



Effects of Graphic Design Skills on the Employability of Business Education Students in Nigerian Colleges of Education

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Abstract

This study investigated the impact of graphic design skills on the employability of business education students in Nigerian colleges of education. Employing a true experimental pre-test and post-test within-subjects design, the study involved 40 randomly selected students from the Federal College of Education (Technical), Bichi. Baseline assessments were conducted to measure the participants' graphic design competencies and perceptions of employability. The intervention consisted of a six-week Canva-based training program focused on designing flyers and invitation cards. Internal validity was ensured through randomization, control of confounding variables, and consistent implementation procedures, while external validity was strengthened through representative sampling, real-world application, and potential for replication. Data were collected through structured surveys and analyzed using descriptive statistics and paired t-tests. The findings revealed statistically significant improvements in both graphic design skills and employability perceptions following the intervention. Consequently, the null hypotheses were rejected, affirming that graphic design training positively influences employability. Notable challenges included limited access to Canva tools, difficulties in balancing academic workload, and potential threats to validity arising from the study's unique context. The study recommends the integration of graphic design competencies into the business education curriculum to enhance graduate employability. Despite its limitations, the study underscores the value of graphic design training in equipping business education students for the competitive Nigerian job market.

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Introduction

Business education serves as an educational framework aimed at equipping individuals with the skills necessary to succeed in their chosen careers. It not only imparts essential knowledge in business and technology but also fosters both professional and personal development. The curriculum encourages students to share their knowledge with others, thereby promoting a culture of lifelong learning and professional growth within the wider community (Isiyaku, Ayub, & Abdulkadir, 2015). According to the National Commission for Colleges of Education (NCCE, 2009), one of the core objectives of business education is to provide students with relevant skills for gainful employment or self-reliance as entrepreneurs.

Despite these objectives, empirical evidence indicates that many graduates of business education programs remain unemployed, underemployed, and economically insecure. This disconnect persists despite efforts to integrate technology-related skills into the curriculum (Ekpenyong & Edokpolor, 2015; Edokpolor & Owenvbiugie, 2017; Nigeria Bureau of Statistics, 2020). In light of this, introducing graphic design—a discipline that uses visual elements such as text, shapes, and images to convey messages effectively—offers a promising pathway to enhancing business education and bridging the employability gap (Desinta, Kayla, Marcella, Amata, & Irma, 2024).

In contemporary times, graphic design has become a cornerstone of modern communication, influencing various sectors, including industry and education. As technology continues to evolve, graphic design has increasingly benefitted from digital advancements that have transformed the visual communication landscape (Wardhanie & Rahmawati, 2022). Given the current trends in computer technology, the Internet, and artificial intelligence, it is imperative for both students and educators to enhance their employability by developing competencies in computer graphics and visual communication.

Fortunately, aspiring graphic designers now have access to a wide range of online and offline resources. For example, website creation tools such as Wix, WordPress, and Adobe Dreamweaver provide user-friendly, drag-and-drop interfaces that simplify coding and design using customizable templates. Similarly, tools like Adobe Express, PosterMyWall, and Microsoft Publisher enable users to design visually appealing marketing materials such as flyers and brochures with ease. Additionally, platforms like Adobe Illustrator, CorelDRAW, and LogoMaker support rapid logo creation through vector-based graphic design techniques (Syerov, 2025).

The integration of artificial intelligence has further expanded the possibilities within the field of graphic design. Tools like Canva offer an extensive array of customizable templates for creating flyers, posters, business cards, banners, certificates, magazines, journals, apparel tags, lesson plans, and more. According to Desinta, Kayla, Marcella, Amata, and Irma (2024), Canva is a highly versatile and accessible online graphic design platform that supports the creation of resumes, brochures, infographics, book covers, and various other educational and promotional materials. Its utility in both educational and creative contexts underscores its value as an instructional tool.

This study aims to examine the employability of business education students in Nigerian colleges of education by equipping them with practical graphic design skills. Canva was employed as the primary tool for a training intervention, through which students were taught to design flyers and invitation cards. It is anticipated that by mastering these foundational skills, students will be motivated to explore other design tools and expand their capacity to create diverse materials for personal and professional use. The immediate goal is to enable students to design basic marketing materials, thereby laying a foundation for future careers in graphic design and enhancing their overall employability.

The Concept of Employability

As of 2023, Nigeria's unemployment rate stood at 3.3%, showing a slight improvement compared to previous years. Estimates suggest that the Nigerian labour force exceeds 75 million people, with approximately 2.3 million individuals unemployed. Looking ahead to 2025, it is projected that automation and digitalisation will significantly transform traditional employment structures, particularly in sectors such as banking, telecommunications, customer service, and education. Already, rising business costs and persistent economic challenges have led to job losses in the manufacturing, trade, and services sectors. These trends highlight the urgent need to equip individuals with adaptable and marketable skills to navigate the evolving labour market effectively (Adewolu, 2024).

Employability refers to an individual's ability to secure and maintain employment while adapting to changing work environments (Mahajan, Gupta, & Misra, 2022). It involves not only obtaining a job but also demonstrating adaptability

The Significance of Employability

To remain competitive in today's job market and build a successful career, employability is essential. By emphasizing employability, educational institutions can better prepare students for the realities of the workplace. Graduates equipped with strong employability skills contribute significantly to innovation and productivity within organizations. For business education students in particular, employability bridges the gap between academic learning and practical job opportunities (Christiansen & Even, 2024).

Business education equips students with foundational knowledge in accounting, marketing, management, and entrepreneurship, ensuring that theoretical concepts are translated into practical, job-ready competencies. In addition to technical expertise, students must also develop key soft skills such as communication, teamwork, adaptability, and critical thinking. These attributes enhance their professional appeal and give them a competitive edge in a saturated job market.

Flexibility in career pathways is equally important. Business education students should be equipped to navigate a range of career options,

and a commitment to continuous professional development. According to Mahajan et al. (2022), employability encompasses a range of essential competencies, including core skills such as communication, problem-solving, collaboration, and digital literacy. It also includes vocational and technical skills tailored to specific industries—such as data analysis or graphic design—which align with labour market demands.

In addition, lifelong learning and flexibility are crucial for sustaining employability, ensuring individuals can acquire new skills and adapt to evolving roles and technologies. Self-efficacy is another vital element, reflecting a person's confidence in their ability to perform tasks and contribute meaningfully to an organization. Professionalism, characterized by attributes such as time management, a strong work ethic, and accountability, also plays a key role. Lastly, networking skills—defined by the ability to build and maintain professional relationships—are essential for accessing opportunities and fostering career growth.

from corporate employment to entrepreneurial ventures. Employable graduates leverage leadership, innovation, and problem-solving skills developed through their training to make tangible contributions to their organizations.

In a rapidly evolving business environment, prioritizing employability is more important than ever. A focus on continuous learning and professional development helps students remain adaptable and relevant in the face of technological and economic shifts. Business education programs that emphasize employability often yield higher employment rates, thereby not only enhancing individual career outcomes but also contributing to a reduction in national unemployment and supporting economic growth.

Beyond traditional job readiness, such programs also cultivate entrepreneurial competencies. Skills like networking, creativity, and strategic thinking prepare students to launch new ventures and respond to emerging market demands. These qualities foster innovation and have the potential to generate employment across diverse sectors.

Ultimately, business education programs that integrate employability as a core objective do

more than promote academic achievement—they empower students with the essential tools to excel in their professional journeys and drive meaningful change in the workforce (Christiansen et al., 2024; Kayyali, 2024).

Employability of business education graduates of Nigerian colleges of education in the current technologically driven and competitive society

The current technological trend reflects a significant shift from theory-based to skill-based learning, particularly in computer applications. To ensure that business education students in Nigerian colleges of education are well-prepared for the workforce and positioned for success in the business world, they must be equipped with strong competencies and practical skills in computer applications. This emphasis on skill development enhances their employability and contributes meaningfully to their future success in the industry (Hutapea, Manullang & Hartati, 2024).

However, business education students in Nigerian colleges of education face unique challenges and opportunities in today's increasingly competitive technological environment. These include:

Skill Gaps:

Although business education programs are designed to develop employability skills such as communication, teamwork, and problem-solving, a significant gap often exists in technology-related competencies. Many students lack proficiency in advanced IT tools, digital marketing, and graphic design—skills that are increasingly in demand in the job market (Ayonmike & Okeke, 2016; Jimoh, 2022; Olalude, 2023). A study by Edet and Udida (2019), involving 200 business education graduates from the University of Calabar and Cross River University of Technology, revealed that the acquisition of employability skills among graduates was significantly low. The study further found that the curriculum of business education programs in the sampled universities had limited influence on graduates' employability.

Consistently, Cletus and Alabi (2024), in a study involving 116 Business Education students

in two universities in Cross River State, highlighted the importance of 21st-century skills—such as artificial intelligence-based graphic design—for enhancing employability and achieving global relevance. Nevertheless, the availability of online courses and certifications in areas such as graphic design, digital marketing, and IT provides an opportunity for students and graduates to bridge the skill gap and improve their employment prospects (Gao & Huber, 2024).

Curriculum Limitations:

Research shows that the curriculum in many Nigerian colleges of education lacks sufficient integration of emerging technological trends. This limitation restricts students' exposure to critical areas such as data analytics, e-commerce, digital entrepreneurship, and computer graphics (Onwuagboke, Singh & Fook, 2015; Thelma, Sain, Mpolomoka, Akpan & Davy, 2024). Such restrictions may inhibit the development of essential skills needed to thrive in a digital economy.

A recent study involving 727 penultimate and final-year business education undergraduates, as well as 25 lecturers across universities in South-West Nigeria, identified major deficiencies in the current curriculum (Alao, Mojekwu & Opara, 2024). The findings indicated that the curriculum lacks effective and innovative pedagogical strategies to equip students with the skills required for employability and sustainable development. As a result, the existing curriculum does not meet the standards of functional quality associated with Education for Sustainable Development (ESD) and fails to adequately prepare graduates to contribute to the achievement of Sustainable Development Goals (SDGs), including poverty eradication, zero hunger, and decent work.

Adaptability:

Business education students generally demonstrate adaptability and a willingness to learn, even amid challenging circumstances. Many are proactive in acquiring additional skills through online platforms, workshops, and self-paced learning, thereby increasing their employability. This adaptability positions them well for roles that

require continuous learning or on-the-job training (Mohammed, Gada, Shehu & AbdulRafiu, 2025).

However, students often encounter significant barriers, including limited access to modern technology, inadequate funding for training, and insufficient infrastructure in their institutions. These challenges impede their ability to compete effectively in a globalized labor market (Mer & Viridi, 2024; Sariat, Leonard & Chinonso, 2024).

Technological Impact:

The growing influence of automation, artificial intelligence, and digital transformation is reshaping the job market in Nigeria. These Nigeria's increasing emphasis on entrepreneurship presents substantial opportunities for business education students to establish their own enterprises. With proper training in digital tools and a focus on innovative thinking, these students are well-positioned to succeed in emerging sectors such as e-commerce, freelancing, and tech-driven startups.

Specific Technological Skills Currently in Demand across the Globe

As we progress further into 2025, the landscape of technological skills is evolving rapidly, driven by swift advancements in technology and shifting demands across various industries. The most in-demand skills are both intriguing and essential for thriving in the future job market. Embracing these competencies is critical for maintaining competitiveness in a world where innovation is a key determinant of success (Jaskari, 2025).

According to Yadav and Shrawankar (2025), the top technological skills enhancing global employability and opening doors to innovative, high-paying roles include proficiency in artificial intelligence (AI) and machine learning (ML). These technologies have become integral across industries such as healthcare, finance, and education, where they are streamlining operations and improving decision-making processes.

Equally important is the growing demand for data analytics and visualization skills. The ability to analyze, interpret, and communicate data

advancements are not only generating new job opportunities but also compelling business education students to develop technical competencies aligned with evolving industry requirements (Xu & Babaian, 2021; Mutohhari, Sutiman, Nurtanto, Kholifah & Samsudin, 2021).

This transformation can serve as a catalyst, motivating students to pursue relevant skills that will prepare them for future careers. Yet, many graduates remain underprepared, lacking proficiency in critical digital tools such as graphic design software, data analytics platforms, and digital marketing technologies (Gao & Huber, 2024).

Opportunities:

By engaging with these opportunities, students not only enhance their skill sets but also contribute to the broader entrepreneurial ecosystem. This alignment between education and entrepreneurship highlights the nation's potential for transformative economic development (Kraus, Kraus & Shtepa, 2021; Lim & Lee, 2024).

effectively is highly valued. Proficiency in tools such as Tableau and Power BI allows professionals to extract insights and present findings in compelling ways. Additionally, expertise in cloud computing—through platforms like AWS, Microsoft Azure, and Google Cloud—is essential for managing scalable, cloud-based solutions.

With the continued rise in cyber threats, the need for cybersecurity professionals has surged. Individuals with skills in protecting networks, systems, and sensitive data are crucial for safeguarding organizational infrastructure. Furthermore, software development remains foundational in the tech industry. Mastery of web and mobile app development frameworks, as well as programming languages like Python and JavaScript, is vital for developers navigating this ever-evolving field.

Leadership in digital transformation is also gaining prominence. Skills related to managing technological change and implementing digital strategies are increasingly important for organizational leaders facing fast-paced environments. Moreover, interest in blockchain technology continues to grow, particularly in areas

such as supply chain management and business finance. Knowledge of blockchain applications can provide professionals with a strategic edge in these sectors.

In addition to these high-tech skills, research underscores the value of computer graphics expertise. Skills in this area open up opportunities across a wide range of fields—including science, business, education, and entertainment—where visual communication and design are becoming increasingly important (Rashid & Kausik, 2024; Team, 2012).

Despite the objective of business education programs to equip graduates with

essential knowledge and skills for today's competitive job market, studies show that many graduates still face high unemployment rates. A major contributing factor is the lack of practical, industry-relevant skills (Mohammed et al., 2025). Therefore, to enhance the employability of business education students in Nigerian colleges of education, this study advocates for the integration of graphic design skills—using user-friendly tools like Canva—into the curriculum. This inclusion will better prepare graduates to meet the evolving demands of the digital economy.

Knowing Canva

Canva is a versatile design tool renowned for its extensive features and user-friendly interface, as highlighted by Maulana et al. (2024) and Safira et al. (2025). It offers thousands of editable templates suitable for a wide range of design needs, including business cards, presentations, flyers, and social media posts. The intuitive drag-and-drop interface allows users to effortlessly add and arrange text, images, and shapes, making the design process accessible to users of all skill levels.

To foster creativity, Canva provides a vast collection of both free and premium design elements, such as images, fonts, icons, and illustrations. Another standout feature is its collaboration capability, which enables teams to share designs, provide feedback through comments, and work together in real-time. For users aiming to maintain brand consistency, Canva offers a "Brand Kit" feature, allowing them to set and manage brand-specific fonts, logos, and color schemes.

Beyond graphic design, Canva also supports video editing and production. Users can add text overlays, integrate music, and apply smooth transitions with ease. Notably, Canva incorporates AI-powered tools like "Text-to-Image" for generating custom visuals and "Magic Write" for creating written content, further enhancing its design capabilities. Once a design is

complete, users can either download it in various file formats—including PNG, JPG, and PDF—or share it directly on social media platforms.

Canva is valuable in a variety of contexts. Individuals can use it for personal projects such as photo collages, resumes, and invitations. In the business world, it is effective for creating presentations, branding materials, and marketing campaigns. Educators and students can leverage Canva to develop lesson plans, infographics, and engaging classroom projects.

Accessibility is another advantage of Canva. It is available as a web application and through mobile apps on both iOS and Android platforms. The platform offers a free version with essential tools and a Pro version that unlocks advanced features and exclusive content. Overall, Canva simplifies the design process, enabling users to create professional-quality content on the go.

As previously mentioned, the central theme of this study is to introduce Canva as a graphic design tool and to guide students in exploring its features. Through this process, students will learn to design intuitive flyers and invitation cards, laying the groundwork for more advanced graphic design skills. To begin exploring the tool, students are encouraged to visit <https://www.canva.com>.

Research Objectives

The primary objective of this study was to advocate graphic design skills for the enhancement

of the employability of business education students in Nigerian colleges of education. This

objective is broken down into the following specific aims:

1. To determine the pre-test level of baseline graphic design skills of business education students at the FCE(T) Bichi.
2. To determine the post-test level of baseline graphic design skills of business education students at the FCE(T) Bichi.
3. To determine the pre-test level of the employability perception of business education Students at the FCE(T) Bichi.
4. To determine the post-test level of employability perception of business education Students at the FCE(T) Bichi.

Research Questions

The following research questions guided this study:

1. What is the pre-test level of baseline graphic design skills of business education Students at the FCE(T) Bichi?
2. What is the post-test level of baseline graphic design skills of business education Students at the FCE(T) Bichi?
3. What is the pre-test level of the employability perception of business education Students at the FCE(T) Bichi?

Expected Outcomes

The anticipated outcomes of this study include a significant enhancement of graphic design skills among students in the experimental group. Furthermore, participants were expected to demonstrate improvements in key employability indicators, such as the development of professional portfolios and increased confidence in navigating the job market. However, potential challenges—such as order effects—were anticipated. To address this, the researchers incorporated breaks during the training sessions to minimize the influence of factors like fatigue and learning effects.

Significance of the Study

The significance of this study lies in its potential to offer actionable insights for both policymakers and educators regarding the

4. What is the post-test level of employability perception of business education Students at the FCE(T) Bichi?

Hypotheses

The following hypotheses have been proposed for the study:

1. Null Hypothesis (H_{01}): There is no significant difference between the baseline graphic design skills of business education students in the control group and the experimental group at FCE(T) Bichi
2. Alternate Hypothesis (HA_1): There is a significant difference between the baseline graphic design skills of business education students in the control group and the experimental group at FCE(T) Bichi.
3. Null Hypothesis (H_{02}): Graphic design skills have no significant positive effect on the employability perception of business education students at FCE(T) Bichi. Alternate
4. Hypothesis (HA_2): Graphic design skills have a significant positive effect on the employability perception of business education students at FCE(T) Bichi.

integration of graphic design training into technical and vocational education curricula. By doing so, the research aims to enhance long-term youth employment opportunities in Nigeria. Furthermore, it aims to equip business education students with the necessary skills to succeed in a competitive labor market. Lastly, this research will contribute to the existing body of knowledge focused on enhancing employability within the realm of business education.

Methodology

The methodology of this study is presented as follows:

Research Design

This is a True Experimental Study using a Pre-Test and Post-Test Within-Subjects Design

where the participants acted as their own control, allowing for the comparison of employability levels before and after the intervention (graphic design training). This method guarantees increased statistical power for the study, because by controlling for individual differences, results tend to be more reliable. The method is also cost-effective because it requires fewer participants since no separate control group is needed (Ma-Kellams, 2021).

Participants

Population: The population of the study comprises of 320 NCE III business education students of FCE(T) Bichi, 2024/2025 academic year.

Sample Size: A total of 40 students were randomly selected for the study across the four departments of the school of secondary education (business), namely: Accounting Education, Entrepreneurship Education, Management Education and Marketing Education (Fraenkel, Wallen & Hyun, 2012).

Justification for Sample: The study has used the same sample across conditions, ensuring

Internal Validity

Internal validity refers to the degree to which the study establishes a trustworthy cause-and-effect relationship between graphic design skills and employability. In this study, to ensure high internal validity, the following measures were taken:

Randomization: Participants of the study were randomly selected from the 4 departments of the school of secondary education (business). Ten (10) participants were randomly selected from each of the 4 schools to form the control group that also acted as the experimental group.

Control of Confounding Variables: Factors like prior graphic design experience were controlled to ensure that any observed effects are due to the intervention. All the participants had no prior graphic design experience prior to the intervention.

Consistency in Implementation: The graphic design training was standardized across all participants to avoid variability in the treatment.

efficient use of resources and eliminating between-subject variability. Hence, individual differences such as personality traits or skill levels are automatically controlled since the same participants are used in all conditions.

Variables

The Independent Variable in this study was the training for graphic design skills (the intervention), while the Dependent Variables are baseline graphic skills and employability perception, measured through self-reported surveys.

Instrument of Data Collection

The instrument for data collection consisted of pre-test and post-test surveys designed to gather insights into students' baseline graphic design skills and their perceptions of employability. At the post-test stage, the instrument was designed to gather feedback from the students regarding the graphic design training they received.

External Validity

External validity concerns the extent to which the findings can be generalized to other populations, settings, or times. In this study, to enhance external validity, the following measures were taken:

Representative Sampling: As much as possible, the researchers have ensured that participants of the study have reflected the broader population of business education students in FCE(T) Bichi.

Real-World Application: As much as possible, the researchers have ensured that the graphic design training mimics the real-world scenario to ensure applicability.

Replication: To confirm the generalizability of this study, it can be replicated in other colleges or regions of Nigeria

While the above measures were carefully taken, it is important to state that threats to the

external validity of this study may include the following:

Interaction Effects: The unique characteristics of Federal College of Education (Technical), [FCE(T)] Bichi, might limit the applicability of findings to other institutions.

Ecological Validity: The circumstance in which the environment of this study was controlled might limit the extent to which the study reflects real-world conditions.

Data Analysis Techniques

In the analysis of the data, a quantitative technique was employed using paired t-tests to

Procedures and Materials

To train students in creating flyers and invitation cards using the Canva AI tool, several essential materials and facilities were provided to ensure a hands-on learning experience. First, students were given access to computers or laptops with internet connectivity. Each student was required to have a Canva account—either free or pro—to utilize the platform’s features fully during the training. A projector was also used for live demonstrations, enabling students to follow along with the instructor in real time. To reinforce the learning objectives, a sample flyer with a defined purpose was used to help students understand the practical application of their designs. This combination of resources created an engaging and productive training environment.

Pre-Test (Baseline Measurement): A pre-test was conducted to evaluate students' employability skills prior to the intervention. This involved a structured questionnaire assessing baseline graphic design competencies and self-reported surveys capturing their perceptions of employability.

Intervention (Graphic Design Skills Training): The intervention comprised a six-week graphic design training program tailored to the students' learning needs. The first two weeks focused on teaching basic graphic design principles, followed by two weeks of training specifically on designing flyers and invitation cards using the Canva AI tool. The final two weeks involved practical projects, where students were

evaluate pre-test and post-test scores. This statistical method helped to measure the effectiveness of the training program by determining any significant changes in participants' performance. Additionally, employability indicators such as skill level and portfolio quality were compared between the experimental group, which underwent the training, and the control group, which did not. This comparison aimed to highlight the impact of the training on the participants' overall employability.

guided to create various flyers and invitation cards intended for real-world use, including sales. Throughout the training, researchers ensured that students had consistent access to computers and the necessary software.

Post-Test (After Intervention): Following the intervention, the same self-reported surveys and design skill assessments were administered to measure changes in the dependent variables, including improvements in graphic design competencies and employability perceptions.

Guiding Students to Create Flyers Using Canva: To create a flyer in Canva, students began by visiting the Canva website and logging into their accounts. Those without an account were assisted in creating one. On the homepage, students typed “Flyer” into the search bar to browse available templates. They were instructed to select templates that matched the intended purpose of their flyer—be it for an event, business promotion, or announcement.

Students then learned to customize their flyers by editing text boxes, changing font styles, sizes, and colors to align with their themes. They were also taught to use the color palette tool to adjust background and element colors to match branding requirements. To enhance design aesthetics, students added shapes, icons, or illustrations from Canva’s “Elements” section.

For business-related flyers, students were guided to include logos, contact information, and social media handles to establish brand identity. Emphasis was placed on maintaining visual consistency in fonts and colors to create a cohesive

look. Once their designs were complete, students reviewed the content for accuracy and visual balance. They used Canva's alignment tools to ensure proper spacing and positioning of elements. After final adjustments, they clicked the "Share" button in the top-right corner and selected "Download," choosing a suitable format such as PDF for print or PNG for digital sharing. Students were also shown how to share their flyers directly via email or social media. For physical copies, they learned to use Canva's printing service or to download the file for local printing.

Guiding Students to Create Invitation Cards Using Canva: The process for creating invitation cards was similar to that of flyers. Students logged into or signed up for a Canva account and searched for "Invitation Card" on the homepage. They explored a wide range of templates suitable for events like business meetings, birthday parties, and weddings.

Upon selecting a template, students customized it by editing text to reflect the tone of the occasion—choosing elegant fonts for weddings or playful styles for birthdays. They were taught to enhance their designs by uploading personal images or selecting from Canva's extensive library of illustrations and stock photos. Color schemes were adjusted to match the event's theme, and additional visual elements such as icons, stickers, and shapes were added for creative flair.

Essential event details—including the name, date, time, location, and RSVP contact—were carefully inserted. Students were encouraged to proofread their designs thoroughly and to use Canva's zoom and alignment tools to polish the layout. Once satisfied, they downloaded the cards in preferred formats (PDF Print, PNG, or JPG) or used Canva's integrated print feature for home delivery or local printing.

Skills Needed in Using Canva to Design Flyers and Invitation Cards

Flyers: Designing flyers with Canva helps individuals develop a broad range of technical and creative skills. Key competencies include:

Platform Navigation: Selecting appropriate templates based on flyer objectives (e.g., promotions, events).

Tool Mastery: Using Canva's drag-and-drop interface to arrange text, images, and elements.

Layout and Composition: Organizing content for visual balance, employing white space effectively, and ensuring consistent alignment.

Typography: Choosing and pairing fonts that match the flyer's theme; adjusting text size, spacing, and color to establish hierarchy and emphasize key information.

Color Coordination: Applying color palettes that reinforce the flyer's theme, with attention to contrast and readability.

Image Editing: Uploading, resizing, and enhancing images using filters and effects; integrating relevant icons and illustrations.

Branding Consistency: Maintaining uniform use of logos, colors, and fonts to represent organizational identity.

Attention to Detail: Proofreading for grammatical errors and ensuring proper alignment and spacing.

Creativity and Adaptability: Designing unique content that stands out while working within constraints.

Problem-Solving: Finding solutions to design limitations.

Time Management: Meeting deadlines, especially when managing multiple design tasks.

Version Control: Updating and refining designs efficiently.

Invitation Cards: Effective invitation card design in Canva involves a mix of technical know-how, design principles, and attention to detail. Key skills include:

Technical Proficiency: Navigating Canva's interface, accessing templates, and customizing layouts.

Template Customization: Editing text, colors, and images to match the event's theme.

Typography: Selecting fonts that convey the mood of the event and organizing text to emphasize key information.

Design Aesthetics: Applying balanced layouts, appropriate color schemes, and adequate contrast for readability.

Image Integration: Uploading and resizing personal or stock photos; applying filters for visual consistency.

Layer Management: Ensuring text and images overlay clearly without clutter.

Accuracy and Detail: Verifying event details and proofreading for any errors.

Alignment and Spacing: Maintaining symmetry and clean arrangement of design elements.

Creativity: Tailoring designs to reflect the uniqueness of the event beyond default templates.

Problem-Solving: Navigating limitations within Canva's features to find creative alternatives.

Time Management: Completing projects efficiently within deadlines.

Version Control: Saving drafts and tracking revisions for final submissions.

By developing these comprehensive skills, students become proficient in designing compelling and professional-quality flyers and invitation cards using Canva.

Developing General Skills for Graphic Design

Developing graphic design skills requires a blend of technical expertise, creative insight, and professional understanding. To start, mastering the fundamental design principles—such as color theory, typography, balance, contrast, and visual hierarchy—is essential. A strong understanding of these concepts will empower you to create visually appealing compositions that effectively communicate your message through design.

Software proficiency is another crucial aspect of graphic design. Becoming skilled in tools like Canva and CorelDRAW, along with industry-standard software, is important. Additionally, exploring specialized tools such as Figma for interface design and Procreate for digital drawing can broaden your skill set and enhance your capabilities.

Creativity and innovation are fundamental in the design process. The ability to think creatively allows you to generate unique ideas, while experimenting with various styles and techniques helps you establish your distinct design

Results

Table 1 summarizes the responses from III students of the School of Secondary Education (Business) at FCE(T) Bichi regarding their experiences and opinions on graphic design skills and activities before they received graphic design training. When asked about prior training in graphic design, all respondents reported a lack of experience, resulting in a uniform response of zero.

voice. Communication skills are equally critical. Learning to interpret client briefs and present your work effectively ensures that you can convey ideas visually while addressing the needs of your target audience.

On the technical side, it is essential to familiarize yourself with different file formats, resolution requirements, and printing specifications. Developing designs optimized for both digital and print media is a crucial skill. A solution-oriented approach is also necessary when facing design challenges, as it combines creativity with functionality and aesthetic considerations to find the best solutions.

Time management is another vital skill in the graphic design field. Handling multiple projects and meeting deadlines is a regular part of a designer's life, and prioritizing tasks while efficiently managing resources will keep your workflow organized and productive.

Building a strong portfolio is key to showcasing your capabilities. Include diverse projects—such as logos, flyers, web designs, and branding materials—along with personal projects that highlight your unique style and skills.

As the design landscape continues to evolve, adaptability becomes increasingly important. Staying updated on emerging trends and tools, being open to learning new techniques, and adjusting to different client demands will enhance your resilience in this ever-changing field. Finally, networking and collaboration are powerful assets. Establishing connections with other designers and clients opens valuable opportunities, while collaborating on projects fosters teamwork and communication skills.

By focusing on these key areas, you can develop a well-rounded skill set that will serve you throughout your graphic design career.

This is reflected in the mean score of 0.00 and a standard deviation of zero, highlighting the absence of any prior training among the participants. Regarding their proficiency in graphic design tools, specifically Canva, scores ranged from 1 to 2, with an average of 1.25. This suggests that, overall, the students exhibited low proficiency with these tools.

Table 1: Descriptive Statistics	N	(Pre-test) Min	Max	Mean	Std. Deviation
Have you received prior training in graphic design?	40	0	0	.00	.000
How would you rate your proficiency in graphic design tools such as Canva?	40	1	2	1.25	.439
Do you currently include graphic design skills in your portfolio or resume?	40	0	0	.00	.000
How confident are you in securing a job based on your current skills?	40	1	2	1.13	.335
How relevant are graphic design skills to the job market for business education?	40	4	4	4.00	.000
How often do you engage in activities or projects that enhance employability, such as producing flyers	40	1	3	1.38	.540
Valid N (listwise)	40				

The standard deviation of 0.439 indicates some minor variation in individual proficiency levels among the students. Additionally, the majority of participants indicated that they do not include graphic design skills in their portfolios or resumes. This resulted in a mean score of 0.00 and a standard deviation of zero, highlighting a complete lack of emphasis on these skills in their professional documents.

The students were also asked about their confidence in securing a job based on their current skills. Their responses yielded a low mean of 1.13, indicating little confidence in their job prospects. The standard deviation of 0.335 reflects low variability in their responses, suggesting a collective sentiment of uncertainty. Interestingly, when asked about the relevance of graphic design skills to the job market for business education, all participants unanimously rated this as 4. This consensus resulted in a mean score of 4.00 and a

standard deviation of zero, underscoring a clear agreement on the importance of these skills in enhancing employability.

Finally, when asked how often they engage in activities or projects aimed at improving employability, such as producing flyers, responses varied from 1 to 3, resulting in a mean of 1.38. This indicates that participants rarely engage in activities that could enhance their employability, with a standard deviation of 0.540 reflecting moderate variability in participant engagement levels.

Overall, the results reveal a significant gap in graphic design training and confidence among these students prior to their training intervention, despite recognizing the relevance of these skills in the job market. These findings highlight valuable opportunities for training programs to improve proficiency, portfolio inclusion, and job confidence.

Table 2: Descriptive Statistics (Post-test)	N	Min	Max	Mean	Std. Deviation
How confident are you in securing a job based on your current skills?	40	2	4	3.75	.494
How relevant are graphic design skills to the job market for business education?	40	4	4	4.00	.000

How often do you engage in activities or projects that enhance employability, such as producing flyers	40	2	4	3.55	.597
How would you rate the usefulness of the graphic design training program in improving your skills?	40	4	4	4.00	.000
Did the training you received help you create or enhance your professional portfolio?	40	4	4	4.00	.000
Are you now more confident in pursuing design-oriented job opportunities?	40	4	4	4.00	.000
Valid N (listwise)	40				

When asked about their confidence in securing a job based on their current skills, participants expressed a generally high level of confidence, with scores ranging from 2 to 4 and an average of 3.75. The standard deviation of 0.494 indicates reasonable consistency in their responses. Furthermore, the relevance of graphic design skills to the job market for business education was overwhelmingly acknowledged, with all participants giving a score of 4. This unanimous response resulted in a mean score of 4.00 and a standard deviation of zero, highlighting the critical importance of these skills in their educational context.

In terms of engagement in employability-enhancing activities, such as producing flyers, scores varied from 2 to 4, with a mean of 3.55. This suggests frequent participation in such activities, although the standard deviation of 0.597 reflects moderate variability in their engagement levels.

The graphic design training program received exceptionally high ratings, with all participants rating the usefulness of the program in improving their skills as a 4. This resulted in a mean score of 4.00 with no variation, indicating that

everyone found the training highly beneficial. Similarly, when asked whether the training helped them enhance their professional portfolios, all participants rated this aspect as a 4, again resulting in a mean score of 4.00 and a standard deviation of zero. This shows universal satisfaction regarding the program's effectiveness in portfolio development.

Lastly, participants expressed newfound confidence in pursuing design-oriented job opportunities, once again rating their confidence at a 4. This consistent response, with a mean score of 4.00 and no variation, demonstrates that the training significantly boosted their confidence in seeking graphic design-related jobs.

Overall, participants view graphic design skills as highly relevant, with the training program being seen as extremely effective. They are more engaged in activities that enhance employability, and the program has successfully improved their portfolios and confidence in pursuing design-related careers. These results indicate that the training program has been a resounding success across all measured areas.

Table 3: Paired Samples Test for Baseline Graphic Skills (BSG)
Paired Differences

Pair	Mean	Std. Dev	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
1 BSGPst - BSGPre	2.04167	.25248	.03992	1.96092	2.12241	51.143	39	.000

As shown in Table 3, a paired samples t-test was conducted to compare the 40 survey responses from the experimental group during the post-test phase with the 40 responses from the pre-test on their baseline graphic design skills. The results reveal an average difference of 2.04167 between the two paired data sets, indicating that post-test scores are generally higher than pre-test scores by this margin. The standard deviation of paired differences is 0.25248, suggesting slight variation among the paired scores. The standard error of the mean difference is 0.03992, reflecting high precision in estimating the mean difference.

The 95% confidence interval for the difference ranges from 1.96092 to 2.12241, with a t-value of 51.143, indicating a statistically significant discrepancy between the two data sets. The p-value of 0.000 strongly rejects the null hypothesis that the paired data sets are identical.

In summary, the results demonstrate a statistically significant increase in baseline graphic skills from pre-test (BSGPre) to post-test (BSGPst), with $p < 0.05$. This confirms that the graphic design training intervention led to a meaningful improvement in graphic design skills.

Table 4: Paired Samples Test for Employability Perception (EMP)

		Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Dev	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 1	EMPPst - EMPPre	1.60000	.28445	.04498	1.50903	1.69097	35.575	39	.000

Table 4 shows that 40 survey responses from the experimental group during the post-test phase and 40 survey responses from the control group during the pre-test on their respective employability perception were compared using a paired samples t-test. According to the results, there is an average difference of 1.60000 between the two paired data sets, indicating that, on average, post-test scores are greater than pre-test scores. The variability of these differences is indicated by the paired differences' standard deviation, which is 0.28445. The comparatively low result of 0.28445 suggests that the paired scores vary slightly. The precision of the mean difference is reflected in the standard error mean, which is 0.04498. A modest standard error indicates a high degree of precision in the estimation of this mean difference. Additionally, according to the differences' 95% CI, the actual mean difference should fall between 1.50903 and 1.69097 at a 95% confidence level.

The mean difference divided by the standard error yields the t-value, which is 35.575. There is a substantial difference between the two data sets, as indicated by this high absolute value. Consistently, $df = 39$, or the number of participants minus one, is the degree of freedom for this analysis. Lastly, a p-value of 0.000 indicates that the observed difference is statistically significant. The null hypothesis that the paired data sets are identical is strongly refuted by this extremely significant result.

Overall, the results reveal a statistically significant increase in employability perception from the pre-test (EMPPre) to the post-test (EMPPst) ($p < 0.05$). This finding is substantiated by the positive mean difference and confidence interval, indicating that the graphic design training intervention led to a noteworthy enhancement in employability perception between the two measurement phases.

Findings

This study has revealed several key findings based on the results obtained, which align with the study's objectives, research questions, and hypotheses. First and foremost, it has been established that the baseline graphic design skills of business education students at FCE(T) Bichi, prior to their training intervention, were alarmingly low, as evidenced by their uniform response of zero when asked about their prior training and experience in graphic design. However, the post-test results indicated a significant improvement in their graphic design proficiency, as reflected by the exceptionally high mean score that represents the respondents' views on the usefulness of the training in enhancing their graphic design skills.

Furthermore, the students' perception of employability before receiving the graphic design training was notably low, as demonstrated by their low mean score regarding their confidence in securing a job based on their pre-test skills. After the training, however, participants expressed newfound confidence in pursuing design-oriented job opportunities, as indicated by the significant increase in their confidence levels when seeking jobs related to graphic design. This shift in perception not only highlights the effectiveness of the training program but also suggests that

Conclusions

The findings from this study reveal the transformative impact of training on students' perceptions of their job readiness. The significant differences observed between pre-test and post-test graphic design skills and employability perceptions underscore the effectiveness of skill development programs, particularly in graphic design. As participants reported increased confidence in their employability prospects following the training, it becomes evident that such educational interventions play a crucial role in equipping students with the essential skills needed in today's competitive job market. This evidence not only supports the acceptance of the alternative hypotheses but also highlights the need for continued investment in targeted training

improved skills can greatly influence students' willingness to enter the competitive job market. As a result, many participants reported increased enthusiasm for building their portfolios and networking within the industry, recognizing the importance of these activities in advancing their careers.

Similarly, the study's results revealed statistically significant differences between the pre-test and post-test baseline graphic design skills of the participants, with higher scores observed in the post-test period. This evidence suggests a notable improvement or shift in the measurements, leading to the rejection of the null hypothesis (H01) and acceptance of the alternative hypothesis (HA1), which states that there is a significant difference in the baseline graphic design skills of business education students in the control group and the experimental group at FCE(T) Bichi.

Additionally, the study revealed statistically significant differences between the pre-test and post-test employability perceptions of the participants, with higher scores observed in the post-test period. This evidence indicates a notable improvement or shift in the measurements, leading to the rejection of the null hypothesis (H02) and acceptance of the alternative hypothesis (HA2), which states that graphic design skills have a significant positive effect on the employability perception of business education students at FCE(T) Bichi.

initiatives that bridge the gap between education and employment opportunities for aspiring professionals.

Ultimately, the findings support the scalability of the training program across various vocational and technical education institutions and regions. Policymakers and stakeholders can leverage these insights to make informed decisions about integrating graphic design and similar skill sets into technical and vocational education frameworks, particularly within business education, thereby enhancing student preparedness for workforce entry.

However, despite the critical importance of this study, a major obstacle encountered during the training was the limited availability of the graphic design tools, which hindered the achievement of optimal learning outcomes.

Additionally, some students found it challenging to balance the additional workload of the training

with their regular academic commitments, which affected their overall development.

Recommendations

Based on the findings and conclusions of this study, several recommendations have emerged to enhance the current state of graphic design education in Nigeria. Firstly, the study identified specific skill gaps, particularly a lack of familiarity with contemporary AI tools relevant to the field of graphic design. This finding underscores the need for future training programs tailored specifically to Nigerian government authorities and colleges of education, emphasizing the importance of equipping individuals with up-to-date knowledge and competencies.

Additionally, integrating graphic design training into the business education curriculum is proposed as a vital improvement. This recommendation aligns with ongoing curriculum reform initiatives by the National Commission for Colleges of Education (NCCE), aiming to provide students with a more comprehensive and practical educational experience.

Ethical Considerations

In the context of the study, several ethical considerations were paramount to ensure the integrity of the research and the protection of participants. First and foremost was the principle of informed consent. Before the commencement of the study, all participants were required to provide their informed consent, ensuring they were fully aware of the nature of the research and their roles in it. Confidentiality was another critical aspect; to

Furthermore, the formation of strategic partnerships between the governing bodies of Nigerian colleges of education and industry stakeholders is strongly recommended. Such collaborations would create valuable opportunities for students, including internships, mentorships, and exposure to real-world challenges they are likely to face after graduation.

Lastly, there is a compelling call for the government to implement the recommended graphic design training program across the entire Vocational and Technical Education (VTE) sector in Nigerian institutions. This initiative should ensure that students have access to essential software and hardware, alongside continuous mentorship and development opportunities for VTE graduates. By addressing these recommendations, the landscape of graphic design education in Nigeria can be significantly improved, ultimately benefiting students, institutions, and the wider industry.

protect the identities of participants, all data collected were anonymized. This measure safeguarded personal information and enhanced the trust participants placed in the research process.

Additionally, participation in the study was entirely voluntary. Students had the right to withdraw from the study at any point without facing any penalties. This approach not only respected the autonomy of the participants but also encouraged honest and open engagement in the research.

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