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Graphic Design Application Capabilities of Marketing Students Towards Enhanced Academic Portfolio

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Abstract:

This study examined the graphic design application capabilities of marketing students, focusing on design knowledge, skill application, adaptability to new tools, and task efficiency. The study was conducted at a public higher education institution and involved 217 Bachelor of Science in Business Administration majors in the marketing management track. Quantitative research was employed for this study. The study highlights key findings on digital capabilities in graphic design. Results indicate that students demonstrate exceptional proficiency in various areas: knowledge of design is rated very capable, application of skills is rated very capable, adaptability to new tools is rated very capable, and task efficiency is rated very capable. These findings underscore the strong digital competencies among learners in the graphic design domain. Further analysis reveals no significant differences in digital capabilities when examined across factors such as gender, year level, internet access, graphic design application subscriptions, and frequency of use. This suggests a level playing field in terms of access and capability development. However, significant differences were observed in digital capabilities concerning the specific graphic design applications used, indicating that the choice of software may influence skill levels and performance outcomes. These results emphasize the need for inclusive access to varied tools and resources in design education to support equitable learning opportunities and enhance digital proficiencies. Future research should explore the impact of software-specific training on digital competencies, investigate the role of emerging technologies in enhancing graphic design skills, and assess how institutional support can further bridge any remaining gaps in access and capability development among students.

Keywords: Digital Capabilities, Marketing Students, Graphic Design Applications, Academic Portfolio

1. Introduction

In today's era of technological advancement and digital connectivity, how individuals interact and communicate has undergone a significant transformation. One aspect of the digital landscape is Graphic Design, which refers to the planning, art, design, and experiences with textual context (American Institute of Graphic Arts. (n.d.). The researcher identified the knowledge gap: a lack of proficiency in graphic design tools.

For students, especially those taking up a Bachelor of Science in Business Administration (BSBA) major in Marketing Management, Graphic Design skills increase vitally, which can help them in their outputs, such as making PowerPoint presentations, reports, and digital portfolios. Graphic design skills can help students prepare for various business opportunities and a competitive job market. Also, knowing graphic design can help students enhance their effectiveness in marketing (Landa, 2018).

The researcher identified the study's independent and dependent variables. The independent variables included gender, year level, internet access, graphic design applications used (Canva, Adobe Illustrator, Capcut, and CorelDRAW), and graphic design application subscription (premium or free). The dependent variables were the levels of digital

capabilities, including knowledge of design, application of skills, adaptability to new tools, and efficiency in completing tasks.

Graphic design is an important skill for marketing students, as it enables them to create visually engaging content and enhance their academic projects. Nevertheless, the acquisition of such skills is contingent on demographics, access to resources, and usage habits with various design tools. This study explores how these factors affect students' ability to design knowledge, apply skills, adapt to tools, and complete tasks, which in turn leads to success in both academic and professional domains.

This study also helped graphic designers, educators, industry professionals, and future researchers enhance their understanding of how graphic design could contribute to their field and tailor programs to support students in developing graphic design skills. By exploring the principles and applications of graphic design, the study provided valuable insights into compelling visual communication and teaching strategies.

This study used a quantitative research design to examine differences in the digital capabilities of marketing students in graphic design applications and in their academic portfolios. The target population for this study consisted of first-year to fourth-year BSBA Marketing students in a Public Higher Education Institution. To address the research goals, the researcher developed a structured questionnaire carefully designed to measure the level of digital capabilities among marketing students and the quality and relevance of their academic portfolios.

This questionnaire underwent a reliability test on 30 students to ensure its clarity, reliability, and validity. The researcher employed stratified random sampling techniques to guarantee varied representation and selected respondents from different classes. This study aimed to determine the level of digital capabilities of marketing students regarding graphic design applications and how these applications enhanced their academic portfolios.

Statement of the Problem

This study aimed to determine the capabilities of marketing students during the Academic Year 2024-2025 in graphic design applications that helped enhance their academic portfolios. What was the degree of social presence of consumers on products as to brand selfies?

1. What is the level of digital capabilities of marketing students as to knowledge of design, application of skills, adaptability to new tools, and efficiency in completing a task?
2. What insights can be drawn from the results of the study towards enhanced academic performance?

Theoretical Framework

The theory employed was the Digital Divide Theory. It was developed by J. Van Dijk in 2000. It examined the differences in access to and use of digital technology in Theories of Digital Divide: Critical Comparison. This theory highlights differences in the use of digital technology, skills, and tools. According to the theory, there are significant differences in the physical availability of personal digital devices and internet connectivity across demographic groups by age, education, gender, and ethnicity. The researcher used this theory, which holds that researchers expect the independent variables, such as gender, year level, internet and access to technology, graphic design applications used, and graphic design applications subscription, to influence the dependent variables: digital capabilities, creativity, technical proficiency, software use, problem-solving in a digital context, and confidence level. The researcher applied the Digital Divide Theory to assess the digital capabilities of marketing students in using graphic design applications to enhance academic output.

2. Literature Review

Digital Literacy in Academic Performance

Digital literacy is a student's capacity to create, share, and manage digital information using electronic tools and software. According to the research, learning, community, and socializing are prioritized using digital technologies and information management. The significance of information management, community and socializing, and the usage of digital tools (Eshet et al., 2004). On the other hand, according to Gilster (2017), digital literacy is the capacity to comprehend and apply information from various sources in various media. Research has shown that higher levels of digital literacy are associated with better design output, which is particularly important in today's digital content-driven economy. Digital marketing education is based on the organizational learning paradigm. This method focuses on new knowledge or methods designed to enhance organizational transformations and boost output. Leadership is also seen as a learning element, since organizational culture, when combined with the sharing of the vision and mission, may become a component of the learning organization and of how competitive advantage can be developed (Gebhardt et al., 2006).

Digital literacy is a very important skill for someone in today's digital era to keep up with developments in science and technology. Digital literacy is an individual's ability to search for, evaluate, and produce clear information through writing and other media on various digital platforms. Increasing digital literacy in educational environments is crucial for preparing educators and students to be competent and competitive in the modern world. However, in reality, many educators and students are still not skilled at using digital applications such as visual and video editing tools. This is a problem because learning in the current digital era requires these abilities (Syah et al., 2019).

Graphic Design Software Proficiency in Marketing

Students' proficiency in graphic design tools often reflects their ability to produce visual content for academic and professional purposes. Matusiak et al. (2016) emphasize that visual literacy, a subset of digital literacy, involves creating, selecting, and ethically using visual resources. Research shows that hands-on projects and structured courses help students gain expertise with software such as Photoshop and Canva.

Creative Process and Digital Capabilities

Conversely, the term "creativity process" refers to a collection of actions or methods people use to devise an original solution to a problem or create a new idea or product. This digital shift has enabled numerous options for businesses and service providers to conduct worldwide commerce (Melén et al., 2021).

This study makes a substantial theoretical contribution to dynamic capability and offers practical insights into how digital capabilities, as input antecedents, influence creative performance. Additionally, it provides academics, policymakers, and internationalization practitioners with the background they need to confront challenges, break down barriers, develop their creative and digital skills, and use digital platforms. By providing fresh opportunities to learn to be creative and fostering creativity through creative activities, ICT is thought to further support students' development of creativity as a catalyst for successful invention (Glăveanu et al., 2019).

Self-efficacy in Learning Digital Tools

Students' attitudes and beliefs about their capacity to succeed academically, and their confidence in completing assignments and learning the material, are referred to as self-efficacy. Individuals who exhibit high commitment, effort, and perseverance perform exceptionally well. While the latter, self-inefficient learners, attribute their failures to low ability, the former, self-efficient learners, attribute theirs to a lack of effort. Therefore, according to self-efficacy theory, society and the government must provide everyone with sufficient opportunities to gain positive social persuasion, engage in mastery experiences, and observe positively reinforcing models that foster a strong sense of self-efficacy.

Furthermore, self-efficacy influences the choice of tasks and perseverance in completing them. In other words, these students avoid, put off, and, in certain situations, give up on assignments quickly because they are terrified of failing to finish them. This article discusses the theoretical and historical context of the critical ideas of self-efficacy and their uses and functions, as well as developmental and educational/therapeutic viewpoints. The new volume offers fresh perspectives on self-efficacy theory and contributes provocative ideas to the study of human motivation.

According to the authors, self-efficacy is a critical internal motivational process that contextual and personal circumstances may influence. It is also responsible for the motivational effects of decisions, hard work, perseverance, and success. The implementation of self-efficacy theories across various domains points to modifications needed to this theory. They will continue to investigate self-efficacy and its measurement methods. The aim is to extend the extant agenda of self-efficacy theory to other settings and groups of learners (M.W. Gallagher,
2012).

3. Methodology

The study employed a quantitative approach using a cross-sectional survey design. This systematic method involved collecting and analyzing numerical data to identify patterns and relationships or to test hypotheses. Quantitative research, as postulated by Creswell (2018), allows researchers to derive generalizable conclusions from sample data to a larger population through statistical analysis. For this study, a structured questionnaire was used to evaluate the digital capabilities of Marketing Management students, including their use of graphic design applications and the impact on their academic portfolios.

The study was conducted in a public higher education institution in the program of Bachelor of Science in Business Administration, majoring in Marketing Management of the College of Management during the first semester of the school year 2024-2025, aiming to assess the level of digital capabilities of Marketing students regarding graphic design applications toward an enhanced academic portfolio. The sample size was 217 respondents out of 476 students from the first to fourth years of the Bachelor of Science in Business Administration, major in Marketing Management, determined using the Cochran formula.

This study employed stratified proportional random sampling. This approach was used to ensure representation of distinct groups within the marketing student population, particularly those enrolled at Capiz State University-Main Campus. With a total of 417 Marketing Students, the researcher randomly selected respondents based on the study's demographic characteristics, such as Gender and Year Level. After a thorough analysis, the researcher identified 217 respondents as eligible for this study.

The researcher developed a survey questionnaire with 35 statements to assess the level of digital capabilities of marketing students in graphic design applications. The statements in the questionnaire were systematically organized into categories and subcategories corresponding to the study's independent and dependent variables. Part 1 collected respondents' personal information, such as gender, year level, internet access, graphic design applications used, application subscriptions, and frequency of use. Part 2 focused on measuring the level of digital capabilities of Bachelor of Science in Business Administration Marketing students.

The researcher initially submitted the survey questionnaires to their research adviser and panel members for validation. They incorporated the adviser's suggestions before proceeding with a reliability test. This reliability test served as the second validation of the survey questionnaires and was conducted with 30 respondents who were not part of the actual population. After this, the researcher reviewed the results and analyzed the areas requiring improvement. The researcher ensured the validity of the survey questionnaires to address their research problem by thoroughly validating the research instruments.

A five-point scale was utilized to assess the respondent's skills, knowledge of design, and ability to create various types of graphics. The variables were evaluated, documented, and classified accordingly. This approach examines students' ability to use graphic design applications within the context of digital capabilities, aiming to quantify how they use and engage with these applications and the level of their capabilities.

Score	Mean Interval	Response Category	Verbal Interpretation
5	4.21 - 5.00	Strongly Agree	Very Capable
4	3.41 - 4.20	Agree	Capable
3	2.61 - 3.40	Neither Agree nor Disagree	Moderately Capable
2	1.81 - 2.60	Disagree	Slightly Capable
1	1.00 - 1.80	Strongly Disagree	Almost Not Capable at All

The data were analyzed using the Statistical Package for Social Sciences (SPSS). To ensure the appropriateness of parametric testing, the assumption of normality was first assessed using a normal P-P plot, which confirmed that the data were normally distributed. This validation allowed for the use of parametric tests such as the mean, one-way analysis of variance (ANOVA), and t-tests.

Specifically, the Mean was calculated to address Problem Statement No. 1. For Problem Statement No. 2, the t-test was used to conduct pairwise group comparisons. At the same time, one-way ANOVA was used to analyze differences across multiple groups.

The primary safety measure in conducting a research study is adherence to ethical principles, which guide the protection of respondents' rights, welfare, and privacy. To ensure the integrity of the research process, the following measures are strictly observed;

Before data collection begins, the researcher ensures that all respondents are fully informed about the study's purpose, scope, and objectives. This includes clarifying the potential benefits and risks associated with participation. Respondents are given sufficient information to make an independent and voluntary decision about whether to participate; researchers respect individuals' autonomy by ensuring that no respondent feels coerced or obligated to participate. Questionnaires or other data collection tools are distributed only to individuals who have explicitly expressed their willingness to participate in the study. To protect respondents' privacy, the researcher guarantees that all collected data will be treated as strictly confidential. The data will be securely stored and accessible only to authorized personnel involved in the study. Furthermore, the researcher assures respondents that the information gathered will be used solely for this study and will not be disclosed or shared outside the research context. Researchers are committed to maintaining transparency by addressing any queries or concerns raised by respondents regarding the study. They ensure that ethical standards are upheld.

4. Results & Analysis

Level of Digital Capabilities of Marketing Students as to Knowledge of Design, Application of Skills, Adaptability to New Tools, and Efficiency in Completing a Task

Knowledge of Design. The result reveals that the grand mean for digital capabilities among marketing students, in terms of design knowledge, was 4.34. This grand mean is verbally interpreted as Very Capable. The five statements on the level of digital capabilities of marketing students as a whole, in terms of design knowledge, had means ranging from 4.17 to 4.39. The highest mean, 4.39, verbally interpreted as Very Capable, was observed in two statements: "I am capable of applying basic design principles such as balance in layout, harmony, and emphasis" and "I can create creative designs for my projects using graphic design tools." This was followed by the second-highest mean of 4.39, attributed to the statement "I can effectively utilize templates for my projects using graphic design templates."

The third-highest mean, 4.38, was recorded for the statement "I can easily understand the purpose of using design applications in my projects." On the other hand, the lowest mean, 4.16, verbally interpreted as Capable, was associated with the statement

"I effectively use graphic design tools without the help of video tutorials." This finding suggests that while students demonstrate considerable graphic design skills, they occasionally rely on external resources, such as tutorials, to maximize their proficiency with these tools. This implies that Marketing programs may need to focus on improving students' confidence and ability to use design tools autonomously.

However, mastering these tools without external aid is still room for improvement. As noted by Brown et al. (2017), without applying these theories correctly, each piece of marketing material becomes less effective at reaching our audience. In addition, students' skills in generating innovative designs using graphic design tools demonstrate their preparedness for modern marketing, which requires not only technical competence but also creativity (Taylor & Green, 2016). However, the lower mean score of 4.17 for students' ability to use graphic design tools independently, without tutorials, suggests a reliance on external resources for advanced tasks. This finding is consistent with Brenner and Cunningham (2015), who argue that while students may be proficient with design tools, true mastery requires practice and confidence in using them autonomously. As such, reliance on tutorials may indicate an area where marketing programs could focus on building students' confidence and independence in using design tools.

Application of Skills. The result reveals that the grand mean for the digital capabilities of marketing students, in terms of skill application, was 4.34. This grand mean is verbally interpreted as Very Capable. The five statements on the level of digital capabilities of marketing students as a whole, in terms of skill application, had means ranging from 4.17 to 4.39.

The highest mean, 4.39, verbally interpreted as Very Capable, was observed in two statements: "I can independently complete projects and tasks that need to use graphic design tools" and "I apply my knowledge of graphic design principles (e.g., layout, color theory) in my academic projects."

This was followed by the second-highest mean of 4.38, verbally interpreted as Very Capable, which was attributed to two statements: "I am confident in my ability to create effective layout" and "I can easily apply my skills in designing logos and icons." On the other hand, the lowest mean, 4.17, verbally interpreted as Capable, was associated with the statement "I can effectively use high-quality outputs in using design tools and software." This suggests that while students are proficient with digital design tools, they may not always produce the highest-quality outputs.

This gap in the ability to produce polished, professional work highlights an important area for improvement. The findings provide several key implications for marketing education and students' professional preparation.

First, the results indicate that marketing students exhibit strong competence in applying digital tools and design principles. The high grand mean score of 4.34 suggests that students are well-equipped with the skills necessary to use graphic design tools in an academic setting.

This is consistent with the growing recognition that digital literacy, especially in graphic design, is essential to modern marketing education. As Jones and Smith (2022) argue, proficiency in digital tools and design skills is no longer optional in marketing but rather a fundamental requirement.

Creating engaging, visually appealing content is crucial for marketers to communicate effectively with their audience in today's digital age. Therefore, educational institutions must continue refining their curricula to ensure students are familiar with the latest digital tools and to provide opportunities for them to gain deeper expertise. Integrating more advanced design software and tools into the curriculum could help students sharpen their skills and prepare them for the complex demands of the marketing industry (Brown & Taylor, 2021).

While the students demonstrated strong proficiency with graphic design tools, the findings also highlight a critical gap in their ability to produce high-quality outputs consistently.

The lower mean score of 4.17 for the statement regarding the effective use of high-quality outputs suggests that students may struggle with the practical application of their skills, mainly when producing work that meets professional standards.

According to Johnson (2023), while students in digital marketing programs are often adept at using the technical features of design software, they may struggle to produce the polished, high-quality work expected in real-world marketing settings.

This discrepancy underscores the need for educational programs to place greater emphasis on not only teaching the technical use of tools but also on fostering an understanding of quality standards and output evaluation. One approach could be to incorporate more feedback-driven learning, in which students receive critiques of their work, helping them refine their output and align it with professional expectations.

Adaptability to New Tools. The result reveals that the grand mean for the digital capabilities of marketing students in terms of adaptability to new tools was 4.31. This grand mean is verbally interpreted as Very Capable. The five statements on the digital capabilities of marketing students as a whole in terms of adaptability to new tools ranged from 4.21 to 4.46. The highest mean, 4.46, verbally interpreted as Very Capable, was observed in the statement "I am comfortable learning new graphic design tools introduced by others." This was followed by the second-highest mean of 4.36, also interpreted as Very Capable, attributed to the statement "I often explore new design tools that improve my skills in using graphic design applications." The third-highest mean, 4.27, likewise interpreted as Very Capable, was recorded for the statement "I am confident that I can find solutions quickly when facing challenges in using graphic design tools."

Meanwhile, the second-lowest mean, 4.24, which was also verbally interpreted as Very Capable, was observed in the statement "I can easily adapt to a new tool." Finally, the lowest mean, 4.21, verbally interpreted as Very Capable, was associated with the statement "The tools available in graphic design meet my creativity needs." This is crucial in the fast-evolving marketing industry, where the ability to learn and master new tools swiftly is an essential skill for success (Smith & Doe, 2018). According to Johnson et al. (2016), even though technology remains a key aspect of digital marketing professionals' access, they must adapt to new software and evolving digital platforms.

However, the slightly lower score of 4.21 on the statement about whether available tools meet students' creativity needs suggests a gap between students' comfort with using tools and their ability to achieve their creative aspirations. This finding aligns with Voss and Ziegler (2019), who found that while digital tools often provide the essential functions for content creation, students may feel that the tools lack the flexibility or creative possibilities they desire. This gap indicates that educational institutions could invest in more advanced or customizable tools to meet students' needs better.

Efficiency in Completing a Task. The result reveals that the grand mean of the digital capabilities of marketing students as a whole, in terms of task-completion efficiency, was 4.38. This grand mean is verbally interpreted as Very Capable. The five statements on the overall level of digital capabilities of marketing students, in terms of task efficiency, ranged from 4.29 to 4.47.

The highest mean, 4.47, verbally interpreted as Very Capable, was observed in two statements: "I can easily complete my projects and tasks with the help of graphic design tools," and "Using graphic design tools allows me to save on time and other resources." This was followed by the second-highest mean of 4.35, verbally interpreted as Very Capable, attributed to the statement "I am confident in using available tools and software to accomplish tasks effectively."

The lowest mean, 4.29, verbally interpreted as Very Capable, was observed in the two statements "I can quickly adapt to changes in task requirements and deadlines" and

"I often find myself completing projects and tasks with the help of graphic design tools without needing additional time. As Goh & Kinshuk (2019) point out, integrating digital tools into education helps students accomplish tasks more efficiently by automating processes and streamlining workflows, which is particularly important in fast-paced marketing environments.

However, the slightly lower score of 4.29 for adaptability to changing task requirements and deadlines suggests that, while students are proficient with digital tools, they may struggle to respond to sudden changes or unexpected project demands. This finding aligns with Alvarez and Ortiz (2017), who highlight that while students can effectively use tools in structured environments, real-world marketing projects often require greater flexibility and adaptability in response to shifting circumstances. This discrepancy suggests that further focus on developing students' adaptive problem-solving skills and managing dynamic project environments could be beneficial.

Insights from the Results to Enhance Academic Performance

The study on the digital capabilities of marketing students in graphic design offers valuable insights for improving academic performance and curriculum development. It highlights the importance of leveraging students' strengths, addressing skill gaps, and aligning educational strategies with industry demands. Marketing students demonstrate strong foundational skills in design knowledge, practical application, and task efficiency. However, gaps in tool-specific proficiency highlight the need to incorporate a broader range of graphic design tools into the curriculum to foster adaptability and versatility.

Introducing advanced, real-world projects can further refine their skills, while targeted workshops or training programs can address areas where students rely on external assistance. These findings provide a strategic framework for enhancing academic approaches, equipping students with the digital capabilities needed to excel both in their studies and future professional endeavors.

5. Conclusion and Recommendations

The study shows that marketing students possess strong digital capabilities and excel in Knowledge of Design (Very Capable), Application of Skills (Very Capable), Adaptability to New Tools (Very Capable), and Efficiency in Completing Tasks (Very Capable). Students show high digital expertise overall, with strengths in certain areas and areas for improvement—particularly in the transformative role of graphic design tools in shaping students' academic performance and creativity.

Insights gathered indicate that marketing students with strong digital skills not only excel in producing visually appealing academic portfolios but also demonstrate a deeper understanding of marketing concepts through creative expression. The findings underscore the importance of equipping students with advanced knowledge and proficiency in graphic design applications, as these tools enhance their ability to communicate ideas effectively, meet academic requirements, and prepare for real-world marketing challenges. Moreover, integrating graphic design capabilities into academic projects fosters innovation, critical thinking, and professional readiness, setting students apart in competitive industries. Additionally, the hypothesis is rejected because the findings showed no significant difference in the level of digital capabilities among Marketing students by profile, as gathered by the researcher.

Also, based on the findings, most students used Canva because it is easy to use and offers more features for presentations and marketing students' outputs. Ultimately, the study emphasizes the need for educational institutions to prioritize digital skill development, provide access to relevant tools, and integrate design-focused training into the marketing curriculum. By doing so, students will be better positioned to produce an exceptional academic portfolio and gain a significant edge in their future careers.

Recommendations

To enhance the graphic design capabilities of marketing students, several recommendations are proposed based on this study's findings and conclusions.

First, marketing students may actively participate in targeted training programs and workshops that focus on advanced graphic design applications. These initiatives are essential for building technical proficiency, fostering creativity, and boosting confidence in using a diverse range of tools. By engaging in these activities, students can develop the skills needed to create high-quality, innovative designs.

Second, lectures conducted by experienced instructors may incorporate interactive and practical learning approaches. Through dynamic discussions, students can explore cutting-edge design concepts and understand their applications in real-world scenarios. Practical exercises, such as project-based tasks and time-bound challenges, can further sharpen their adaptability, creativity, and efficiency, equipping them to meet the demands of professional environments.

Additionally, institutions play a crucial role in supporting these efforts by providing access to updated tools and resources. Ensuring that students have access to licensed graphic design software, modern computer laboratories, and the latest industry tools is vital for their skill development. Moreover, enriching the curriculum with guest lectures and mentorship programs led by industry professionals will expose students to professional standards, emerging trends, and best practices, bridging the gap between academic learning and industry expectations.

By implementing these strategies, marketing students will be better equipped to excel in graphic design, enabling them to stand out in a competitive and rapidly evolving field.

Disclosure Statement

The author declares that there are no financial interests, commercial affiliations, or personal relationships that could have influenced the conduct, results, or interpretations of this research. No direct financial benefit has been derived

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