OTM EDUCATION IN THE DIGITAL ERA: DEVELOPING DIGITAL SKILLS FOR FUTURE BUSINESS LEADERS

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Abstract
Digital transformation is reshaping the skills required for effective business leadership. This study centered on investigating Office Technology and Management (OTM) education in the digital era, with a focus on developing digital skills for future business leaders. A descriptive research design was adopted. The population comprised 50 final-year degree OTM students in the 2025/2026 academic session at Nnamdi Azikiwe University, Awka, Anambra State, and all were studied using the census method. A 10-item structured questionnaire, face-validated by three experts in education, was used for data collection. The reliability of the instrument was established through pilot testing, yielding a Cronbach's alpha coefficient of 0.70. Out of the 50 copies of the questionnaire administered, 46 (92%) were properly completed and used for analysis. Mean statistics were employed to analyze the data. The findings revealed that respondents agreed that digital communication and digital software skills are essential for OTM students to function effectively as future business leaders. The study concluded that acquiring these skills enhances students' preparedness for leadership roles in the digital economy. It was recommended that the OTM curriculum be redesigned by curriculum planners to incorporate courses and content that foster digital communication and software competencies for effective participation in the technology-driven era.

Keywords: OTM Education, Digital, Era, Digital Skills Future Business leadership

Introduction

The rapid growth of information technology in society has transformed the operational systems of virtually all sectors of national life. Advances in technology have significantly altered how activities are carried out in education, trade, financial transactions, marketing and health, among others. In the education sector, digital transformation has changed teaching and learning processes, instructional methods and learning materials. Office Technology and Management (OTM) education has not been left out of this transformation, as it is an interdisciplinary programme typically offered within the business education curriculum.

Office Technology and Management (OTM) education is the use of modern inventions and devices in office settings to transform and improve office work processes. Ekpenyong (2008) defined OTM education as an aspect of the educational process that, in addition to general education, involves the study of technologies and related sciences, as well as the acquisition of practical skills, attitudes, understanding and knowledge related to occupations in various economic and social sectors. Ejeka and Mgbonyebi (2016) further noted that OTM education is designed to equip students with vocational skills and socio-psychological competencies required for effective office management. It prepares students with knowledge and skills in operations management, information technology management and data analytics. OTM education is a programme within vocational and business education that focuses on training students for employment in office and management-related roles. The core skills inculcated through OTM education include keyboarding and stenography, office management, computer applications, data processing, managerial competence and communication skills. The programme provides students with both practical and theoretical knowledge required to manage and organize office operations efficiently. It covers areas such as communication, information technology, office administration, accounting and entrepreneurship. The goals of OTM education include equipping students with competencies for secretarial, managerial and administrative positions in public and private sectors, developing adaptability to changing business environments and preparing students for further academic and professional advancement (Ndogu et al., 2021).

However, the digital era strongly advocates the use of technology across all spheres of human activity including education. The rapid development of internet access and global connectivity has contributed to the growth of the digital economy worldwide. In today's digital environment, basic digital skills include online searching, email communication, virtual networking, cloud-based collaboration tools such as Google Meet, Google Drive, Zoom, Microsoft Teams and Slack, document and spreadsheet creation, and basic device maintenance such as software updates and system activation. Skills such as screen sharing during virtual meetings and managing schedules through online calendars have also become essential, making digital competence a necessity for effective participation in modern work environments.

In other words, digital skill refers to the ability to find, evaluate, use, share and create content using digital devices such as smartphones and computers. UNESCO (2018) described digital skills as a range of abilities that involve the use of digital devices, communication tools and networks to access and manage information. Similarly, Kehinde and Olatunde (2022) defined digital skills as the ability to locate, evaluate, utilize, share and create content through information technologies and the internet. Chaouchi and Bourgeau (2020) further explained that while some digital skills are required for using and interacting with technology to perform specific tasks, others are necessary for designing, creating and maintaining technological tools and solutions across industries.

Considering the importance of OTM education and the demands of the digital era, training of OTM students in digital skills has become imperative. Technological advancement and increased computerization have transformed office work by reducing routine manual tasks and improving the quality, speed and accuracy of work performed by office managers. As a result, OTM students require new skill sets, known as digital skills, to remain relevant in future business careers. Okute, Enang and Etoma (2022) noted that the acquisition of digital technology skills enables individuals to effectively use digital devices, communication tools and networks to access and manage information. These skills involve competencies related to software applications, digital tools and computer hardware, as well as digital literacy required for completing internal and customer-oriented office tasks.

Today, business organizations are expected to adopt digital technologies for managing sales, storing and analyzing customer data and communicating information efficiently. As business organizations continue to expand their use of digital tools to execute essential work processes, office managers benefit from understanding how to use these tools to communicate, manipulate and analyze data effectively. In the digital era, the skills demanded by industries are becoming more sophisticated, and office managers are expected to possess these skills rather than rely on a limited number of specialists.

With this understanding, it is evident that technology is now central to daily life, and increasing dependence on digital communication and internet-based systems requires office managers to continually adapt to changing skill demands to become future business leaders. Scholars have observed that the possession of digital communication skills by office managers can reduce unemployment among OTM graduates by enabling self-employment, business creation and job generation. In line with this, Akpojotor (2022) stated that the digitalization of OTM education enhances students' ICT capabilities, intellectual competence and business skills, thereby improving their employability. Digitalized OTM education equips students with the skills needed to manage advanced office technologies and information systems required for organizational efficiency and high productivity.

Furthermore, the global job market is increasingly competitive, and only office managers with strong digital skills can gain a competitive advantage. Global competitiveness involves teaching and learning processes that enable students to understand global issues, cultural diversity and international opportunities, thereby preparing them to function effectively in different cultural contexts (Ikpesu, 2017). To compete globally, office managers must possess knowledge of digital office software and digital communication skills, which allow them to access systems, tools and data from any location or device. Given the ever-changing nature of today's work environment, Kayii and Okiridu (2020) highlighted the importance of soft skills particularly interpersonal and emotional intelligence which help individuals build relationships, adapt to change, and grow in their careers. As a result, office managers are also expected to develop relevant digital soft skills.

In the digital era, OTM education must therefore develop students' online communication skills, including the use of emails, social media platforms, blogs and websites for personal and business interactions. These competencies enable students to understand content marketing, digital advertising, data-driven marketing, search engine optimization (SEO) and social media engagement. Such skills also enhance students' ability to communicate clearly, consistently and appropriately with diverse audiences through online platforms. In view of these developments, this study examined Office Technology and Management education in the digital era, with a focus on developing digital skills for future business leaders.

Statement of the Problem

The rapid advancement of digital technologies has transformed modern office operations and management practices, increasing the demand for office managers with strong digital skills, adaptability and leadership competence. Office Technology and Management (OTM) education is expected to equip students with these competencies to function effectively in today's digitalized business environment. However, growing concerns suggest that many OTM graduates lack the digital skills required by contemporary workplaces. Evidence points to a mismatch between workplace digital demands and the skills acquired during OTM training, raising questions about the adequacy of existing curricula, instructional strategies and learning resources. In many institutions, OTM instruction seems to remain largely theoretical, with limited exposure to practical digital tools and technologies. If this gap persists, OTM graduates may face reduced employability, limit entrepreneurial capacity and weakened leadership potential in a globally competitive digital economy. Therefore, there is a need to examine OTM education in the digital era, focusing on how effectively it develops the digital skills required for future business leadership.

Purpose of the Study

The main purpose of the study was to examine OTM education in the digital era; developing digital skills for future business leaders. Specifically, the study:

1. Examine digital communication skills expected of OTM education students of Nnamdi Azikiwe University, Awka in future business leadership.
2. Examine digital software skills expected of OTM education for students' future business leadership.

Research Questions

The following research questions guided this study;

1. What digital communication skills are expected of OTM education students of Nnamdi Azikiwe University, Awka, for effective future business leadership?
2. What digital software skills are expected of OTM education students of Nnamdi Azikiwe University, Awka, for effective future business leadership?

Methods

This study adopted a descriptive survey research design. It was carried out in Anambra State. The population of the study consisted of 50 final year (400 levels) OTM education students of 2025/2026 academic session in Nnamdi Azikiwe University, Awka in Anambra State. The researcher did not sample the population since it was considered manageable and accessible. The census method of sampling was therefore employed for the study. The instrument for data collection was a structured questionnaire tagged "OTM Education in the Digital Era, Developing Digital Skill for Future Business Leaders" (ODEDDSFBL). The questionnaire consisted of two sections; A and B. Section A contained socio-economic information of the participants, such as gender and age. Section B is divided into two clusters B1 and B2 with a total of 10 items covering the two research questions. The instrument was structured on a four-point rating scale of Strongly Agreed (SA) - 4, Agreed (A) - 3, Disagreed (D) -2 and Strongly Disagreed (SD) - 1. The face validity of the instrument was ascertained using two experts: one expert from Technology and Vocational Education and one other expert

from Measurement and Evaluation. A pilot study was test conducted using Cronbach alpha reliability procedure to measure the reliability of the instrument which yielded a reliability coefficient of 0.75, indicating that the instrument was quite reliable for the study. The instrument was administered to the respondents and collected personally by the researchers and two research assistants adequately briefed on the modalities for administration and retrieval of the questionnaire. Out of 50 copies of questionnaire administer to the respondents, 46(92%) copies were correctly filled, returned and used for data analysis. Mean statistics were used to analyzed the data collected. The rule is accepted mean if computer mean is 2.5 and above or reject the mean if computer mean is less than 2.5.

Results and Discussion

Table 1: Mean Response on Digital Communication Skills Expected of OTM Education for Students for Future Business Leadership

S/N	Items	SA	A	D	SD	$\bar{X}$	Remarks
1	Skill to communicate with clients via emails.	22	21	3	0	3.40	Agreed
2	Skill to communicate with customers/clients through Facebook, Whatsapp and Instagram	30	16	0	0	3.70	Agreed
3	Skill to share content information via online.	26	20	0	0	3.60	Agreed
4	Skill for digital advertising and data-driven marketing.	25	20	1	0	3.50	Agreed
5.	Skill for search engine optimization (SEO) to optimize business opportunities.	21	19	3	3	3.30	Agreed
	Cluster mean					**3.50**	**Agreed**

Table 1 above analyzed data on digital communication skills expected of OTM education for students' future business leadership. The item-by-item analysis shows that all the five items have mean scores ranging from 3.30 to 3.70, which indicates the respondents agree that they are expected of OTM education students. The cluster mean score is 3.5 which is greater than 2.5 benchmark. means that respondents agreed that all the skills mentioned above are the digital communication skills expected of OTM education to impart on students for future business leadership.

Table 2: Mean Response on Digital Software Skills Expected of OTM Education for Students for Future Business Leadership

S/N	Items	SA	A	D	SD	X	Remarks
1	Skill for e-signing documents on-line without printing the papers.	19	18	6	3	2.80	Agreed
2	Skill for accessing email documents.	24	22	0	0	3.50	Agreed
3	Skill for sending electronic mail.	21	19	4	2	2.50	Agreed
4	Skill for operation of computers.	23	22	1	0	3.50	Agreed
5.	Skill for operation photocopy machines.	22	20	2	2	3.30	Agreed
	Cluster Mean					**3.10**	**Agreed**

In table 2, the cluster mean is 3.10 while the accepting is mean 2.5. Since the cluster mean at 3.1 is greater than 2.5, it is agreed that e-signing of documents on-line without printing the papers, accessing email documents, sending of electronic mail, operation of computers and operation photocopy machines are the digital software skills OTM education should develop in students for future business leadership. The item-by-item analysis also reveals that all the five items have mean scores ranging from 2.50 to 3.50, and all rated agreed by the respondents.

Discussion of Findings

In the analysis done so far, it is observed that OTM education can develop business education students to possess the following skills: communicating with clients via emails, communicating with customers/clients through Facebook, Whatsapp and Instagram, share content information via online, digital advertising and data-driven marketing skills. Also, the department of OTM education is expected to prepare business education students on soft skills such as e-signing documents, accessing email documents, sending of electronic mail, operation of computers and operation photocopy machines. Acquisition of these skills by OTM students can enable them to become future business leaders. These findings are supported by Akpojotor (2022) who observed that digitalization of OTM education could provide business education students with the necessary knowledge and skills to handle sophisticated office technologies and information systems required by industries for efficiency and high productivity and these include ICT abilities, intellectual and business competencies, computer operation, accessing of e-mail documents.

Conclusion

Considering the present-day business world as well as the advancement in industrial work, knowledge of technology is the only system that students can survive. The advance of digital technology has transformed every work of industry and society. The study concluded that for OTM students to fit into the system of work, employability and self-reliance in today's labour market, OTM education and the curriculum have to be restructured to develop students' skills such online communication, electronic access and sending emails, e-advertising and knowledge of search engines.

Recommendations

Based on the findings of this study, the following recommendations are made.

1. The curriculum of OTM education in Nigerian universities should be re-designed by curriculum planners to include courses and topics that will develop in students' digital communication and digital soft skills to operation in this era of technology.
2. The Nigerian government and the university management should provide the important infrastructures that will aid in the training of OTM students on digital technology.
3. OTM lecturers in Nigerian universities should endeavour to attend staff development programme to improve on digital technology to be able to apply it in the classroom.

References

Akpojotor, B. E. (2022). Digitalization of business education programme in tertiary institutions in Delta State, Nigeria: Challenges and prospects. *ATBU Journal of Science, Technology and Education (JOSTE), 10*(2), 181–191.

Chaouch, H., & Bourgeau, T. (2020). *Will all jobs require programming skills in the growing digital society?* International Telecommunication Union. https://academy.itu.int/sites/default/files/media2/file/Digital%20Skills%20Insights%202020 20.pdf

Ejeka, C. A., & Mgbonyebi, D. C. (2016). Towards achieving quality assurance in office technology and management programme in Delta State polytechnics. *International Journal of Vocational and Technical Education Research, 2*(2), 1–8.

Ekpenyong, L. E. (2008). *Foundations of technical and vocational education: Evolution and practice.* University of Uyo Press.

Ikpesu, C. (2017). Globalizing business education curriculum experiences in Nigerian higher education for enhanced students' employability. *European Journal of Business and Innovation Research, 5*(5), 47–57.

Kayii, N. E., & Okiridu, O. S. F. (2020). Teachers' perception of the integration of soft skills in teaching business students in secondary schools in Rivers State. *Vocational and Technology Education Journal (VOTEJ), 2*(1), 39–48.

Kehinde, E. E., & Olatunde, A. M. (2022). Digital skills needed by business education graduates for unemployment reduction in the 21st century. *Nigerian Journal of Business Education, 9*(1), 134–148.

Ndogu, L. C., Ibrahim, A., Mshelia, M. A., & Shehu, Y. C. (2021). Assessment of curriculum content and human resources for the implementation of office technology and management programme in public polytechnics in Northern Nigeria. *Al-Hikmah Journal of Business, 12*, 90–97.

Nworgu, B. G. (2015). *Educational research: Basic issues and methodology* (3rd ed.). University Trust Publishers.

Okute, A. L., Enang, C. E., & Etoma, M. G. (2022). Framework for digital skills acquisition for global competitiveness by business education students of tertiary institutions in Nigeria. *Nigerian Journal of Business Education, 9*(2), 172–182.

UNESCO. (2018). *Digital skills critical for jobs and social inclusion.* https://en.unesco.org/news/digital-skills-critical-jobs-and-social-inclusion