Bridging the Employability Gap: The Vital Soft Skills Needed by HND   Graphic Design Graduates in the 21st Century Workforce

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Abstract:
Basically, competencies have been a significant matter that affects the growth of economies. From the perspective of the industry, the skills gap has been identified as a lack of the right skills among graduates. This multiple case study adopts the evaluative research to investigate the level of soft skills inherent in the Higher National Diploma (HND) in Graphic Design Programme (GDP) at Takoradi Technical University (TTU). Adopting the interpretive approach, it translated the social perspectives of 30 key stakeholders of the HND GDP gathered through purposive and snowball sampling methods using face-to-face and focus group interaction from Sekondi-Takoradi, Kumasi, Accra and Tema to establish the applicability of the curriculum to the world of work. Utilizing the Career EDGE model by Dacre-Pool and Sewell as a theoretical lens for analysing the data, the result reveals that some key skills are absent in the CAPGD curriculum, thus presenting graduates ill-equipped for the world of work.

Keywords: Higher technical education, curriculum, competencies, TVET graduates' employability, soft skill, generic skills, skill gap

1. Introduction

Generally, there has been an upsurge in graduate unemployability in recent times (ILO, 2024), causing a lot of anxiety among stakeholders of higher education institutions (HEI) (Mobarak, 2019). Issues on skills gaps have overwhelmed discussions on the employability of graduates such that both the world of work and academia are yet to discover initiatives to address the menace (Sarpong-Nyantakyi, 2023). Meanwhile, appropriate Technical and Vocational Education and Training (TVET) programmes are expected to facilitate industrialization, generate capital and eliminate poverty, thereby delivering strategies that tackle gaps in training programmes (Atangana & Tabi, 2022). Prudent higher education institutions align training programmes to labour market demands to ensure the relevance of the programme to economic growth (Van Noy & Cleary, 2017). Hence, it is critical to investigate the employable skills inculcated in the curriculum so that learners can produce work-ready graduates for the world of work (Sarpong-Nyantakyi, 2020; Mobarak, 2019).

Evidence from Curriculum Development (n.d.) outlines only a handful of the competency skills, such as Computer Literacy, Entrepreneurial Studies and Communication Skills. It has been suggested that the unemployment challenges could be attributed to the non-alignment of some institutional objectives and national requirements on issues pertaining to job creation and graduate employment (Mensah, 2013). While the desire to promote graduate employability keeps soaring, it has also given rise to numerous studies, which have produced detailed breakdowns and classifications of particular skills and attributes required to promote graduate employability, such as core competencies or skills, key skills, common skills, transferable skills, essential skills, functional skills, skills for life, generic skills and enterprise skills (Lowden et al., 2009)**.**

To improve the employability qualities of TVET graduates in Ghana, there are a number of job attributes that need to be inculcated into the main curriculum to ensure that graduates are well-positioned to secure and maintain jobs. Among them are competency skills, entrepreneurship skills, numeracy skills, leadership skills, teamwork, emotional intelligence (interpersonal skills), motivational and mentorship skills.

1.1. Competency Skills

Pilbeam and Corbridge (2006) define competency as a person's behavioural feature that promotes effective or superior performance and the capacity to perform some kind of skill to an approved standard. In this study, competency is perceived as the ability to utilize all the learning experiences to achieve a given task. While employability and competence are inseparable and cannot be discussed in isolation, it is measured by a graduate's level of competency demanded by the world of work, which results from linkages between tertiary education and the industry (Biagi et al., 2020). Therefore, it behoves the industry to partner with academia in curriculum development to ensure that the training for the HND CAPGD is in line with workplace expectations.

1.2. Core Competency

Core competency has diverse connotations; it could be used to mean "essential must-have" aptitudes that the individual needs to perform a task. It also considers the common skills or attributes that employees within an organization ought to have, irrespective of the role or levels at which they are operating (Pilbeam & Corbridge, 2006). Iqbal and Zenchenkov (2014) outline competency into three broad categories:

- First of all, proper skills, that is, basic skills required by all graduates;
- Secondly, attributes covering opinions, morale, flexibility and motivation; and
- Thirdly, knowledge (acquired knowledge).

In this study, the core competency or basic skills required of HND GD students is commercial design, which is an aspect of graphic communication. Today, graphic design has emerged as a broader-based discipline, such as design for print, advertising, and motion graphics for film and television, to multi-disciplinary teams prepared to take on new challenges in their field and professionals (Tanega, 2012).

Wide-ranging developments in the graphic design sector have made it necessary to improve education at all levels to meet the field's dynamic nature (Appiah, 2014). Therefore, graduates must gain the necessary experience to be competitive and relevant in the graphic art profession.

Competencies are also outlined by Fung and Wong (2012) as the set of abilities needed to obtain, hold, and advance in a certain position. These skills cover a broad spectrum of qualities that are important for preparing technical university students. Hager et al. (2002) define the critical competency in a similar manner:

Thinking skills such as logical and analytical reasoning, problem-solving, intellectual curiosity, effective communication skills, teamwork skills, and capacities to identify, access and manage knowledge and information; personal attributes such as imagination, creativity and intellectual rigour; and values such as ethical practice, persistence, integrity and tolerance. This diverse collection of qualities and capacities is distinguished from the discipline-specific knowledge and associated technical skills that traditionally are associated with higher education (p.3).

Pilbeam and Corbridge (2006), however, divide competencies into two categories: technical competencies, which include the necessary cognitive and practical abilities for an employee, and behavioural competencies, which look at people's behaviour and demeanor at work. Equally, generic skills, also known as basic employability skills, are recognized by Rosenberg et al. (2012) as essential but transferable core competencies that support the knowledge, abilities, and experience required to advance in the modern workplace.

Addressing these all-important key skills, it has become evident that most HND Graphic Design graduates possess some competencies in technical skills, communication skills, and personal attributes because they form part of the curriculum content. However, other HND Graphic Design students are unable to use some of these skills to their advantage. This explains why some students aim to acquire a certificate as a springboard to pursue careers in other fields.

Furthermore, eight dimensions of fundamental employability skills are identified by Rosenberg et al. (2012) as follows:

- Fundamental skills in reading and numeracy;
- Critical thinking abilities;
- Management abilities;
- Leadership abilities;
- Interpersonal abilities;
- Information technology abilities;
- Systems thinking abilities; and
- Work ethic disposition.

These authors underscored the need for stakeholders to be sympathetic to graduates' attitudes toward employability skills since there is no association between academia and the industry.

Research indicates that the Ghanaian job market is experiencing a widening skill gap because the demand for skilled labour far outweighs the supply (Talmage-Rostron, 2023). The training programmes are not practice-led to equip the learners with requisite proficiencies for the industry, culminating in competency mismatch (Talmage-Rostron, 2023). Consequently, most alumni lack the requisite proficiency for the workplace due to a low level of coordination between academia and industry (Samanta et al., 2021; Mobarak, 2019).

While the purpose of education is to enable societies to have a command of knowledge, skills and values for the development of people, Ananga et al. (2016) argue that most training institutions in Africa are yet to create a suitable environment for both training and labour market collaboration. Meanwhile, Ghana's Tertiary Education Policy and Reforms envisage education at all levels to be relevant and thus respond to national goals and aspirations (GoG, 2019). Hence, Talmage-Rostron (2023) posits that the majority of Ghanaians in the working population are victims of education mismatch because traditional education has not succeeded in providing the required proficiencies needed in the world of work.

Asefer and Abidin (2021) emphasize that businesses today place a significant value on soft skills, which calls for graduates to be highly proficient in these skills. Industry expectations are thus for a resurgence of interest and comprehension in soft skill acquisition, necessitating coordinated efforts from all parties involved. Among them, the most important is for higher education institutions to create curricula that align with what the industry demands (Sarpong-Nyantakyi et al., 2020). This situation requires immediate attention.

1.3. Conceptual Underpinning

The study adopts the CareerEDGE framework by Dacre-Pool and Sewell (2007). According to the authors, employability is a combination of abilities, information, comprehension, and character traits that increase a person's likelihood of selecting and securing a successful career (Figure 1 below).
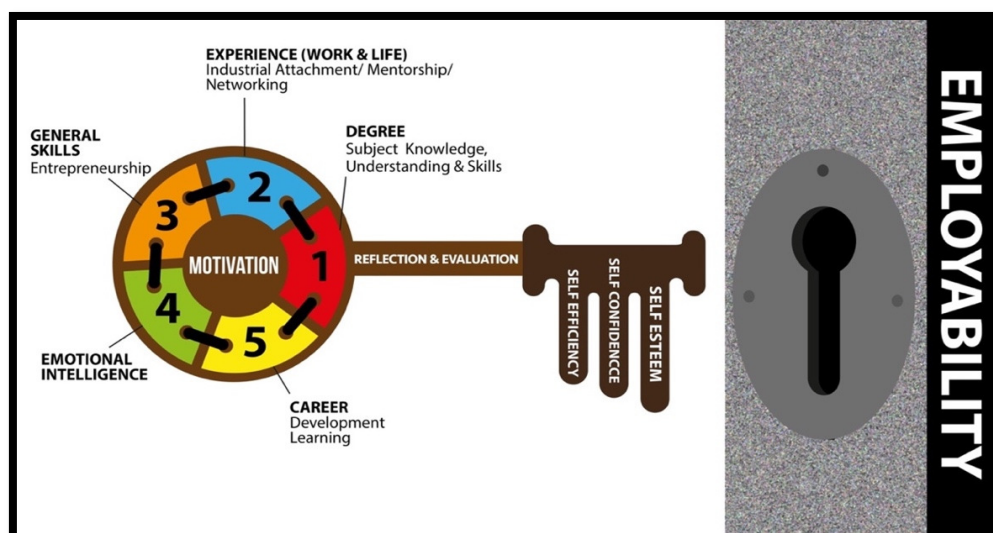

Figure 1: Study's Framework
Source: Sarpong-Nyantakyi, 2020

As it takes a comprehensive approach to employability and curriculum design, this framework is the best option (Sarpong-Nyantakyi, 2020). The theoretical base for this research shows an elongated, figurative key with five parts or modules that the learner must master. These are described as follows: The degree:

- Symbolizes the subject knowledge, comprehension, and abilities of CAPGD;
- The trainees' experience, work, and life;
- The trainees' generic skills;
- The trainees' emotional intelligence; and
- The trainees' career development learning.

These five modules revolve around the central component-motivation and thus transmit intrinsic and extrinsic drive into the various components. As a result, encouraging the teaching and learning process to ensure that the learner has fully assimilated the modules. Strategically, the place of motivation in the framework guarantees coordination among the sections.

The stem follows the impartation phase, where the model's philosophy of reflection and evaluation is implemented. This ultimately converts knowledge and abilities into coil-like parts, which result in self-efficacy, self-assurance, and self-worth. The three closely related "Ss" of self-efficacy, self-confidence, and self-esteem — described by the framework provide a critical relationship between employability and knowledge, understanding, skills, experience, and personal traits. Upon graduation, the graduate would have the opportunity to work as a mentor's assistant to gain practical experience in the workplace before starting a job. Through empowerment, one can become employable and eventually become an employer or job generator.

This concept aims to provide stakeholders — faculty, industry, and learners — with the necessary experiences and abilities to help them navigate the competitive economy by including all six skills and other competencies in the curriculum. These qualities need to be ingrained in the curriculum of the school and the internship programme so that graduates are prepared for the world of work. The researcher understands that to create career-learning programmes, model advanced must be pertinent to a study. Enhancements to learning curricula and the type of career assistance provided by higher education are also necessary.

To bolster the intellectual underpinnings of professional development learning, relationships with teaching departments and industry should be reorganized (Watts, 2006; Pond & Harrington, 2013). Career development programmes involve tight collaboration between industry and faculty to ensure that there is little to no gap between the competencies that the industry expects from job applicants and HND Graphic Design graduates. Wilson (2014) argues that to adequately prepare HND Graphic Design graduates for post-graduation expectations, the graphic design workplace should have a voice in curriculum content and influence academic institutions. This will help students study graphic design and visual communication for the workplace. Wilson once more issues a challenge to industry stakeholders: lead the charge in implementing new technology, changing curricula, developing pedagogies and teaching and learning tools to meet industry standards. In this sense, enhancing the academic curriculum of the HND CAPGD would develop the professional development programme and promote employment among the graduates.

2. Methodology

The study's philosophical underpinning is an interpretivist epistemological stance, and it employs an interpretative method of inquiry to examine how applicable HND graphic design graduates are to the industry. It has a social constructivist ontological stance, making its method of investigation subjective. This gives the study the capacity to translate the social viewpoints of the major participants of the HND CAPGD through face-to-face interviews, focus group discussions and the CareerEDGE model as the theoretical framework for analyzing the data acquired for the investigation. Hence, evaluative case study research is adopted to assess the strengths and weaknesses of the HND CAPGD (Yin, 2014) as it determines the applicability of the HND CAPGD curriculum to the workplace through an interpretive approach from the social perspectives of the major stakeholders. The study examined the phenomenon of the skills gap, which is delimited to the geographical context of Takoradi, Accra, Tema, and Kumasi metropolises — which serve as the hub for industrial-based supervisors (IBS).

2.1. Study Participants

The target population for the study constitutes a heterogeneous collection of key stakeholders of HND CAPGD at Takoradi Technical University (TTU). These were two hundred and sixteen (216) graduates enrolled on the 2022/23 Top-up Bachelor-Technology in Graphic Design Program. Thirty-five (35) faculty members and ninety (90) industry-based supervisors (IBS) are estimated at three hundred and forty-one (341) participants. For an in-depth qualitative study, a sample size of 30 was representative (Creswell & Clark, 2017). The accessible population was categorized into three cohorts comprising five (5) faculty members at the Department of Graphic Design Technology (DGDT) purposively sampled from Takoradi and nine (9) IBS from Takoradi, Tema, Accra and Kumasi. The study also employed snowball and theoretical sampling techniques to select sixteen (16) graduate participants, who were made up of fourteen (14) face-to-face interviews and two focus group discussions.

The purpose of the grouping was to secure in-depth, rich interpretations and conclusions that reflect the objectives of this case study evaluation. Njie and Asimiran (2014) emphasize that in-depth data enhances explanation and generates ideas, concepts, and theories about this experience. Thus, the data is expected to provide the researcher the opportunity to assess the relevance of the HND Graphic Design curriculum to the world of work.

2.2. Qualitative Data Collection and Analysis

According to Corbin and Strauss (2008), qualitative analysis is the process of closely examining and analyzing data to create meaning, improve comprehension, and advance empirical knowledge. Transcripts of the data were organized into text data, which was then coded into themes for study and discussion. Therefore, this study aims to investigate stakeholders' perceptions of the skills gaps inherent in the HND Graphic Design curriculum.

As the study evaluates the TTU HND CAPGD curriculum, it examines the current example in a real-world setting, rendering the object of interest essential for the country, the workplace, and the institution of higher learning. Consequently, the research uses an inductive technique to analyze the relationship between theory and research through an in-depth analysis, with the goal of determining how employability-related the HND CAPGD is (Bryman, 2008).

3. Results and Discussion

Generic skills, which are also known as graduate or lifelong skills, are the twenty-first-century skills required of HND GD graduates (Sarpong-Nyantakyi, 2023). According to Meeks (2017), employers anticipate graduates to have the following qualities: creative or imaginative abilities, flexibility or adaptability, openness to learning, self-reliance, teamwork, interpersonal skills, capacity for working under pressure, proficient oral and written communication for a variety of contexts, and numeracy aptitude. The other skills are using new technology, planning, coordinating, organising, paying attention to detail, managing time effectively, taking on responsibility, and making judgments. Unfortunately, the HND GD Curriculum does not cover all of these qualities, except for a few, i.e., industrial attachment experience, computer literacy, communication skills, and entrepreneurial studies, which seek to promote entrepreneurial attitude and creative abilities.

3.1. Entrepreneurship as a Soft Skill

The HND GD programme aims to make students self-employed by equipping them with the knowledge, abilities, and attitudes needed to succeed in business. Hence, entrepreneurial education is an essential part of the curriculum content (TTU, n.d.). The HND CAPGD has included entrepreneurial education as a course component since its inception in 1995; nonetheless, the curriculum lacks practical content that would allow students to connect theory with practice.

> *Indeed! I considered entrepreneurship too theoretical and difficult. It is a new subject altogether because it was not taught at the SHS. Madam, as I initially mentioned, I was unable to link the course on entrepreneurship with the Graphic design programme. We discovered, however, that we were squandering that chance after the industry attachment exercise (FGD, personal communication, Takoradi, April 21, 2023).*

In an attempt to evaluate the trainees' abilities, a few participants who had graduated said that because the instruction was so broad, they were unable to connect the information from the entrepreneurial lectures to the demands of the workplace. The above response on a focus group discussion with graduates makes this point clear. Again, some faculty members expressed concerns about trainees' inability to connect entrepreneurial instruction to graphic design practice. Graduates feel this delivery method is irrelevant to the job because they lack the necessary information, skills, and competence. Staff response reaffirms this assertion:

Students prefer direct questions with a yes-or-no response; trainees find it difficult to transfer their knowledge from entrepreneurship courses to other subjects due to their inadequate comprehension. Similar to entrepreneurship, graphic design is primarily about invention and innovation (STF, personal communication, Takoradi, April 21, 2023).

A report published by the British Council on employability in Ghana indicates that:

Employability is associated with taking on paid work, starting one's own business, and creating new economic chances. It is acknowledged that although colleges are significant, a person's employability is largely determined by the calibre of their primary and secondary education and the additional learning they get in non-formal settings (McCowan et al., 2016, p. 10).

Since entrepreneurship has a profound impact on the economy, education in this area is essential. In Ghana, entrepreneurship education must be incorporated at all levels of the academic ladder as it is an essential component of the curricula in the majority of developed nations. If properly designed, this would foster in the young people a sense of entrepreneurship, allowing them to transform their pastimes into imaginative and successful businesses. Children as young as kindergarten students are exposed to entrepreneurship education in industrialized nations like the United States of America to foster risk-taking abilities, act in an entrepreneurial manner, and eventually grow up to become entrepreneurs (Barringer & Ireland, 2008).

3.1.1. Creative Skill

Creativity is another competence that is fundamental to the graphic design industry because it involves building something new or innovative (Sutton & Seifert, 2008). A graphic designer's capacity to be creative is what keeps him or her in business, and how the designer approaches his or her work will determine whether the designer continues to expand or shrink. The quotations, however, imply that this ability falls short of expectations.

I found out that using computer-aided design (CAD) tools presented my first challenge. During HND days, we were not taught computer software. I was taught by Mr. Q., but I was completely lost on it. Indeed! In the industry, computer-aided design and graphics go hand in hand; everything is done on a computer. In my opinion, the main item that will benefit students is computer-aided design (FTF 8, personal communication, Takoradi, May 19, 2023).

3.2. Information Technology (IT) Skills

Furthermore, according to some graduate responses, certain courses need to be upgraded to cover cutting-edge and modern software programmes:

I have an issue with HND because I learned most of what I know during the internship. I recently began studying InDesign software, so I'm still learning. I came to the organization to learn CorelDraw because I did not fully comprehend it when I was leaving school. Occasionally, there is a significant void since one cannot apply what one learned in school to one's current job. (FGD, Personal communication, Takoradi, May 19, 2023).

Nonetheless, several industry-based comments indicated that inadequacies in teaching and learning tools and ideation are the reason for the skills mismatch. As a result, most interns lack the necessary experience that is expected of trainees, as confirmed by an industry-based supervisor: "Therefore, educate them on what the computer should do rather than how to use it" (IND 1, personal communication, Accra, September 20, 2018).

This response assumes that there are important areas in which the graduates lack proficiency, which requires trainers to reevaluate. A degree in graphic design teaches students how to creatively integrate design elements and principles into visual communication in addition to software programs, skills and comprehension. Training in analytical reasoning, innovativeness, design fundamentals, ideation and development methodologies, and visualization are some of the "must have" for the HND GDP (Landa, 2011). Subsequently, it equips the learner with all-around skills for the workplace.

Few responses from faculty and industry claimed that the inadequate curriculum has led to graduates who are only partially developed. According to STF 3, the HND GD curriculum is non-operational because it does not entail refresher courses to keep students up to date with industry advancements or regular reviews to guarantee that they are abreast with industry. This is supported by the following faculty response:

Virtually every attempt in life is driven by technology. This indicates that it is critical to examine the two—or three-decade curriculum that served as the basis for teaching students' practical skills in favour of a more sophisticated technologically oriented approach that will meet the educational needs of today's learners (STF 4, personal communication, Takoradi, April 17, 2016).

3.2.1.Emotional Intelligence

The importance of emotional intelligence (EI) in today's curriculum cannot be over-emphasized. This essential skill examines one's capacity to recognize and manage one's own emotions as well as apply them for the good of others (Yeung, 2014). It has proven beneficial in both educational and professional settings as it encourages learners to apply their knowledge to direct and shape their thoughts, developments, and others. Nonetheless, this key attribute is absent in the curriculum. Inquiry from students yielded the following answers: "I am learning about this term today," "I am learning about it for the first time," and "I heard of it just a month ago" were among the statements made by some of the responders.

During a focus group discussion, just a handful were familiar with the term but could not link it up to their hard skills. The following are some responses: 'The first time I heard of the term emotional intelligence- was a year ago'; another said, 'I read about EI in 2016' (FGD 2, personal communication, Takoradi, May 19, 2023). In buttressing this point, Jackson (2012) confirmed that the majority of the African nations south of the Saharan have not grasped the significance of soft skills in preparing graduates for the workforce. This is because policy-makers in these countries believe that soft skills are not testable and, thus, do not include them in curriculum design. This has resulted in a mismatch between the skills supplied by higher education providers and what the industry demands (Biagi et al., 2020).

3.2.2. Career Development Unit

TTU's Career Development Unit (CDU) is mandated to coach trainees on how to research the job market for potential opportunities and prepare them for interviews. It is anticipated that the lessons will educate trainees on career development learning, especially on useful skills that are related to lifelong skills and managing self-employment (Bridgstock et al., 2019); in addition, it is anticipated that the lessons will empower learners to identify areas of passion for future growth. However, because the unit is fairly new, not much is known about its operations. Watts (2006) supports this by stating that career development learning has not received the necessary focus in training institutions until recently. In light of the constantly changing nature of the labour market, the CDU at TTU must bolster its efforts to promote career development learning for work readiness.

Critical thinking abilities that promote reading and numeracy comprehension are known as cognitive skills. Nevertheless, non-cognitive skills, such as soft skills, behavioural skills, or technical skills, represent personality attributes like adaptability, leadership, communication, and dependability that are appropriate for particular occupations that demand accuracy, such as Graphic design (Olusola, 2019).

The framework outlines a diverse range of abilities that complement most fields of study. Effah et al. (2014) affirmed that the former Polytechnic system implemented an industrial training programme to supplement on-campus instruction and to provide trainees with the necessary hands-on training to promote employability. However, not all trainees are fully prepared for the task at hand as they do not possess the generic abilities necessary to demonstrate proficiencies at the workplace.

It has been abundantly evident that Ghana's current educational system does not support entrepreneurial education and training despite the numerous campaigns calling for suitable entrepreneurship education and training. The majority of HND GD students regard entrepreneurship education as a stepping stone to prepare for corporate institutions or white-collar positions rather than as a way to support start-ups or entrepreneurs (Owusu-Ansah & Poku, 2012). It was also inferred from the results that, among all the stakeholders, emotional intelligence, critical thinking, motivational and mentoring skills are the work traits that are least used.

4. Conclusion and Recommendations

Given the current climate in which graduates of higher education are disproportionately unemployed, one would think that parents and other caregivers would urge their children to pursue higher technical education to increase their chances of finding employment after graduation. To some extent, the HND GD curriculum was designed with traditional colleges in mind, with theory-laden lectures that do not equip students to create jobs but rather to seek them out. Because the HND CAPGD is not CBT-based, this scenario has not changed since its inception.

The study advocates experiential learning and the acquisition of essential skills, thereby providing job-ready graduates for the workplace. Lastly, the construct must be adopted in future curriculum reviews for the HND CAPGD. This must be reviewed frequently to ensure that the content meets current industry demands. The study is in support of the view that an entirely new curriculum framework should drive the HND graphic design programme.

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