher demand through 2030. By embedding digitalization into business education, institutions equip graduates with transferable digital literacy and problem solving abilities that remain useful across roles, industries, and career stages making their skills sustainable in the long run. Critics argue that digitalization risks making skills less sustainable. Not all students have equal access to devices, stable internet, and licensed software, so a rapid shift to digital tools can widen the gap between digitally empowered and digitally disadvantaged students.

Additionally, skills tied to specific platforms can become obsolete when software changes, and over-reliance on automation may weaken foundational skills like critical thinking and judgement. If these issues are not addressed, digitalization could produce short-term gains but long-term fragility in graduate employability.

These risks are real, but they do not undermine the case for digitalization – they define how it should be implemented. Access gaps can be closed through institutional support, open-source tools and blended learning models that do not require high-end devices.

Obsolescence is reduced by teaching transferable digital literacy rather than training only on one software. And foundational skills are preserved when digital tools are used to argument, not replace, core reasoning. When designed this way, digitalization remains the most effective way to keep business education relevant and sustainable.

Conclusion

In conclusion, digitalization is the key to updating functional skills in business education because it aligns training with the realities of modern workplaces. As manual processes give way to cloud accounting, data analytics, digital marketing, outline collaboration, business education must be equipped with competencies that go beyond traditional methods. The evidence shows that employers now prioritize digital literacy, and students who develop these skills gain higher employability and career flexibility. If implementers of business education programmes integrate digitalization into their instruction, they can close the skills mismatch and produce graduates who are truly work-ready in a digital economy.

Recommendations

Based on the review and arguments presented above, the following recommendations are proposed to close the digital skills gap in business education and strengthen lecturer capacity, institutional resources, and graduate readiness for the digital workplace:

1. Tertiary institutions should run regular ICT/digital upskilling programmes for business educators. Lecturers need to model the digital tools students will use in industry,
2. Management of institutions of learning should invest in digital equipments, stable internet access to support practical, hands-on learning, and licensed software.
3. Institutions should partner with technology companies and Non-Governmental Organizations (NGO's) for support where funding is limited.'
4. Business education departments should partner with industry through internships, guest lectures, and curriculum review panels. This keeps training aligned with workplace needs.
5. Implementers of business education programmes should ensure that assessment include project-based tasks using real digital tools e.g. creating a digital marketing plan, preparing accounts in QuickBooks, or managing a virtual office task.

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