WHAT MAKES AN UNDERGRADUATE GRAPHIC DESIGN EDUCATION VALUABLE?

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ABSTRACT

Several scholars had addressed the value of formal graphic design education in preparing students for the professional design careers in the past. Their studies investigated the necessity of a 'degree' for employment. In general, their results indicated that employers in design industry emphasized more on 'practical experience' than 'academic qualification' when recruiting graphic designers. Additionally, due to the availability and accessibility of various design software and tools today, there are a growing number of 'self-taught' and 'informally trained' graphic designers in the industry. In light of this phenomenon, design educators and higher educational institutions must reevaluate how they can articulate a broader value of formal education for design practice. Through conducting a comprehensive literature review, this paper aims to discuss what should be taught in graphic design education to best prepare graduates for a fast-changing world and strengthen the value of a 'degree' in graphic design. Recommendations will be provided in the conclusion.

Key words: Graphic design education, undergraduate, competencies, liberal arts, lifelong learning.

INTRODUCTION

Formal design education plays an important role to prepare students to begin their careers in professional design practice (Davis, 2005; Frascara, 1998; Wilson, 2014). Students develop specific skills to professionally acceptable level at university and in return, they will be hired based on their skills in creating visually appealing designs after they graduate. It is believed that they will be able to 'survive' in the industry if they manage to use these skills creatively and effectively to help a business or product to stand out from the crowd (Muratovski, 2016). However, as Heller (2015) wrote, "…[graphic] design education has a lofty status now… it is no longer adequate to simply [train the graduates to] have a marketable portfolio.... They [graduates] must have certificates, diplomas, degress, awards, and scads more evidence that they are designers with a capital D rather than mere mouse-pushers" (p. 11-12). In other words, graphic design graduates must demonstrate additional competencies to enhance their employability and secure positions in industry (Adu, 2015).

A number of studies had been conducted to examine the value of formal graphic design education in preparing students for the professional design careers (e.g., Heller, 2005a, 2015; Littlejohn 2017; Tovey 2015). Through analyzing 230 job advertisements for graphic design positions from Finland, Dziobczenski, Person, and Meriläinen (2018) found out that less than 35% of employers requested the job applicants to hold a degree and more than 60% of them asked for candidates with certain 'years of working experience'. Cheung's (2012) qualitative study highlighted that 50% of the employers in Hong Kong expect the design educators to take up the 'full responsibility' for training the graduates. Most employers do not see the industry as a 'training ground' for graduates and they expect them to be able to meet clients' demands within business constraints immediately right after they join their companies (Cheung, 2012). Nevertheless, graphic design graduates are always regarded as ill-prepared for the competencies needed to be productive in the industry (Heller, 2005b; McCoy, 1997). Recent studies indicate that the competency levels of graphic design graduates do not match to the expectations of the employers despite receiving three to four years of formal education (Adu, 2015; Debbie, 2011; Hsieh, Guan, & Wu, 2010).

In addition to the graduates who receive formal design education, there are a growing number of 'self-taught' and 'informally trained' graphic designers (Keedy, 1997). This is in part due to the fact that unlike architectural and interior design, formal academic and professional qualifications are not required to practice graphic design (Higgins, 2008; Short, 2011). Anyone can claim to be a graphic designer as long as they know how to use design software (Debbie, 2011). Okyere (2017) conducted a case study to investigate the impact of informally trained graphic designers on the design industry in Ghana. His results suggested that 82% of the graphic design workforce in Ghana is informally trained. This group of graphic designers has huge impact on the design industry because they work fast, have practical knowledge, and are able to provide affordable prices to the clients. The clients in Ghana tend to hire informally trained graphic designers because those who graduate from universities are usually lacking exposure to the standards of practice in design industry (Okyere, 2017). In other words, individuals without formal education in graphic design can now work as graphic designers of which McWade (2013) described that "whether you are ready or not, this modern world has made everyone a designer". Cross (2001) also claimed that everyone has the ability to design. This phenomenon has raised a critical question: what truly makes a formal graphic design education valuable today?

In responding to this phenomenon, there is a significant need for design educators and higher educational institutions to reconsider how they can articulate a broader value of formal education for professional design practice (Dziobczenski, Person, & Meriläinen, 2018; Okyere, 2017). Through conducting a comprehensive review of literature, this paper aims to investigate what should indeed be taught in an undergraduate graphic design education to permit graduates to gain a competitive advantage in a fast-changing world. Specifically, it traces the origin of graphic design education; raises several issues on educating graphic

designers; discusses previous studies and views on graphic design education; and provides recommendations to strengthen the value of a 'degree' in graphic design.

LITERATURE REVIEW

An Influential Model for Design Education: Bauhaus School of Design

The Bauhaus was a design school established by Walter Gropius, a German architect in 1919. This design school was praised as a "revolutionary School model that contributed much to design education" (McCoy, 2005, p. 5). The founding ideology of Bauhaus was to develop a new education system and make design as a 'tool' for solving social and economic problems after the World War I (Meggs & Purvis, 2012; Hollis, 1994). The school was meant to build the future by means of unifying architecture, sculpture, and painting into single form of creative expression (Griffith Winton, 2000; Tallman, 2010). It trained students holistically in design fundamental, art and design history, material and media expression, hands-on creation, design methods discovery, and future career exploration (Itten, 1975).

The concept 'basic course' was an important system in the Bauhaus school (**Figure 1**). The basic course was to last one semester, i.e., six months. Upon the completion of the basic course, students were to be trained in a more specialized area for future collaboration with industry. According to Itten (1975), a 'spiritual guru' of the Bauhaus, the basic course emphasized on several aspects (pp. 9-10):

1. To release students' creative powers and art talents.
2. To empower students to produce genuine original work.
3. To teach students the fundamental principles of design.
4. To encourage students to use these principles effectively and creatively in different contexts and situations.
5. To prepare students with different choices of career.
6. To allow students to explore a wide range of materials, tools, media, and creative activities.
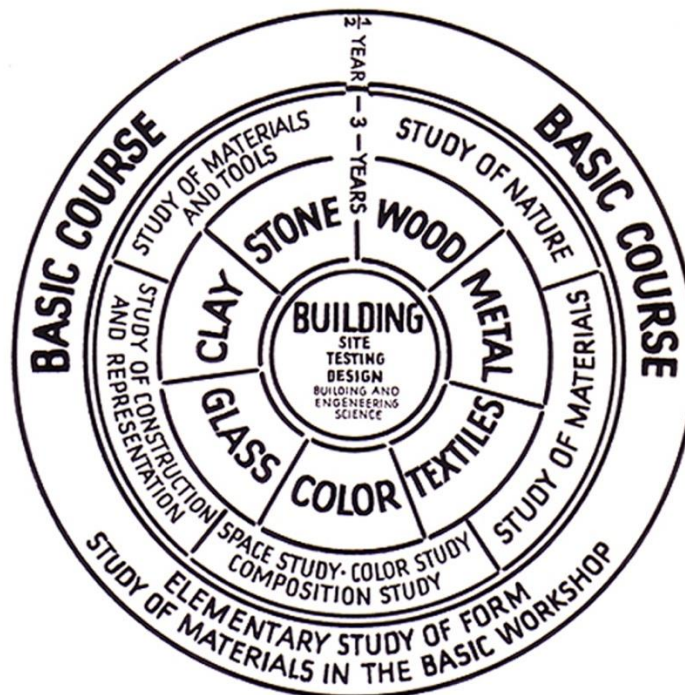
Figure 1: This diagram illustrates the education system at the Bauhaus. It was developed by German architect Walter Gropius in 1922. Source: Itten, J. (1975). *Design and Form: The Basic Course at the Bauhaus and Later*. New York: Wiley (p. 13).

The Bauhaus education system has a major impact on many design programmes around the world. Even until today, many design programmes, including graphic design, offer basic courses in the freshman year to prepare students for more specialized and advanced studies. These basic courses usually aim to enhance students' fundamental understanding of various principles and technical terms used in design practice (Marks, 2015; McCoy, 2003; Swanson, 2004). As a result, to align closely with the entry requirements of design practice (McCoy, 1990) and to teach the "principles and visual composition, technical understanding of typesetting and printing, and presentation skills" to students (Davis, 2005, p. 14) seem to have become the 'traditional priorities'

for educating graphic designers. These priorities are important for the sake of the design outcome itself and the portfolio. Students develop specific skills to professionally acceptable level at university and in return, they will be hired based on their skills in creating good-looking designs after they graduate. It is believed that they will be able to 'survive' in the industry if they manage to use these skills to help a business or product to stand out from the crowd (Muratovski, 2016).

Concerns over the Traditional Priorities for Educating Graphic Designers

However, over the years, many design writers and educators (e.g., Davis, 2005; Findeli, 2001; Heller, 2015a) remain concerned with these 'traditional priorities' because it is questionable if such 'skill-based training' can be appropriately called 'education' (Swanson, 2004). As highlighted by McCoy (1990), despite it is important for graduates to possess skill-based competencies in order to enhance their employability; it is the responsibility of design educators to impart long-term skills required for them to be successful in their lives and in their future careers in professional design practice. She asserted that design educators may fail to achieve its primary purpose of educating the 'whole person' if they merely focus on the immediate needs of the industry. McCoy (1990) was highly alert of this phenomenon due to the fact that many graduates cannot even competently read and write after four-year of study in design programmes. McCoy's (1990) view can be summed up in her statement: "We [design educators] must do more than train; we must educate" (p. 21).

Similarly, Davis (2005) urged graphic design educators who place emphasis on technical skills to reevaluate what should indeed be taught due to the rapid development of technological tools. It is inadequate to just train students in producing eye-pleasing design because of the availability and accessibility of various design software today (Davis, 2005). Tung (2002) argued that it is a 'mistake' to put too much attention on technical skills in graphic design programmes because technology evolves constantly. As technology evolves, so does the means of production, design software, and tools. The skills that students gain from their study may become obsolete after they graduate.

The Gap Between Graphic Design Education and Professional Practice

From previous studies, it is learned that technical-oriented programmes can limit students' understanding of graphic design profession. Thomas (2013) examined students' perception of graphic design profession. He found out that most students do not understand what graphic designers do and think that graphic designers only work with art-related companies. Therefore, most students do not appreciate or even respect graphic design profession and what graphic designers do (Thomas, 2013). McCoy (2003) claimed that most technical-oriented programmes have detached graphic design form from context. Consequently, graduates tend to see graphic form as "something separated and unrelated to subjective values and even ideas" (p. 7) and fail to apply graphic design in broader and more strategic context.

In discussing the creativity and design education in Singapore and Malaysia, Lim (2015) noted that although most design graduates have good design ability, they are not capable to identify new possibilities and develop commercially viable solutions. As a result, most of them merely "end up roles where they design according to a set of given instructions" (Lim, 2015, p. 58). Debbie (2011) conducted interviews with prominent industry experts to collect their insights into the current state of graphic design education in Malaysia. All interviewees agreed that higher educational institutions fail to produce industry-ready workforce. Despite the numbers of graphic design graduates are increasing annually, the standard of design education in Malaysia is declining. Debbie (2011) highlighted in her study that "The role of education institutions in developing the necessary knowledge and skills of future designers is questioned" (p. 140). As a result, the growth of graphic design profession in Malaysia is hampered by a lack of quality design education (Graphic Design Association of Malaysia (wREGA), 2012). In Malaysia, graphic designers are viewed as 'craftsmen', 'decorators', or 'stylists' rather than as professionals who can "contribute to, dictate and influence global cultures; intellectual capital; human values; personal preferences; material needs; economic activity; regional development; and… our living environment" (wREGA, 2012, p. 14).

In his study, Cheung (2016) mentioned that due to the lack of knowledge and training in its professionalism, graphic designers in Hong Kong have not been respected as professionals. Aesthetic and stylistic aspects seem to be the main aspects of competence for graphic designers. Cheung (2016) concluded his study by identifying a 'competency gap' between academia and professional practice. This gap shows that graduates are taught inadequately in the education on certain professional knowledge, such as business, project management, marketing, user behavior, and psychology, that has been considered as highly important in design practice (Cheung, 2016).
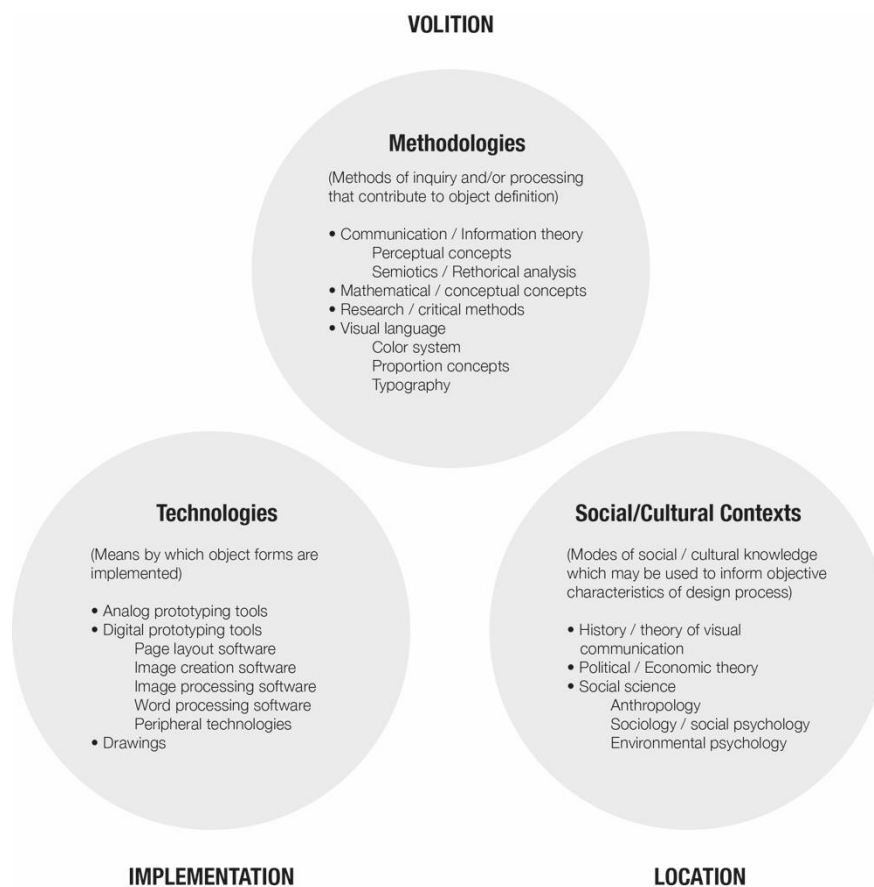
A handful studies had been conducted over the last two decades to identify the essential competencies required by the graduates to perform effectively in design practice (e.g., Adu, 2015; American Institute of Graphic Design (AIGA), 2015a; Bridges, 2013; Dharavath, 2003; Dziobczenski & Person, 2017; Heller, 2005a, 2015a; Hsieh et al., 2010; Short, 2011; Smith, 2014; Wang, 2006; Wilson, 2014). These studies, in short, indicate that in order for the graduates to gain a competitive edge in professional design practice, they must possess a wide range of additional competencies, including industry knowledge, contextual understanding, business practice, social awareness, time and cost management skills, project management skills, communication skills, interpersonal skills, problem-solving skills, teamwork skills, design thinking, emotional intelligence, self-respect, self-usefulness, confidence, and so forth (Adu, 2015; Dziobczenski & Person, 2017; Short, 2011). In other words, design graduates must be multi-skilled to jump-start their professional careers.

Indeed, the expectation of contemporary employers is high (Adu, 2015). They are looking for well-prepared and dedicated designers who can work in a wide array of media, including print, digital, and interactive (Dziobczenski & Person, 2017). Various new career paths are offered by the employers, such as UI/UX designer, interaction designer, creative strategist, digital

designer, brand visual designer, marketing content designer, design and marketing coordinator, communication coordinator, usability expert, and so forth (Dziobczenski et al., 2018). Except for merely making beautiful things, these new career paths suggest the diverse roles graphic designers can play in modern design practice. Design educators and higher educational institutions must not compromise to develop and deliver relevant curricula to effectively and efficiently prepare their graduates for these new career paths in the professional design practice (Dziobczenski et al., 2018).

Reflecting the 'Context of Design' in Graphic Design Education

In an effort to determine what ought to be taught in graphic design education, Briggs (2015) proposed a conceptual model as shown in **Figure 2** to illustrate 'how', 'what', and 'for whom' aspects of a design process. These aspects are termed as 'volition', 'implementation', and 'location' in the model. According to Briggs (2015), a good design solution must closely relate to "knowledge of the practical circumstances of time and place, that is, to context" (p. 280). This literally means that it is of utmost important to consider contextual factors and knowledge that would contribute to the successful development of design solutions in the educational process.

VOLITION

Methodologies

(Methods of inquiry and/or processing that contribute to object definition)

- Communication / Information theory
  Perceptual concepts
  Semiotics / Rethorical analysis
- Mathematical / conceptual concepts
- Research / critical methods
- Visual language
  Color system
  Proportion concepts
  Typography

Technologies

(Means by which object forms are implemented)

- Analog prototyping tools
- Digital prototyping tools
  Page layout software
  Image creation software
  Image processing software
  Word processing software
  Peripheral technologies
- Drawings

Social/Cultural Contexts

(Modes of social / cultural knowledge which may be used to inform objective characteristics of design process)

- History / theory of visual communication
- Political / Economic theory
- Social science
  Anthropology
  Sociology / social psychology
  Environmental psychology

IMPLEMENTATION   **LOCATION**

Figure 2: Graphic design: A triadic model of domains and resources. Source: Briggs, T. (2015). Graphic Design Curricula: Visualizing Design Processes and Skills. In S. Heller (Ed.), *The education of a graphic designer* (3rd ed., pp. 280–283). New York: Allworth Press.

Accordingly, many industry practitioners, design scholars, and international design bodies asserted that design programmes should go beyond the typical scope of teaching and continue to evolve to respond effectively to the social, economic, cultural, and technological context of the time (AIGA, 2015b; Friedman, 2012; International Council of Communication Design (ICOGRADA), 2011; Marks, 2015). As stated by Lehrer (2005, p. 75),

> Before teaching graphic design, it's helpful, every decade or so, to question the parameters of the field. It's generally understood by now that graphic designs expand it beyond a 2D and 3D design to include 4D (motion and interactive) design that the modernist/Swiss palette is too limited, that a decent education needs to include the study of theory, and the design history has a cultural, technological, and political context. But the parameters that define graphic design activity are still constrained by an (arbitrary) economic premise that presumes graphic designers to be skilled hired hands.

Harland (2011) also noted that "the traditional domains of typography, illustration, photography, and print, while contributing significantly to graphic design, are inadequate terms for describing what graphic design is, and what graphic designers do" (p.

22). In order to strengthen the effectiveness of graphic design education, he suggested a new perspective to perceive graphic design for design educators and higher educational institutions to consider. Harland (2011) described graphic design as a "unified thinking and doing activity that involves idea generation, image creation, word interpretation, and media realization" (p. 22) for five interconnected dimensions, which are: communication, commerce, industry, culture, and society. As shown in **Figure 3**, communication is positioned as the most fundamental dimension whereas society is considered as the most significant dimension in graphic design practice. Harland (2011) argued that graphic design should not be viewed only as "a craft for commerce", but as "a tool for social, cultural, and economic development" (Harland, 2011, p. 34).
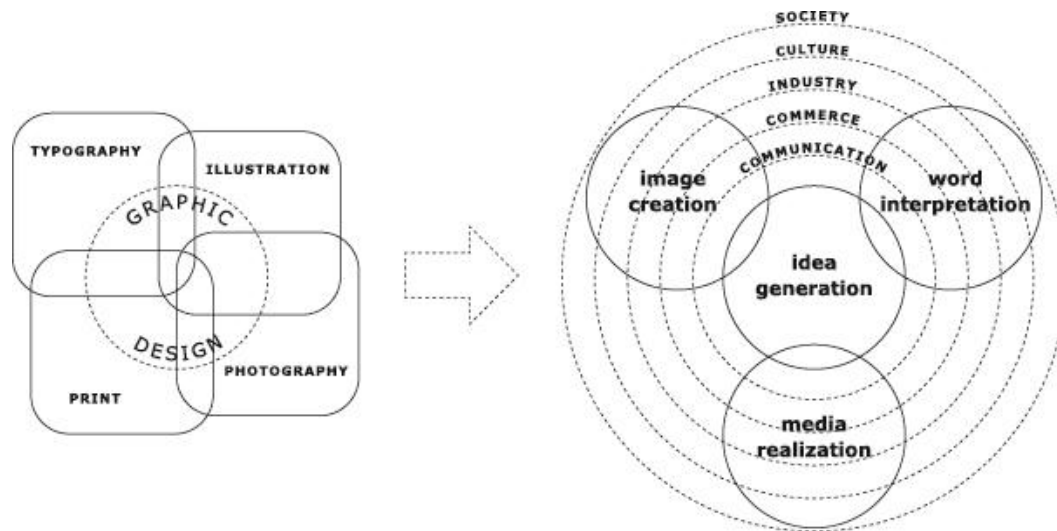
Figure 3: The shift from traditional to contemporary ways of thinking about graphic design. Source: Harland, R.G. (2011). The Dimensions of Graphic Design and its Spheres of Influence. *Design Issues, 27*(1), 21 - 34.

Integrating Liberal Arts into Graphic Design Education

Due to the lack of specificity in graphic design, the idea of integrating liberal arts into graphic design education has been raised. Several studies (e.g., Butler, 1995; Friedman, 2012; McCoy, 1990; Swanson, 2004) highlighted the benefits of the liberal arts for design students. Baseman (2015) wrote that a strong foundation in liberal arts will strengthen students' communication, information gathering, research, and writing skills; allow them to gain better knowledge in different disciplines; and train them to become strategic thinkers and leaders in the profession who can adapt to the constantly changing world. However, Ciampa (2010) expressed her concern over the integration of liberal arts into graphic design education. She afraid that the students are not being able to transfer the knowledge from one context to another and therefore view such integration as a distraction or a 'waste of time'. Therefore, it is important to identify a way to integrate liberal arts without distracting from valuable time for learning design principles, theory, thinking, software skills, and portfolio composition. As noted by Swanson (2004), "A primary task of design education is to find a balance between skills training and a general understanding that will benefit students, the field of graphic design, and working professionals" (p. 11).
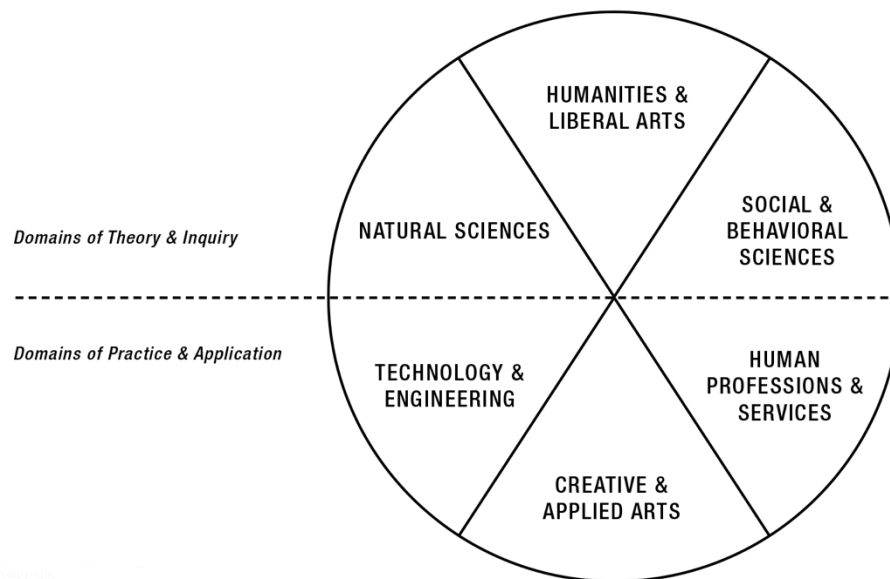
Figure 4: Design domains and disciplines suggested by Friedman (2012). Source: Friedman, K. (2012). Models of design: Envisioning a future design education. *Visible language*, *46*(1/2), 132.

Integrating knowledge from different disciplines become increasing important because design is now evolving from an craft-oriented profession into a discipline that is committed to conceptualization and implementation of new ideas (Muratovski, 2016). However, it is never easy for a cross-disciplinary collaboration to work. Designers will have to understand the general knowledge of other disciplines whereas other disciplines will also have to become more familiar with the principles that guide design. In line with this, Friedman (2012) anticipated that the distinction between different disciplines will be diminished gradually. This means that experts from different disciplines will be working together to define, plan, and design solutions in the future. He also argued that design is an 'integrative field' that constantly interact with six general disciplines, which are: natural science, humanities and liberal arts, social and behavioral sciences, technology and engineering, creative and applied arts, and human professions and services (**Figure 4**) (Friedman, 2012). Undoubtedly, future design education will have to consider how to impart the knowledge of these disciplines in order for the graduates to be able to work in cross-disciplinary teams effectively. In supporting of Friedman's (2012) view, Sperka and Stolár (2005) described the future of graphic design as: "Resting in its ability to be absorbed into different sectors of human activity from art and sciences to entertainment. The volume of cross-disciplinary activities that affect designers today is going to grow in the future and 'graphic design' will become a much more massive discipline..." (p. 9).

Love (2001) argued that to educate design students to be able to address 'non-routine situations' is also important. While designing across disciplines, specific skills and knowledge are required to enable individuals to draw on materials developed in other disciplines at a professional level. He suggested that designers are required to have a proficient level of commercially-based professional skills and cognitive understanding across a wide area of disciplines while dealing with cross-disciplinary design (Love, 2001). This, however, can hardly be achieved within typical design education model because cross-disciplinarity requires an advanced theoretical and cognitive education model that merges research methods and methodologies, theories, and findings of multiple disciplines together (Love, 2001).


DISCUSSION

Indeed, graphic design in higher education has experienced some critical changes over the last few decades. Typical model in graphic design education, which focuses on skill training, is no longer viewed as valid and appropriate today due to its incapability in supplying industry with competent graduates to deal with complex problems (AIGA, 2015b; Davis, 2015; Muratovski, 2016). A review of literature indicates that it becomes increasingly important to integrate knowledge from multiple disciplines in educational process to enable students to work effectively in cross-disciplinary teams and generate innovative solutions. The understanding of design thinking, theories, and a multidisciplinary approach can help students to keep pace with the developments in the social and economic environment (Cheung, 2016). However, it is a challenging task to deliver so many things yet to keep the 'heritage' in design education due to the limitation of time. A degree programme is to last only three to four years. Therefore, Heller (2015b) suggested the idea to increase the study duration of design to five-year as this would give addition time to broaden the scope of study. As noted by Heller (2015b), "More time could also allow for longer and more varied internships as requirements toward graduation. Five years of dedicated design pedagogy will better prepare students to enter the workforce, where doubtless they will learn even more" (p. 211).

Nevertheless, it is difficult to propose a formula that identifies a solid core curriculum and guidelines for what should be taught

in graphic design education (Heller, 2005b). There are different views and emphases on graphic design (Wang, 2006), such as visual communication design, digital and interactive design, and advertising design (Cheung, 2016). This phenomenon has led to inconsistent standards in curricula among graphic design related programmes (Bridges, 2013). Therefore, additional investigation is needed to establish competency standards about what consists a desirable performance in professional practice for graphic design graduates. These standards can shed some light on those competencies required by the graduates for successful job performance. On the one hand, they serve as 'benchmarks' for professional graphic design practice and thereby govern the quality of all new entrants to the profession. On the other hand, they help design educators and higher educational institutions to evaluate the value, quality, utility, effectiveness, and significance of their existing curricula. Accordingly, insufficiencies can be identified, revisions made, and quality assured. In addition to these standards, a valid and effective assessment tool must also be developed to measure the competency levels of graphic design graduates accurately. Accuracy, in this sense, means that the results of the assessment 'truly' reflect the capability of a graphic design graduate.

In regard to the question of whether or not, or how to successfully, integrate liberal arts into graphic design education, another related issue is that of offering design focuses. Should design students specialize in one design discipline? Is it more important for students to graduate with a deep understanding in a specialized field of design, or with a broad, shallower knowledge of all aspects of the design field (Higgins, 2008)? Since many undergraduate students are quite young and new to design, how can they know what area they want to focus in (Ciampa, 2010)? Therefore, Heller and Fernandes (2004) suggested that aside from choosing a specific area to devote the time and energy, it would be wise for novice designers to be competent in as many other areas as possible to strengthen their careers in professional practice. McCoy and McCoy (2006) argued that specialization will narrow an entry-level designer's options and asserted that it is important for students to receive a broad undergraduate education, i.e., to work between different media and a range of communication problems.
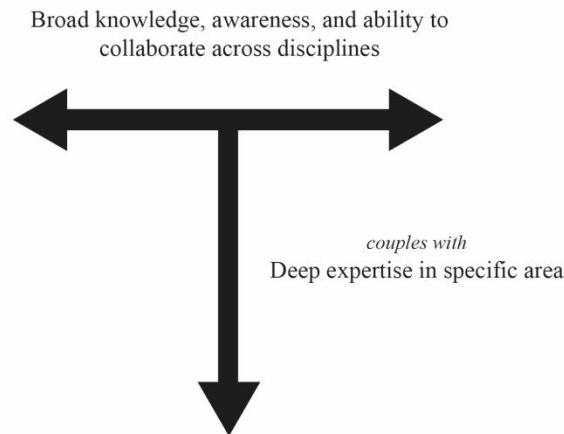
Figure 5: T-shaped person. Source: Kelly, T. (2005). *The ten faces of innovation: IDEO's strategies for beating the devil's advocate & driving creativity throughout your organization*. New York: Currency/Doubleday.

Accordingly, Davis (2015) proposed the idea of educating 'design generalists', or so called 'T-shaped person' (**Figure 5**) to strengthen the value of graphic design education. Students who trained as 'design generalists' will be able to investigate communication problems from multiple perspectives and so function more effectively as members of cross-disciplinary design teams. Less specialized training can also diversify design graduates' career pathways in the future. However, as noted by Davis (2015), there is little evidence that the design educators and higher educational institutions are taking this idea into account when they develop and deliver their curricula to prepare students for the real world design practice. Similarly, Nae (2017) also stated that students are inadequately prepared to deal with multi-domain environments and problems. She suggested that some non-disciplinary knowledge (e.g., sciences, humanities, business, and technology) and their applied use must be emphasized at the early stage of design education to allow students to explore external disciplines to find the most innovative and effective solution for specific design problems. Students must be trained to see the 'big picture' of a solution instead of merely focusing on a single piece of design (Nae, 2017).

CONCLUSION

As compared to other creative disciplines such as fine arts and architecture, graphic design is a young profession. Therefore, what an undergraduate should learn is constantly evolving (AIGA & National Schools of Art and Design (NASAD), 2010; Short, 2011). Given the changed and ever-expanding role of a graphic designer and the struggle to accommodate everything a graphic designer needs to know in an undergraduate curriculum, one of the most valuable things design educators can teach young professionals is to be self-motivated lifelong learners. As highlighted by Heller (2005b), the notion of a "platform for lifelong

learning inherent in any good design education". In other words, not only to feed the garduates with the immediate skills needed for design practice, formal education must impart a wide range of additional competencies, such as research skills, critical thinking skills, problem-solving skills, reflective thinking skills, multidisciplinary knowledge, and collaborative teamwork skills, for the ongoing learning needed to operate as a designer over time (Baseman, 2015; Davis, 2015; Giampietro, 2015; McCoy, 1990b; Lasky, 2005; Swanson, 2004; Walker, 2017). In enhancing the value of a 'degree' in graphic design, a key challenge for design educators and higher educational institutions is how to educate employers in design industry about the value of having employees who know how to learn (Dziobczenski et al., 2018).

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