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How Will I Thrive? Developing Designer Professional Identity Among Undergraduate Communication Design Students

Denise Bosler
Kutztown University of Pennsylvania, bosler@kutztown.edu

How Will I Thrive? Developing Designer Professional Identity

Among Undergraduate Communication Design Students

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By Denise L. Bosler

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Dissertation Committee:

Dr. Cathleen McGeehan, Committee Chair

Dr. Mark Wolfmeyer, Committee Member

Dr. Amy Pfeiler-Wunder, Committee Member

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Abstract

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By

Denise L. Bosler

Kutztown University of Pennsylvania, 2021

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Directed by Dr. Cathleen McGeehan

A designer's professional identity is constructed throughout a designer's life and is developed through life experiences and education. This development takes time and spans the life of a designer. Yet early career designers are expected to acclimate to their new role quickly and exhibit a professional identity immediately upon joining the workforce, even though estimates show that it takes six-to-eighteen months "for a graduate to become effective", which, "is a perilously long time for a small employer to wait" (Shaughnessy, 2005, p.41). While understanding the general importance of a professional identity is often clear to recent design graduates, developing it requires becoming self-aware of what traits constitutes designer professional identity (DPI). Kunrath, Cash and Yi-ling (2016) define DPI as the synthesis of personal attributes and design skills. However, the development of this full complement of DPI traits is often ignored and ill-supported in design education curriculum. A student's DPI, if under-developed, can be a barrier to successfully transitioning from student to professional.

Design educators have the opportunity to take the lead in developing a stronger sense of professional identity in their students. The primary purpose of the mixed methods study was to gain an understanding of how design educators can further develop a strong sense of DPI in university communication design students. The secondary purpose was to determine how CD students develop their sense of designer professional identity and what factors contribute to its development. The results of this study build upon the body of research surrounding design education and identifies areas that can improve the holistic development of students' DPI.

Keywords: design, higher education, designer professional identity, self-reflection, Eudaimonic Identity Theory, Transformative Learning Theory

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Chapter 1: Introduction

Overview

When I was a budding graphic designer, my days were filled with long hours of creative problem solving, client demands and looming deadlines. I would jump from one project to the next, morphing my designer persona for each client because the design directive for a teen skin care was different from a mass market salad dressing which was also different from a brand identity for an insurance group. Boundaries of my identity were blurred— my personal design self was slowly being replaced with a client-driven one. Over time my self-confidence depended wholly on feedback from my creative director and clients. Thriving at work meant having my designs selected for the next phase of a project, but my professional growth was stunted by lack of mentorship. It was a go, go, go atmosphere. I chose employment at a place that produced award winning and highly creative work, but whose work environment ultimately made me miserable. I was not encouraged. There was no time for mentorship due to tight and fast client deadlines. Management interaction consisted solely of asking when the work would be completed, and I often worked far more than the standard forty-hour work week. I even pulled a few all-nighters just to get the job done. It turns out I was a workhorse cog in the wheel of a demanding and cutthroat environment because I had the illusion that working at a successful and notable company was the key to my happiness. A company, as it turned out, that cared little for its employees' happiness or well-being. Stress and anxiety followed me around. I lost my personal design passions to those of the company's. The professional designer I had become wasn't what I dreamed for as my career after college. I didn't realize just how much of my designer professional identity was neglected until I sought new employment and an interviewer prompted, "describe who you are as designer." My immediate answer involved describing all my

accomplishments over the years. Before I finished the employer interrupted and indicated that

the work was obvious through my portfolio presentation. She wanted to know who I was and

what I could bring to their business. She wanted to know how my thoughts, beliefs and

experiences would contribute to my role as a designer within their company. She went on to say

she wanted to know about my inspirations and aspirations. Needless to say, I hesitated. I didn't

know how to answer. I was so busy designing and meeting client and work demands that I never

considered reflecting upon myself in that manner. I remember mumbling some sort of generic

response, but her questions stuck with me long after. Who was I? As a designer? As a

professional? Her prompts invited me to pause and reflect. I fully lost myself to the job and was

not thriving—I disregarded my inner passions, lost trust in my experiences and let my beliefs be

swept aside for the company's "greater good." My undergraduate education prepared me well to

utilize my designer skill set—my technical skills and creative sensibilities—but failed to educate

me about integrating my sense of self into the professional world. My professional identity was

underdeveloped for the industry environment in which I was entrenched.

Positionality

As an inside researcher, department chair and professor of a university communication

design (CD) department in which the study is taking place, I have a vested interest in the results

of this action research study. As a seasoned design industry professional I am acutely aware of

the challenges that face emerging designers and their experiences in discovering their

professional identity. In addition, I am a program alumnus, which gives me the distinct

perspective of having been on both sides of the table. I know the future potential for our students

because I have experienced it firsthand. I was one of them. This background is important

because, "a researcher's background and position will affect what they choose to investigate, the

angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions" (Malterud, 2001, p. 483-484).

As a tenured professor for the last seventeen years, I have worked with freshmen, sophomore, junior, senior and masters level students. For the last four years I served as the elected department chair overseeing the communication design department including 13 full-time faculty, several adjuncts, and ~250 majors. My role as a professor allows me to work closely with budding designers through coursework and department events. My role as a department chair has allowed me to examine the department and curriculum as a whole. It has given me insight into all of the courses within the curriculum, not just the courses I've taught. Since 2014 I have coordinated and hosted a senior portfolio review event in which industry professionals mock interview graduating seniors and review portfolios. The knowledge gleaned from my observances from the classroom, from the chair's role and from the assessment and interaction of students with industry professionals led me to pursue this action research study.

I find myself in the unique situation of being both in academia and being a design industry professional. Twenty-five years ago, I embarked on my design career as a newly graduated designer, a graduate of the program in which I am now teaching. Over the years I worked for three different design firms before starting my own design business and teaching at the university. I was once in our students' shoes, literally. As an alumnus I took the same courses our students take and worked in the industry in which they hope to work. I have hired, worked alongside and mentored newly minted emerging designers, students like mine, during the years I was employed as a senior designer and creative director. This distinct perspective fuels the desire to see my students succeed in the same business in which I thrived.

Through critical reflection, I recognized that I am deeply invested in my student's success. I am not a neutral party and my own enthusiasm could get in the way. I had to seriously consider how to organize the research and methodology of this dissertation. Throughout the study I remained conscious of the possibility of creating a Hawthorne Effect in which students feel obliged to take part in the study or modify their behavior to please me because I am a professor, because I am the department chair, or both. (Buss & Zambo, 2014). I also know these students so well that my desire to have a successful outcome could invoke the Experimenter Effect in which I may give unconscious or unintended verbal or non-verbal cues that affect the outcome of a study. (Buss & Zambo, 2014). The recognition of these possibilities made it essential to design a study that has checks and balances in place to lessen the potential bias or other impacts on research outcomes. While I truly desire to be non-judgmental, non-influential, neutral, and an astute observer, I know my lens won't allow me full objectivity. I have hope that the study will provide valuable insights into my students' designer professional identity so I can contribute to the improvement of the communication design curriculum and encourage student success. However, the consciousness of my insider researcher status warned me to maintain neutrality as best I could and not jump to conclusions. It helped me approach the study design with an eye toward objectivity and use methodologies that minimized subjectivity.

Statement of the Problem

A student's undergraduate years are typically an uncertain time period and are classified as a time of *Occupational Identity Moratorium*, a psychological term described as "an active process of exploration and crisis and temporary inability to make a lasting career commitment" (Skorikov & Vondracek, 2011). This uncertainty, especially in gaining an understanding of self, can overlay the students' educational career and hinder the transition from student to

professional (Crossley & Vivekananda-Schmidt, 2009; Kunrath, Cash & Li-Ying, 2018). Design

education has the opportunity to take the lead in developing a strong sense of designer

professional identity (DPI), a combination of personal attributes and design skills, in our students

so they may successfully negotiate the professional environment and not lose their sense of self

to the demanding design industry. Students identities not only benefit from learning what it

means to act as a professional, but also what it means to become one (Dall'Alba, 2009).

Incorporating curriculum which assists design students in the complex and personal self-

realization process has the potential for transformation into their designer professional identity.

Transformative learning can occur through educational practices that present professional

possibilities (Dall'Alba, 2009), encourage reflective practices to gain new insight into self

(Boud, Keogh, & Walker 1985; Dewey, 1910; Trede & Smith, 2011), enhance problem solving

competency (Hong & Choi, 2011), and through the introduction of curriculum that presents real-

world professional situations as a study of practice (Kunrath, Cash & Li-Ying, 2018; Luehmann,

2007) so as to engage in the self-discovery of one's designer professional identity (Kunrath,

Cash & Li-Ying, 2016).

Research Questions

Drawing upon the feedback received from within the industry, designers need to develop

a sense of their professional identity and recognize themselves as professional designers (Tracey

& Hutchinson, 2015), research is focused on gaining insight into DPI development in a

university's communication design (CD) students' education experience. To better prepare CD

students to enter the industry directly out of college, scholarship needs to include the study of

how CD students develop their sense of DPI and what factors contribute to its development. This

knowledge will build upon the body of research surrounding design education and identify areas

which can improve the holistic development of design students' professional identity. Therefore, this dissertation will explore the following questions:

    1. How can a university communication design program develop a strong sense of professional identity within its students?

    2. How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?

    3. What factors contribute to the development of strong professional identities among communication design students?

Background and Context

    Design has been a function of communication since humans began communicating through visuals. Some argue the practice of design dates back as far as the Lascaux cave paintings because the images transcend representational pictures by communicating a greater meaning through a combination of symbols, color and layout. This connection is supported by Robin Landa (2014) who states that design is "a form of visual communication used to convey a message or information to an audience. It is visual representation of an idea relying on the creation, selection, and organization of visual elements" (p. 1). In a sense, design is visual storytelling (Lupton, 2017). This is not the only definition of design, however. In the industry, design is used both as a noun and a verb and relates to both a product and a process (Lawson, 2005). As a noun, design can be defined as art that people use (Lupton, 2017), verbal and visual elements working together to communicate a message (Bosler, 2014), and a "visual language uniting harmony and balance, color and light, scale and tension, form and content" (Helfand, 2001). As a verb, design is a process that "takes the intangible and makes it concrete" (Bosler, 2014, p.1), generates an understanding of problems to create solutions for other people (Lawson,

2005), and develops strategic practices to solve ill-structured problems (Hong & Choi, 2009).

Those that create and practice design are called designers. For the purposes of this dissertation,

the research and literature will focus on design and designers in the fields of graphic design,

advertising design, interactive design and illustration.

     Personality, values, beliefs, and skills are formulated throughout a designer's life and are

developed from life experiences, both in personal lives and through education. Identity

development takes time and spans the life of a designer. Early career designers are expected to

acclimate to their new role quickly and exhibit a professional identity immediately upon joining

the workforce yet estimates show that it takes six-to-eighteen months "for a graduate to become

effective", which, "is a perilously long time for a small employer to wait" (Shaughnessy, 2005,

p.41). Constructing a professional identity is a laborious task particularly when students are

unsure of the expectations of their professional role. (Bowen, 2016). While understanding the

general importance of a professional identity is often clear to recent graduates, developing it

requires becoming self-aware of what traits constitutes designer professional identity (DPI).

     Kunrath, Cash and Yi-ling (2016) define DPI as the synthesis of personal attributes and

design skills that enables someone to design. Kunrath, et al. (2016) developed their initial list of

personal attributes from psychology framework developed from the HEXACO model, which

suggests that personality consists of six basic domains of extraversion, agreeableness,

conscientiousness, emotional stability, culture, and honesty–humility (Brocklebank, Pauls,

Rockmore, & Bates, 2005) and builds upon Goldberg's (1990) BIG FIVE personality traits

model with the addition of honesty-humility. DPI personal attributes are further defined as those

that are related to a designer's experiences, values, beliefs, emotions, feelings, attitudes,

personality, and behavior as relative to the aforementioned psychological traits (Kunrath, et al.,

2016; Kunrath, et al., 2017; Kunrath, et al., 2018; Pfeiler-Wunder, 2017; Tracey & Hutchinson, 2016). These are factors that influence a student's confidence, interpersonal skills, leadership, and openness in both an educational and professional setting. Design skills are defined as those taught as part of the design process and are specifically related to design activity utilizing cognitive, technical and behavioral skills (Kunrath, et al., 2016; Kunrath, et al., 2017; Kunrath, et al., 2018). Cognitive skills include understanding, thinking, evaluating, abstracting, problem solving and learning; technical skills include operational and computer ability—those skills that are part of the physical process of design; and behavioral skills include collaboration, communication, presentation, and project management. DPI cannot be measured through personal attributes or design skills separately, but rather must be considered holistically [Figure 1].

Figure 1

Designer's Professional Identity Formation Framework.
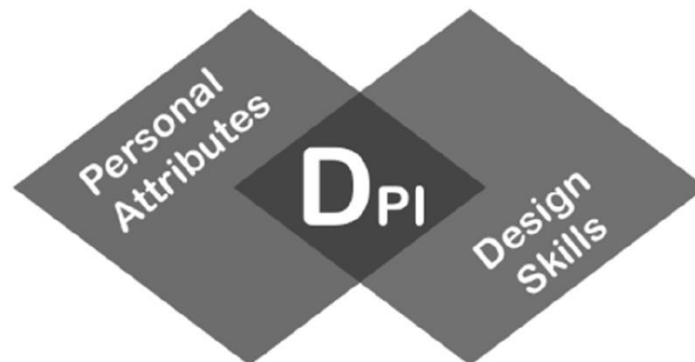
Reprinted from Designer's identity: Personal attributes and design skills by K. Kunrath, P. Cash and J. Yi-Ling, 2016. Copyright 2016 by K. Kunrath, P. Cash and J. Yi-Ling.

Further supporting Kunrath, et al.'s (2016) definition of DPI is the 2019 AIGA Design Census (2019), created by Google and AIGA. The survey was distributed to 9,429 working

design professionals to gain an "understanding of the complex economic, social, and cultural factors shaping the design practice today in the United States" (AIGA, 2019). Survey questions included current salary scales, what kind of work designers are doing and how they're doing it, satisfaction levels, and what they anticipate for the design field in the future, among other industry related inquiries. The top ten respondent answers to "what design skills will be most critical in the future" included adaptability, cross-functional/multi-disciplinary skills, communication/listening, empathy, storytelling, cross-cultural skills, systems thinking, experimentation/play, design research, design thinking, data analysis, and leadership (AIGA, 2019). In addition, a research study with art directors by Blakeman, Haley & Taylor (2020) found that creative directors and other industry professionals strongly felt that students and young designers with knowledge beyond the field—life experiences, cultural experiences, art exposure, and other forms of diverse informal education—had the best advantage for success in a creative environment. This collection of real-world traits supports the design research that advocates for the combination of personal attributes and design skills as necessary for development of a student's DPI for today's design industry environment.

However, the development of this full complement of DPI traits is often ignored and ill-supported in design education curriculum (Kunrath, et al., 2018; Tracey & Hutchinson, 2015; Tracey & Hutchinson, 2016). The encouragement of the design skills—such as showing prowess in computer software applications, ability to communicate ideas through sketches, and generation of refined design projects such as logos, websites, posters, packaging, computer and phone apps, annual reports, advertisements, brochures and other business materials—over personal attributes is common in design education as it more easily shows the physical manifestation of designer ability. This, coupled with the necessity to produce professionals who

can "hit the ground running", historically advances students who are technically-savvy but identity-deprived (Kunrath, Cash & Li-Ying, 2016; Tracey & Hutchinson, 2016).

Potential Significance

A student's DPI, if under-developed, can be a barrier to successfully transitioning from student to professional (Crossley & Vivekananda-Schmidt, 2009; Kunrath, et al., 2018). Therefore, it is vital that communication design degree programs offer students the opportunity to develop their DPI. The communication design degree, which encompasses the combined study of graphic design, advertising design, interactive design and illustration, is defined by National Association of Schools of Art and Design (NASAD), the accrediting body for the university's communication design program, as a professional degree that "focuses on intensive work in art and/or design supported by a program in general studies. Normally, the intent is to prepare for professional practice" (National Association of Schools or Art and Design, 2018). Graduating students are expected to transition seamlessly from student to professional without the need to advance through higher degrees, and industry expects a level of understanding of what it means to work and act as a designer both in skill and professionalism. Design students who realize their impact on their professional environment and feel a sense of belonging to their professional group (Crossley & Vivekananda-Schmidt, 2009; Kunrath, et. al, 2018) achieve a smoother transition from student to professional status. Promoting a professional awareness of what it means to be a designer helps students better adapt to the challenges of the design industry (Kunrath, et. al, 2018, Tracey & Hutchinson, 2013). Challenges facing designers in the workforce include, but are not limited to, client work demands, collegiality amongst colleagues, creative satisfaction, time management, rigid work environments, creative burnout, decision making, and job dissatisfaction (AIGA, 2019). Such challenges have the potential to influence

young designers' professional actions, values, beliefs, decisions, and commitments. Designers who lack an understanding of their beliefs and identity self-awareness require mentorship, guidance, feedback and support in order to form narratives and comprehend their experiences (Tracey & Hutchinson, 2013). In particular, understanding and accepting the responsibilities and obligations of being a professional play an important role in developing self-confidence. In approaching professional situations, self-confidence is a key determiner as to whether a student feels qualified in his or her profession (Crossley & Vivekananda-Schmidt, 2009) and therefore affects personal, professional and design skills decision-making abilities (Kunrath, et. al, 2018). In addition, the ability for students to reflect upon and understand their designer self develops and refines their approach to complex design problems (Hong & Choi, 2011; Tracey & Hutchinson, 2016), often referred to as ill-structured problems because the solutions are often ill-defined, or loosely defined by the client, and left up to the designer to determine the outcome. (Dorst, 2006; Waguepack & Babb, 2017). "In design, 'problems' are often defined only in relation to ideas for their 'solution', and designers do not typically proceed by first attempting to define their problems rigorously" (Cross, 2007 as cited in Waguepack & Babb, 2017, p. 66). Design problems are comprised of predetermined requirements and intentions of the client, and the creative and strategic interpretations of the design problem by the designer. (Dorst, 2006). "There is no unique road that connects design problems with the design solution—design problems can be solved in many ways" (Dorst, 2006). Reflection enables students to examine their thought process and behavior when tackling design situations and ill-structured problems common to the design industry (Hong & Choi, 2009), and they become more likely to make effective decisions and produce higher quality design solutions (Hong & Choi, 2011). In

addition, designers do well if given motivation to endeavor toward fresh and innovative

perspectives, meanings, responses, and/or renditions in design (Waguepack & Babb, 2017).

Theoretical Framework

The purpose of this research is to gain insight into the fostering of DPI development in

CD students' design education experience. The goal is to gain an understanding of the factors

which contribute to their DPI development in order to better prepare students to enter the design

profession directly out of school and promote improved curricular development within the CD

program. This study uses the following theoretical frameworks of *transformative learning theory*

(TLT) and *eudaimonic identity theory* (EIT)— to support exploration into the development of a

strong sense of DPI within CD students.

According to Taylor's (2017) *transformative learning theory* (TLT), humans have an

instinctive drive to make meaning of their lives. TLT is based on Jack Mezinrow's (1978) theory

of adult learning and denotes a uniquely adult theory that is grounded in human communication

where "learning is understood as the process of using a prior interpretation to construe a new or

revised interpretation of the meaning of one's experience in order to guide future action"

(Mezirow, 1996, p. 162; as cited in Taylor, 2017). Essentially, TLT encourages adults, which

includes college students, to investigate perspectives acquired throughout their lives, and re-

examine and reflect upon them. Adults have life experiences that directly influence their current

worldview. This worldview is critical to understanding themselves and can be achieved through

reflection and self-examination of feelings, confidence, assumptions, actions, skills and

knowledge (Taylor, 2017). Engaging in perspective transformation (Mezinrow, 1978), the

learning process in which adults recognize roles and relationships and the reasons and actions for

them, creates the ability to alter future personal and professional practices. "Life experiences can

lay a substantial foundation for creative ideas" (Blakeman, et al., 2020) and are considered an important asset in the creative fields. Life experiences allow creative professionals to see and feel what other people see and feel, and through this perspective, develop new ideas and solutions (Blakeman et al., 2020).

Reflection and self-examination are supported by TLT through its promotion of using critical analysis to understand one's personal and professional identities and sense of self. The use of TLT in the classroom can serve as a frame of reference for fostering perspective transformation through reflective thinking coursework, critique of work, and investigation into design (Taylor, 2017). Foremost in these endeavors should be the ability to reflect on their identity and sense of self. Students need to understand themselves in order to understand the needs of others—target audiences and clients—which is crucial to professional success as a designer.

Work on identity theory stems from a large body of research that has grown out of psychology, anthropology, linguistics, political science, education, family studies and public health (Vignoles, Schwartz & Luyckz, 2011). Different avenues of identity theory emerged, including *eudaimonic identity theory* (EIT) which is defined as identity as self-discovery. Eudiamonia, as per Aristotle's definition, is actively expressing the best within ourselves, or personal excellence (Vignoles, et al., 2011). Waterman (2011) redefines it as a "constellation of subjective experiences" including "feelings of rightness about one's actions, centeredness in what one is doing, strength of purpose, competence, fulfillment, being who one really is, and is doing what one was meant to do" (p.359). EIT's primary objective is to understand the psychological task of identity formation through the discovery of one's potential, choosing one's purpose in life and finding opportunities to implement their potential and purpose (Waterman,

2011). Identity self-discovery requires exploration of sufficient information to identify "a good fit of personal potentials, interests and inclinations" (Waterman, 2011). The reflective process is evaluated and re-evaluated until a "good fit" is determined or abandoned. This reflective practice creates a pattern of identity change over time and is a developmental construct. Reflection also assists in the identification of our best potentials, interests and inclinations, and how we choose to live within them (Waterman, 2011).

This study will be using EIT through reflective practices to explore how students' self-perception of their DPI can be cultivated through reflective classroom experiences. Designers need to understand their intrinsic motivation for becoming a professional. EIT encourages the discovery of one's true self and potentialities, one's daimon, to better understand identity choices (Waterman, 2011). Students will have an opportunity to direct their focus through reflection to discover their personal potential and aptitudes— their personal attributes and design skills—to recognize and implement their DPI through the rating of themselves in self-reflective survey statements and a research paper.

Definitions of Terms

Beliefs - something that is accepted, considered to be true, or held as an opinion.

Client – The customer who needs an ill-structured problem solved.

Design – the act and/or profession of using design elements (such as typography and images) to convey information or create an effect (Merriam Webster, 2019).

Design skills - The cognitive, technical and behavioral skills taught as part of the design process and are specifically related to design activity (Kunrath, et al., 2016; Kunrath, et al., 2017; Kunrath, et al., 2018).

Design solutions – The action or process of working through idea generation to determine the most appropriate outcome to ill-structured problems.

Designer professional identity – The combination of one's personal attributes and design skills (Kunrath, et al., 2016; Kunrath, et al., 2018; Tracey & Hutchinson, 2016).

Identity – The combination of the self-introspective and socio-integrated individual that evolves from interactions of the social family, school and work environments. (Vignoles, Schwartz & Luyckx, 2011).

Ill-structured problems – Design problems which are known for their lack of clear definition and complexities whose characteristics include lack of goal information, little or no defined criterion, no predetermined solution or direction, and the need for a wide range of knowledge (Hong & Choi, 2009),

Personal attributes - Attributes that are related to a designer's experiences, values, beliefs, emotions, feelings, attitudes, personality, and behavior as relative to psychological traits (Kunrath, et al., 2016; Kunrath, et al., 2017; Kunrath, et al., 2018; Pfeiler-Wunder, 2017; Tracey & Hutchinson, 2016).

Perspective transformation –how adults revise their meaning structures. *Meaning structures* act as culturally defined frames of reference that are inclusive of meaning schemes and meaning perspectives. *Meaning schemes*, the smaller components, are indicative of specific beliefs, values, and feelings that reflect interpretation of experience (Taylor, 2017).

Professional– Acquiring the actions, experiences, skills and ways of being (Dall'Alba, 2009) to exist in the professional context of a chosen real-world career (Kunrath, et al., 2016; Tracey & Hutchinson, 2015).

Reflection – *"*Active, persistent, and careful considerations of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (Dewey, 1910, p. 5).

Self-confidence - A feeling or consciousness of one's powers or of reliance on one's circumstances along with a belief in oneself and in one's own abilities.

Target audience – The specific people an ill-structured problem is geared toward—the identification of which contributes to the idea generation of potential design solutions.

Transformative learning theory – A uniquely adult theory that is grounded in human communication where "learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action" (Mezirow, 1996, p. 162 as cited in Taylor, 2017).

Values – A person's principle, standard of behavior, and judgement over what is important in one's life.

Chapter 2: Review of Literature

Introduction

In order for design students to successfully navigate their education and seamlessly enter the design profession, they not only need to develop their design skills, but also must envision themselves as professionals—gain an understanding of what design is, what designers do, and who they are as a designer (Tracey & Hutchinson, 2015). Having this knowledge can help align students' expectations and understanding as to what it means to be a professional so as to be able to respond to the demands and challenges from real-world employers (Kunrath, et al., 2018). In order to develop their students' DPI, educators need to align classroom education to facilitate authentic experiences, real-world challenges, reflection opportunities, and extra-curricular activities—the most important of which is reflection.

Identity Formation

Transformative learning theory indicates that a person's life experiences influence her or his worldview and that this worldview is crucial to understanding oneself (Taylor, 2017). The sense of self necessary to understanding oneself is a lifelong development from childhood to adolescent to adulthood and creates a person's identity. A changing worldview is a natural occurrence that involves the projection of oneself into an imagined future. This process constitutes identity development represented by a synthesis of self and occupational exploration and commitment of personal investment in actions and beliefs (Kroger & Marcia, 2011). Fundamentally, exploration and commitment strive to answer the question: "Who are you?". The answer to this identity question is complex as one needs to combine one's self-introspection with that of one's socio-integrated group who evolves from interactions of the social family, school and work environments. (Vignoles, Schwartz & Luyckx, 2011). In addition, one needs to

understand the possibilities surrounding the process of becoming; "what we are 'not yet'"

(Dall'Alba, 2009, pg.36). By bringing together transformative learning theory and eudaimonic

identity theory, whose primary objective is to understand the psychological task of identity

formation through the discovery of potential, purpose in life and opportunities to implement

these things (Waterman, 2011), one can go beyond personal identity and begin making a

meaningful effort into learning who one becomes as a professional (Dall'Alba, 2009). Students

need to navigate the professional norms of the industry environment and find their place. They

are not just an assembly of tools, skills and educational know-how, their dispositions require

development in order to navigate the social and professional constructs of the design industry

(Bowen, 2016).

Designer Professional Identity

Becoming a professional designer requires the understanding of what it means to be a

professional as well as what constitutes a designer's identity. The role of a professional is to

acquire the actions, experiences, skills and ways of being (Dall'Alba, 2009) to exist in the

professional context of a chosen real-world career (Kunrath, et al., 2016; Tracey & Hutchinson,

2015). One's profession is often viewed as both the main source of income as well as the "main

mechanism of social integration and the means of developing and expressing one's identity"

(Skorikov & Vondrcek, 2011, pg. 697). Fields such as healthcare, education, social work, and

psychology traditionally explore professional identity as part of professional training and have

contributed greatly to the definition of professional identity. This research shows that the

constant evolving experiences, beliefs, values and personal attributes construct the social context

surrounding one's professional practice (Luehmann, 2007; Pfeiler-Wunder, 2017; Skorikov &

Vondrcek, 2011; Tracey & Hutchinson, 2016,). Accepting the responsibilities and obligations of

the professional role and combining it with one's own interpretation of professionalism is necessary to creating the professional identity construct which is formed and re-formed throughout one's career. (Luehmann, 2007; Tracey & Hutchinson, 2016). This is a slow process, however, not noticeable over short periods of time, but becomes a clear and necessary progression as one transforms through from adolescence to adulthood (Skorikov & Vondrcek, 2011). Barriers to a thriving transition from student to professional may be difficult to overcome without this professional identity development and transformation (Crossley & Vivekananda-Schmidt, 2009; Kunrath, et al., 2018).

Developing a *designer* professional identity adds a layer of understanding of what it means to be a designer and what challenges designers will face in the field (Kunrath, et al., 2018). By its very nature, design—the art or profession of using design elements (such as typography and images) to convey information or create an effect (Merriam Webster, 2019)—is a field that requires focus on the needs of clients and target audiences over the needs of oneself. Victore (2020) succinctly and accurately states that "newly weighed down by the practicalities of making other people happy in order to get paid, students lose sight of themselves and the reason they started out on this path." Dorst (2006) confirms the all-encompassing nature of design work and states, "Design is such a diverse profession that it becomes very much like life. You use everything you have to solve a design problem: all your knowledge and personal experiences, your creativity, and your powers of thought. It engulfs you completely." (p. 79).

In order to thrive in the design profession, designers need to embrace the combination of their personal attributes and design skills to build their DPI foundation so they may successfully navigate the experience of becoming a designer (Kunrath, et al., 2016, Dall'Alba, 2009). Personal attributes; the experiences, values, beliefs, emotions, feelings, attitudes, personality, and

behavior as relative to psychological traits (Kunrath, et al., 2018; Kunrath, et al., 2017; Kunrath, et al., 2016; Pfeiler-Wunder, 2017; Tracey & Hutchinson, 2016; Skorikov & Vondrcek, 2011) influence a student's assertiveness, social skills, management, and communication abilities in a professional setting. Design skills are those learned in the design education process and as related to design activity include understanding, thinking, evaluating, abstracting, problem solving and learning, operational and computer ability, as well as collaboration, communication, presentation, and project management skills (Kunrath, et al., 2016; Kunrath, et al., 2017; Kunrath, et al., 2018). The holistic consideration of the personal attribute and design skills will align a designer's professional identity with internal and external expectations (Kunrath, et al., 2018) and allow it to thrive. Specifically, transformative learning as the result of a crisis—"a situation where students are required to stop, think, and reflect, rather than accepting new information without questioning" Trede, et al., 2012, pg. 375)—creates a situation in which reflection becomes the broker between experiences and identity, thereby creating the whole professional. Design consists of ill-structured problems, problems with no concrete path to a solution, and are crises which designers must tackle daily. Similarly, Bowen states (2016) that "defining what it means to be a professional is like working through a problem with barriers, obstacles, experimentation and unknowns" (p. 403). Becoming more in tune with one's DPI, becoming more aligned with the requirements of being a designer and assessing who they can become helps students face the ambiguity that awaits them in the workplace.

Developing Designer Professional Identity

Transformational learning is at the heart of developing one's DPI through the transformation of one's agency (De Weerdt, Bouwen, Corthouts, & Martens, 2006). Research shows that understanding a designer's agency and DPI is best served by, but often over-looked,

in design education (Kunrath, et al., 2018; Skorikov & Vondrcek, 2011; Tracey & Hutchinson,

2015; Tracey & Hutchinson, 2016). Often the focus is on design skills—software knowledge,

technical skills, and creative ability— and there is a need to encourage patience, cooperativeness,

communication, positive attitude, congeniality, and a richness of personality and life

experiences. (Blakeman, et al., 2020). Kunrath, et al. (2017) determined that delaying a

designer's DPI development can become a hurdle for a successful transition from student to

professional (Crossley & Vivekananda-Schmidt, 2009). With these implications, educators

would be wise to incorporate DPI development into their design classrooms (Skorikov &

Vondrcek, 2011). Providing students with authentic experiences (De Weerdt, et al., 2006), real-

world challenges (Hong & Choi, 2011; Kunrath, et al., 2018), reflection opportunities (De

Weerdt, et al., 2006; Dewey, 1910; Hong & Choi, 2011; Kunrath, et al., 2018; Schön, 1983;

Tracey & Hutchinson, 2016; Trede, et al., 2012), and life experiences such as industry-based

extra-curricular activities begin to help students feel as part of a professional group (Blakeman,

et al., 2020; Crossley & Vivekananda-Schmidt, 2009). Encouraging the exploration of a

designer's personal attributes and design skills as related to the professional environment within

the classroom develops a student's self-confidence on who they are becoming as a designer

(Dall'Alba, 2009; Kunrath, et al., 2017).

Of the classroom experiences, reflection is the most widely discussed within professional

identity development research. James Victore, (2020) an established design industry professional

and author, has said, "My best students have always been the ones who failed some other course

of study or life choice—because they carry with them the fire of that experience. Their peripheral

vision is stronger; they can pull from their outside sources, interests and experiences beyond

graphic design." Reflective practices allow students to examine their lived experiences, new-

found experiences, beliefs about design, and self-awareness of their emerging DPI in a supported

and guided atmosphere (Tracey & Hutchinson, 2016; Kunrath, et al., 2018; De Weerdt, et al.,

2006; Trede, et al., 2012). In addition, novice designers can also learn to interpret and manage

ill-structured design problems by leveraging reflection to work through challenges. (Hong &

Choi, 2011; Tracey & Hutchinson, 2013). Their own personal experiences, interpretations,

knowledge, skills and beliefs are used to invent and reinvent processes and design solutions thus

creating a reflective loop of possibilities. (Tracey, Hutchinson, & Grzebek, 2014). Reflection

then serves a dual purpose in assisting students to discover how their personal attributes relate to

their design skills, the result of which is the consolidation of their DPI.

Reflection Defined

The use of reflection has a well-documented history and is defined in a variety of ways.

John Dewey (1910) is a well-known advocate of reflective practice and touts its value as being

educative and a foundation for problem solving. Dewey defines reflection as "active, persistent,

and careful considerations of any belief or supposed form of knowledge in the light of the

grounds that support it, and the further conclusions to which it tends" (Dewey, 1910, p. 5).

Dewey goes on to explain that reflective thinking requires participants to search for and inquire

about substances and materials to resolve issues of perplexity and doubt. He argues that an

individual must remain open-minded, whole-hearted and responsible, and seek knowledge to

reflectively problem solve. Similarly, Donald Schön (1983, 1987) discusses the relationship

between reflection and problem solving. Schön, however, introduces the idea that problem

setting influences problem solving-based reflection because it takes place within the context of a

practitioner's situation and environment. Within this idea, he identifies that reflective thinking

often comes from an element of surprise, or crisis, such as uncertain situations, unpredictable

moments or a troubling phenomenon. This surprise is addressed as reflection-in-action or reflection-on-action. *Reflection-in-action* is reflective thinking that occurs while the situation is occurring—an intellectual evaluation of reflective knowledge to address the situation or an improvisation within the occurrence of the experience. *Reflection-on-action* is retrospective reflective thinking after the situation has occurred and includes thought on the occurrence, hypothesizing possible change, and a development of knowledge that can be applied in the future. Boud, Keogh, and Walker (1985) describe reflection in context to learning, emphasizing experiences of individuals that lead to understandings and insight. In addition to using reflection for problem solving, Mezirow (1981) defines reflection as a way to make meaning in how an individual views his perception of self and offers varying levels of reflection moving from the conscious to the critical conscious levels. Conscious levels encompass the act of examining one's behavior, becoming aware of perceptions regarding those behaviors, recognizing the contexts and becoming mindful of value judgments. Critical consciousness involves becoming aware of external influences and one's predisposition toward them such as judgment of one's self, judgment about other people, and cultural or psychological judgments. Along the same line of thinking, Confucius (500 BCE) emphasized a constant review and critique of one's inner self as a means of transformative reflection through daily silent reflective meditation (as cited in Hong & Choi, 2011). Reflection becomes a crucial tool for determining self, and in particular, professional self (Luehmann, 2007).

Reflective Models

The ideas surrounding reflection are varied and several models are presented as a means to approach reflective practices. Mahnaz Moallem (1998) recognized the need for instructional designers to seek out new ways to approach ill-structured problems—problems from real-world

situations with no clear definition and are a common occurrence for design professionals—and presented a reflective model that breaks down the reflection process into five phases to strategize and guide instructional designers through the reflective process. This model, similar to today's design thinking process, asked individuals to consider reflection by recognizing the problem, clarifying the problem, forming hypotheses, elaborating on solutions, and taking action based upon the best solution. This reflective thinking model relied on the individual to be willing, open and thoughtful to fully explore and reflect upon all potential outcomes. If not, reflective thinking cannot occur. Moallem goes on to develop three aspects essential to fostering reflective thinking in instructional designers. These aspects ask instructional designers to consider self-construction, the assumptions and beliefs they currently hold, action-reconstruction, new understandings and re-framing of problems, and social-reconstruction, identification of inadequacies in social, cultural and political conditions.

Hong and Choi (2009) introduce a model of reflective thinking that focuses on three dimensions of reflection to help designers approach problem solving for real-world situations— points of reflection, objects of reflection and quality of reflection. Their model surmises that designers have difficulty solving ill-structured problems due to a lack of pre-determined paths to an outcome. Design is subjective and has no right or wrong solutions, only solutions that are more appropriate than others. The authors look at two approaches to solutions: problem-driven and solution-driven. Problem-driven sees designers linearly approaching a problem, a series of steps. Solution-driven is non-systematic and bucks the typical linear approach because it is too prescriptive, rigid and limiting. They argue that reflective thinking can increase the number of solutions for ill-structured problems and improve design ability. This led to the development of their three-dimensional model. (1) Points of reflection relate to the timing in which reflective

thinking happens and at what stage of the design process it occurs indicating that it should happen several times during the design process. (2) Objects of reflection refer to the artifacts used in reflective thinking including knowledge of self, knowledge base of the problem, previous experiences, feelings, attitudes, beliefs, values, functions of problem, users, environments and circumstances—all items related to the design process including the designer herself. (3) Quality of reflection evaluates the levels in which reflective thinking occurs and how often a designer "loops" back to the problem in each level increasing from simply solving the problem to understanding the political, social and cultural impact of the solution.

Later Hong and Choi (2011) clarified and refined their thoughts on reflection by developing a revised three-dimensional model to reflective thinking. They also turn their focus specifically toward emerging novice designers' competency in problem solving and how this model promotes and demonstrates the benefits of reflective thinking. This revised model places problem-driven and solution-driven solutions within the first dimension now titled "timing of reflective thinking", formerly called points of reflection, and expand upon them by introducing details and flowcharts of design phases that occur within. This reorganization of the first dimension clarifies how different phases and approaches to reflection in design can relate to the timing of problem solution development. Objects and levels of reflective thinking remain similar, but a greater emphasis is placed on how it can benefit novice designers. Novices, once guided through the three-dimensional model of reflective thinking, have the potential to develop stronger problem-solving skills, particularly those that are ill-structured. Hong and Choi suggest that future research be dedicated to better understand how designers use reflection in their everyday environment, develop a method for assessing reflection in solving design problems and investigate how different learning styles interact with reflective practices.

Student Reflection in the Design Classroom

The act of reflection is often used in the classroom in the form of reflective essays, journals, and other assignments. One of the most challenging issues with using reflection in the classroom is determining the best way to have students dig deep within themselves to critically reflect on a situation to provide a descriptive, comprehensive, and analytical view of a situation versus superficially reporting on habitual action by simply and vaguely stating the facts of an occurrence with little description and no insight. More often than not, students err on the side of providing habitual or minimally descriptive reflections. Students are more comfortable simply describing and recalling situations rather than investigating deeper meanings (Langer, 2002; as cited in Trede & Smith, 2012). They tend to lack emotion in their reflective responses (Tracey & Hutchinson, 2018), lack understanding of reflective practices, and request better guidance in order to venture toward critical reflection (Trede and Smith, 2012). Greater emphasis is needed on guidance and the assessment of reflection to promote better reflective practices.

Trede and Smith (2012) determined that the student-educator relationship is the most crucial when guiding students through reflective practices. There is a fine line between supporting reflection and being too heavy-handed in reflective prompts. Students should be encouraged to take responsibility by being open and actively engaged in the learning process, which, allows them to become critical reflective practitioners. At the same time, educators who take the time to provide assessment of reflection provide valuable insight for both the educator and students. Tools such as the REFLECT rubric developed by Wald, Borkan, Taylor, Anthony, and Reis (2012) can assist in the reflection assessment quality to better provide feedback to students because "students who feel respected and listened to will think aloud with their educator

and engage in dialog that helps them gain insights and clarity in developing their practice skills"

(Trede & Smith, 2012, p. 625).

Reflection is not given enough attention in the design education classroom. Design

education focuses primarily on skill development, technical and personal, yet largely ignores the

potential for reflection. (Lousberg, Rooji, Jansen, van Dooren, Heintz, & van der Zaag, 2019;

Macdonald & MacLeod, 2018; Trede & Smith, 2012; Tracey & Hutchinson, 2018). "Students

learn best by *doing*—like most skills are learned best by doing them over and over again. But

design might be *understood* better by academic *reflection*" (Lousberg, et al., 2019). Reflective

learning helps students process knowledge and engage in critical thinking in regard to their own

knowledge, actions, and experiences both in and out of the educational setting (Tracey, et al.,

2014). Engaging design students in reflective practice enhances both their competency in

problem solving abilities (Hong & Choi, 2011) and identification of their professional identity

(Tracey & Hutchinson, 2018). Inherent in the reflection process is a subconscious "self-critical

approach and an openness to on-the-spot experimentation" (Clouder, 2000) which lends itself to

the design process.

Students can learn to reflect on design problems and use their experiences to gain new

ways of thinking to assess multiple scenarios, develop potential solutions to ill-structured

problems and derive new ways to examine outcomes (Schön, 1983; Hong & Choi, 2011). Risk-

taking, experimentation, and curiosity are attributes that make a strong designer (Macdonald &

MacLeod, 2018) and can be made stronger through reflective practices if properly guided,

particularly with the ill-structured problems common to the design field. Reflective practices are

particularly helpful for novice designers as they learn to think more deeply about concepts and

experiences. Developing design solutions is a feedback loop—trying ideas, testing them and then

trying again until appropriate solutions are found. Reflection provides an opportunity for students to safely explore risks inherent to the design process and allows them to construct their own design models, develop a vocabulary for discussing their experiences (Tracey & Hutchinson, 2013), and understand how their idea generation process affects their design solutions (Tracey & Hutchinson, 2015).

Reflection and Identity Development

Academic discourse on reflection for the purposes of professional identity identification in design education is largely silent (Kunrath, et al., 2018; Skorikov & Vondrcek, 2011; Tracey & Hutchinson, 2016; Tracey & Hutchinson, 2015). This discourse is well-versed in fields such as teaching, healthcare, social work and psychology due to the professional nature of their education. Design is a practicing professional field as well, and a greater focus on reflective practice in developing professional identity is necessary. Design educators are not only responsible for teaching the *what* of design, but also the *how* of becoming a professional. Reflection assists students in understanding how their experiences, beliefs, values and personal qualities develop their DPI (Tracey & Hutchinson, 2018, Kunrath, et al., 2018) and provides the opportunity to make connections with their personal histories as well (Tracey & Hutchinson, 2015). Tracey and Hutchinson (2015) state that "in order to fully conceive of themselves as professionals, designers must know not only what design is and what designers do, but also who they are as a designer—how their personal traits, habits, talents, and limitations affect (and are affected by) their professional work" (p. 528). DPI development is not straightforward and therefore reflective practices can assist students in working through this instable process.

Trede, Macklin and Bridges (2012) discovered through an exhaustive literature review that students need to be encouraged to question their self-awareness and their professional

relationship with others. Reflection can have a positive effect on students and support

assimilation of new ideas, changes and knowledge which, in turn, provides a framework to

support professional identity formation (Tracey, et al., 2014). To experience transformation and

learning without reflection runs the risk of distortion in knowledge and self-understanding

(Trede, et al., 2012). Dall'Alba (2009) emphasizes that transformation of self is as important, if

not more important, than skill set. Dall'Alba explains that the act of becoming is burdened by

ambiguity. Several educational opportunities exist that can encourage reflection and include

relating the past in forming present and future self and encouraging openness over pre-conceived

notions. This, of course, relies on the educator to guide students through reflective practices to

maximize the opportunities, but if done correctly, "education can have a key part to play in who

we are becoming: in what we come to know, how we act, and who we are" (Dall'Alba, 2009).

Reflection becomes the connection between the designer personal self and the ability to solve

complex design problems (Tracey, et al., 2014) thus forming the holistic traits of DPI.

Summary

Design education curriculum that focuses only on design skills creates a deficit in a

student's ability to transform and negotiate the process of become a design professional.

Introducing reflection into the classroom as a means of digging deeper into a student's sense of

self complements a student's design skills by allowing them to expand upon themselves through

a holistic approach. The reflective process of problem solving can be directly applied to the

reflective process of discovering self. Depriving students of the opportunity to reflect on actions,

experiences, and beliefs prevents them from generating informed decisions toward their

educational and professional life path (Hong & Choi, 2011). Students need to be provided with

meaningful occasions in which they can explore and reflect upon their DPI.

Transformative learning theory supports using reflection to become critically conscious of habits, thoughts, perspectives and actions to understand their personal and professional identities and sense of self. By bringing the ideas of TLT into the classroom, faculty can foster the concept of perspective transformation within coursework through the implementation of reflective thinking, critique of one's own work, critique of peer's work, and exploration and experimentation through design. It is important for this research to have participants reflect upon their identity and sense of self supporting the integration of *eudaimonic identity theory* as part of curricular development. Without knowledge of the how, what and why of their own selves, student cannot hope to understand the how, what and why of other selves, target audiences and clients—entities crucial to the success of a designer.

Chapter 3: Research Methodology

Introduction

The purpose of this chapter is to establish the research methodology for this action research study regarding the development of communication design students' designer professional identity. Transformative learning theory and eudaimonic identity theory provided the foundation of this self-reflective study to allow for a deeper understanding of the self-perceptions of communication design students. The research plan, including methodology, setting and context, study participants, data collection methods, procedures, analysis method, and ethical concerns are components of this chapter.

Research Questions

This action research study seeks to answer the following research questions:

1. How can a university communication design program develop a strong sense of professional identity within its students?

2. How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?

3. What factors contribute to the development of strong professional identities among communication design students?

Design-Based Research Methodology

Design-Based Research (DBR) (Wang & Hannafin, 2005) provides the methodological framework for this research study. This methodology's goal, which is systematic and adaptable, strives to improve educational practices though integrative and authentic classroom experiences, collaboration between researchers and designers, and contribute findings to research and professional practices (Tracey & Hutchinson, 2016; Wang & Hannafin, 2005). DBR is designed

to be practical, grounded, iterative, flexible and integrated into a researcher's specific

educational context, data analysis and collection methods, and research goals (Wang &

Hannafin, 2005). DBR provides for an observational opportunity to test theoretical questions

about learning directly within the design education environment (Castro, LeLonde & Pariser,

2016). For the purpose of this study, DBR is being used to explore the role of reflective practices

in discovering how CD students' professional identities are developed through the

communication design program. A mixed methods data set—quantitative and qualitative—was

chosen for this study to compare and determine substantive conclusions about a relationship of

variables, understand the perception of participants, and determine implications for future design

education and research. Mixed methods was chosen because a "pragmatic corroboration occurs

when the qualitative results of a data set do not simply harmonize or complement the quantitative

analysis but corroborate it" (Saldaña, 2016, p. 26b). Conversely, if the quantitative data does not

corroborate the qualitative, it allows the researcher to investigate the disparity. Mixed methods

provides a much needed reality check of the analytic process (Saldaña, 2016).

The Researcher

  I have worked in the graphic design industry in a full-time capacity for eight years, has

owned her own freelance business for 17 years, and has concurrently worked as a professor and

department chair in a communication design program at a state university for 16 years. She has a

Bachelor of Fine Arts in Communication Design and a Master of Fine Arts in Design.

  I was trained through extensive coursework and completed research ethics and

compliance training through the Citi Program, as required by the university, to execute the

designed study. Her experience as a creative director responsible for hiring and mentoring junior

faculty, as well as her experience in the classroom with undergraduate students, contribute to her research skills in analyzing data and drawing substantive conclusions.

Setting/Context

This study takes place in a small town mid-sized university that offers a Bachelor of Fine Arts (BFA) in Communication Design (CD). The CD program enrollment at the time of the study was 254 students. The CD program is part of a state university system and is accredited by the National Association of Schools of Art and Design (NASAD). The communication design degree, which encompasses the study of graphic design, advertising design, interactive design and illustration, is defined by NASAD (2019) as a professional degree that "focuses on intensive work in art and/or design supported by a program in general studies. Normally, the intent is to prepare for professional practice" (p. 85). To meet the definition provided by NASAD, the CD program offers a variety of courses that incorporate extensive exploration of design skills and personal attributes thus striving to prepare students for the professional environment and cultivate their DPI. All program required courses are studio courses which are constructivist in nature and encourage active learning through real-world presentation of ill-structured problems. The solution to these ill-structured problems requires reflection and interpretation of personal attributes and application of design skills to develop appropriate solutions.

Research Participants

Participants included 25 CD students identified as senior-status who were enrolled in a professional practices course, a course that provides students with a better understanding of the design industry in order to prepare them to transition from academia into the work place during their senior year. The professional practices course bridges the gap between the classroom and the professional design environment through professional presentations, lectures,

demonstrations, assignments and field trips. The course rationale states that it also fosters the development of important employment skills and materials while providing access to current information and trends. Participants varied in age, race, gender and socio-economic status. Two students enrolled in the course were excluded from the study because they were not CD students, but majors from a different program. The students participated during the Spring 2020 semester. An informed consent, as shown in Appendix C, was required of the participants prior to participation in the study.

Methods of Data Collection

The research questions are both quantitative and qualitative in nature and they attempt to identify, through reflective opportunities, how students perceive and develop their DPI. Data was collected through four methods to answer the research questions: Pre- and Post-CD Designer Professional Identity Surveys, Where Will I Thrive research paper and Senior Portfolio Review Assessment Survey.

(1) The Pre- and Post-CD Designer Professional Identity Survey incorporated self-reflective survey questions to answer research questions two and three to identify how well the survey questions helped students identify their DPI, as well as, identify specific factors in the CD program that contributed to their DPI development. The cross-sectional self-administered questionnaire was distributed utilizing the Survey Monkey platform, a secure web-based survey generator. The survey was mixed methods—having both quantitative and qualitative questions. A five-point Likert scale survey was used to collect quantitative information from the CD students to gain an overall understanding of their DPI. The Likert scale had a range from strongly disagree (1) to strongly agree (4), with no neutral position to reduce indecisiveness. A zero (0) value "Not Applicable" addition was included in the metrics to allow for students who

didn't understand the question, did not have an opinion, did not experience the question or didn't

have an answer so as not to compromise the validity of the responses. The 60-question pre-

survey and 62 question post-survey, as shown in Appendix A, allowed students to respond how

much they identified with pre-set self-statements and was divided into seven categories:

- Knowledge about professional practices – a students' prior and current knowledge of
  the design profession

- Experience with the profession – personal interaction with, involvement with, or
  knowledge of the design industry and members of the design industry

- Having the professional as a role model – having the mindset of professional designer
  and understanding those who work in the design industry

- Professional self-efficacy – level of effectiveness and successfulness necessary in the
  design industry

- Knowledge of professional self – knowing future goals

- Knowledge of professional skills – acknowledging and having confidence in skills
  needed in the design industry

- Identification of factors that influenced DPI – identification and effectiveness of
  specific communication design program factors

The quantitative survey's intent was to provide a holistic look at students' educational

experiences and perceived professional outlook as guided by the CD curriculum and faculty. At

the end of each category of the first six categories, students were also given an optional open-

ended qualitative comment prompt to expand upon any of the category's questions and offer an

explanation of a chosen answer. Category seven, identification of factors that influenced DPI,

had an optional open-ended comment prompt after each question so that a student could identify

the specific influential factor. The post-survey also included two additional required qualitative question prompts that asked about the students' experiences in the professional practices course as related to their DPI.

(2) The Where Will I Thrive research paper, as shown in Appendix C, was used to answer research questions one, two, and three to identify which aspects of the current CD program strengthen DPI development, how well the self-reflective nature of the paper helped students identify their DPI and identify specific factors in the CD program that contributed to their DPI development. The research paper was assigned to students enrolled in the professional practices course. The purpose of the research paper was two-fold. The first was to encourage students to begin the process of examining different work environments—the structure and work produced, and the potential for the students' career path trajectory within different environments. The goal was to help students identify the professional setting they may find inspiring and desire to pursue for employment after graduation. The paper's guidelines encouraged personal perspective and insight through self-reflection rather than regurgitation of company statistics. Students were encouraged to investigate the company portfolio, culture and structure to answer prompted questions such as "What about this creative environment makes you feel as though YOU will thrive there?", "What do you feel is important about this company?", "Have they contributed to ideas or projects that have a philanthropic goal?", "What projects or campaigns have they worked on that you were attracted to?" and "Do they have a mentor program?". The second part of the paper asked students to develop self-reflective responses to examine their DPI as it related to potential future work environments. Open-ended prompts asked students to investigate how their personal attributes and design skills created who they are as a designer and how they see themselves fitting with a potential employer. Examples of prompts include "What

design skills will you bring to the environment that make you fit in?", "What are your values and beliefs?", "How or why do they or will they align with your future design environment?", "How have your experiences (life and college) shaped the designer you are today?", and "What makes you special/unique compared to all the other designers out there?" No page limit was set in order to encourage students to include insights beyond prompted questions.

(3) The Senior Portfolio Review Assessment Survey, as shown in Appendix B, was used to answer research questions one and three to identify which aspects of the current CD program strengthen DPI development and identify specific factors in the CD program that contributed to their DPI development. The Senior Portfolio Review is an annual departmental event which invites industry professionals to mock interview and review student presentations and portfolios for graduating seniors in the undergraduate CD program. This event provides industry professionals with an opportunity to view students' work created during their enrollment in the program and offers a chance for students to practice their interview skills in mock interviews. Industry professionals volunteered their time—they were not compensated for their participation. Many of the industry professionals were program alumni and participate in the event as a way to support their alma matter. After the event, industry professionals were asked to complete a survey using both a quantitative rubric and qualitative questionnaire to collect data about the student's professionalism in presentation and best business practices to gain an overall understanding of how well students are meeting the learning outcome. Since DPI includes the professionalism and presentation skills, the industry professionals' perspective is helpful in determining how well the CD program cultivates students' sense of DPI especially because they represent the viewpoint of a potential future employer.

As part of the CD department's assessment for programmatic review of one of the

program's student learning outcome which states, "employ professionalism and best business

practices through presentation," data is annually collected from the industry professional

participants of the CD program's Senior Portfolio Review. The student learning outcome relates

directly to several of the Pre- and Post-CD Designer Professional Identity Survey questions that

ask students to assess their level of professionalism and presentational skills. The Senior

Portfolio Review Assessment Survey used mixed methods for data collection. The survey was

distributed once through Google Forms, a secure web-based survey generator, via an email to the

participants. The quantitative results were gathered through the use of the University-approved

four-point scale rubric—expert (4), accomplished (3), emerging (2) and novice (1). The

qualitative questions asked industry professionals to provide overall impressions of their

experience with the students. Additional questions asked the industry professionals about their

experiences working with junior designers in the workplace. These additional questions were not

specific to the student participants from the portfolio review, rather new and emerging designers

as a whole. Questions included "Typically, how well do new junior designers in your company

acclimate to the professional working environment?", "In general, what interpersonal, design

and/or technological skills do newly graduated junior designers know or perform well?", "Are

there any interpersonal, design and/or technological skills you find are generally lacking in

newly graduated junior designers?", and "What, if any, seem to be stumbling blocks for newly

graduated junior designers?"

The Senior Portfolio Review Assessment survey was distributed after the 29th Annual

Senior Portfolio Review event, which was held during the sixteenth, and final, week of the

Spring 2020 semester and was limited to only those CD students who were graduating in the

2019–2020 academic year. In previous years, the event was held face-to-face, industry

professionals sat at assigned tables, and students rotated through to present their portfolio and

participated in mock interviews to garner feedback. Companies saw an average of five students

during the event. Due to the COVID-19 pandemic, the university transitioned to online learning

during week eight of the semester and closed the campus to all in-person events. As a result, the

portfolio review was held as a virtual event in Zoom, a web-based video conferencing platform.

I, along with the professional practices course professor, organized and coordinated the

participation of 50 industry professionals from 33 companies so they could meet with an average

of three students each. We utilized Zoom's breakout room capability so that reviewers and

students could have privacy during their review and mimic the in-person event experience as

closely as possible. 38 students presented their portfolios through the Zoom's screen sharing

function. To best organize and take advantage of the participants' expertise, the professional

practices professor and I created a master chart of companies, students and available time slots.

In doing so we were able to arrange reviews that best matched student talents and interests with

companies' specializations in graphic design, advertising design, interactive design or

illustration. To eliminate researcher bias in the matching of students with companies, we

inquired with other CD department faculty for assistance in matching students' talents with

companies' specializations so that both the student and company would have the most relevant

review possible. This effort also ensured that all students were assigned equal time with industry

professionals and kept us organized during the event. Aside from a few small technical issues

with breakout rooms at the beginning, the event was successful.

Data Collection Timeline

The data collection occurred during the sixteen-week Spring 2020 semester. The Pre-CD Designer Professional Identity Survey was distributed to senior students during the first week of classes. The Where Will I Thrive research paper assignment was assigned during week five and collected by the professional practices course professor during week seven. The Post-CD Designer Professional Identity Survey was distributed to senior students during the fifteenth week of classes, the last week of regular classes before finals week. The Senior Portfolio Review Assessment Survey was distributed to industry participants during week sixteen on the morning after the portfolio review event. Collection of the Senior Portfolio Review Assessment Survey continued during the two weeks after the end of the semester, with one reminder email sent after one week of collecting to encourage additional survey engagement. 25 initial Pre-CD Designer Professional Identity Surveys, 20 Post-CD Designer Professional Identity Surveys, 24 Where Will I Thrive research papers, and 23 Senior Portfolio Review Assessment Surveys were collected.

Procedures Followed

IRB approval was sought from the university. Once approval was granted, I worked with the professional practices course professor to schedule the surveys and review the Where Will I Thrive research paper assignment. The research paper was a pre-existing assignment in the class prior to this study. We reviewed all assignments from the class and agreed that the Where Will I Thrive research paper was the most appropriate artifact because of the assignment's self-reflective properties. On the first day of the professional practices course, I introduced myself, provided basic information about the action research study that was included in the IRB, reviewed the consent form, and presented the Pre-CD Designer Professional Identity Survey to

the participating students. All of the students in the course consented to participation in the

study. Participants were not contacted by me for the remainder of the semester. The professional

practices course professor collected the Where Will I Thrive research papers and distributed the

Post-CD Designer Professional Identity Survey.

The Senior Portfolio Review Assessment Survey is an established survey as part of the

CD program's annual programmatic assessment required by the university. The Senior Portfolio

Review is an annual event and is the culmination of the students' university career in the

program. The assessment survey was not altered for the purposes of this study.

Data Analysis

Quantitative Analysis

Quantitative statistical analysis was completed once the Pre-and Post-CD Designer

Professional Identity Surveys and Senior Portfolio Review Assessment Survey were collected at

the end of the semester. Data results were exported from Survey Monkey and Google Forms as

Excel documents. The statistical analysis was executed in Excel using the Data Analysis

Toolpak. Repeated Measures t-Tests were run on the Pre- and Post-CD Designer Professional

Identity Survey data to compare results. The Pre- and Post-CD Designer Professional Identity

Surveys' quantitative questions are identical therefore using the Repeated Measures t-Tests as

the preferred quantitative analysis method was appropriate because this method of analysis is

used to compare the mean of a single sample measured at two different times. The significance

level was fixed at $p < 0.05$. Specific and related questions from the Post-CD Designer

Professional Identity Surveys and Senior Portfolio Review Assessment Survey were also

compared using Repeated Measures t-Tests as both surveys' LIKERT scales were deemed

comparable in value. The results from both sets of quantitative analysis were also classified as

two-tailed hypotheses because the research questions do not hypothesize a specific outcome for the survey data results.

Qualitative Analysis

Coding of qualitative data was completed upon collection of the Pre-and Post-CD Designer Professional Identity Surveys, Senior Portfolio Review Assessment Survey and Where Will I Thrive research papers after the end of the semester. Coding the artifacts and survey data is a crucial part of the data analysis process. Saldaña (2016) describes the process of coding as taking large volumes of information, such as transcripts, open-ended survey responses, documents, field notes, artifacts, correspondence, and so on, and breaking the information down into smaller passages to create meaning and understanding toward answering the researcher's primary research questions. Most often the codes are words or phrases that are symbolically representative of the information and are assigned to words, phrases or paragraphs within the coding source materials. Coding often occurs in cycles with the first and second coding cycles used to identify the majority of the coding and additional cycles used to refine coding selections, edit existing codes, and add new codes (Saldaña, 2016). Coding of the four artifacts took place during the same time period. Coding was used so the researcher could gain a better understanding of the reflective perspectives of both the student and industry participants. Codes were developed during the research process, based upon literature resources and collected data, for the purposes of analyzing data. Coding was conducted using NVivo, a computer-based qualitative data analysis software.

Provisional Coding. Provisional coding, a method of coding in which pre-determined lists of codes is generated from literature, was utilized as the primary coding method. The initial code list was developed from the Kunrath, et al. (2016) research paper that delineates personal

attributes and design skills traits that lead to the development of designer professional identity. Kunrath, et al.'s list of personal attributes codes were developed from the study of a variety of sources including psychology as there was no documented framework existing in design field literature (Brocklebank, et al., 2005; Goldberg, 1990). The design skills codes were developed from heavily researched literature based upon functional design competencies (Kunrath, et al., 2016). Researchers are warned, however, not to be close-minded and narrow in their use of provisional coding. Researchers are encouraged to reevaluate codes after first and second cycle coding to modify the original code list to eliminate unnecessary codes, modify codes to better fit the context and add emergent codes when necessary (Saldaña, 2016). As a result, of the thirty-seven original provisional codes in this study, seven codes were eliminated, five codes were modified, and seven codes were added.

Simultaneous and Concept Coding. Other coding methods applied to the artifacts include simultaneous coding and concept coding. Simultaneous coding, applying two or more codes to the same passage or sequential passages, was used when a passage could infer multiple meanings. (Saldaña, 2016) Students' thoughts in the research papers were descriptive and complex and latent reflections in passages were interpreted by the coders. The multidimensional self-reflections were rich with meaning and led to interrelationships between thoughts within the same passage. Concept coding, a method of coding to derive "big picture" ideas suggested by the data (Saldaña, 2016), was applied to larger passages of text to harmonize the essence of a thought. The goal of concept coding is to connect and identify broader categories and themes within the coded artifacts.

NVivo Use

NVivo, a computer-based qualitative data analysis software, was utilized to support data management, coding analysis and data matrices development. It was also used to query key words to compare frequencies in order to inform themes and data breakdowns for the development of treemap diagrams. While software was a primary coding tool, it was not utilized as a coding source generator. All artifacts were manually coded through the use of the NVivo software. All codes entered into the software were derived from literature resources and collected data. No automated processes were used in the coding cycles. Five cycles of coding occurred. The first and second cycle of coding used provisional coding and only focused on those codes which developed from the literature. The third, fourth and fifth cycles of coding incorporated modified and emergent codes.

Validity

The Pre- and Post-CD Designer Professional Identity Survey content validity was established by incorporating a modified version of the Professional Identity Five-Factor Scale (Tan, et al., 2017) to specifically address the CD program. The open sourced original survey instrument was designed for data collection from a polytechnic school whose students were enrolled in programs with a wide range of professional outcomes (Tan, et al., 2017). Modifications were made to eliminate the original survey's ambiguity of unknown professions to specify the design industry, as well as insert references to the CD program to replace when polytechnic courses were specified. One factor was split into two factors for better clarity. The addition of the seventh factor, identification of factors which influence a students' DPI, was developed through analysis of major aspects of the CD program. Specific traits within the DPI

personal attributes and design skills as identified by Kunrath, et al. (2016) were then overlaid with the survey questions to further validate the content, as shown in Appendix A.

After the survey was developed, the content validity was further tested using Lawshe's method of measuring content validity, a method used to quantify the "validity of an assessment instrument or tool as evaluated by review of clinical experts" (Gilbert & Prion, 2016, p. 530). A Content Evaluation Panel comprised of experts in the field of study (Gilbert & Prion, 2016)—two design faculty who are also freelance industry professionals—was formed. The survey was sent to the Content Evaluation Panel to score the survey questions as (1) important and essential, (2) important but not essential or (3) not important or essential. Panelist One scored three questions as important but not essential with the remaining scored as important and essential. No questions were scored as not important or essential. Panelist Two scored nine questions as important but not essential with the remaining as important and essential. No questions were scored as not important or essential. Panelist One made a few comments on verbiage to help make questions clearer and the revisions were agreed upon by both myself and Panelist Two. All questions remained in the survey with the incorporated verbiage revisions.

Triangulation

Triangulation of the collected data assures the validity of research by comparing a variety of collected data to the research questions. The purpose of triangulating the data is to both cross-validate the data as well as engage different facets of the CD students' experiences as related to the study. The objective of triangulation "is to increase confidence in the findings through the confirmation of a proposition using two or more independent measures" (Heale & Forbes, 2013, p. 98). Triangulation provides a more comprehensive picture of the overall data and can result in a convergence of conclusions which validates through verification, offers complementary

analysis to support themes or highlight concepts, and/or reveals contradictory results which can lead to further investigation (Heale & Forbes, 2013).

In the first stage of triangulation the Post-CD Designer Professional Identity Survey and the Senior Portfolio Review Assessment Survey were assessed for quantitative comparison. Additionally, the qualitative data from the Post-CD Designer Professional Identity Survey were compared with Senior Portfolio Review Assessment Survey qualitative answers to determine if the students' self-perceived ratings to question statements were convergent or divergent with industry professionals' responses. The second stage of triangulation compared qualitative responses of Post-CD Designer Professional Identity Survey and Where Will I Thrive research paper to determine if the students' self-reflective ratings to the quantitative questions were convergent or divergent with the self-reflective responses in the open-ended survey questions and self-reflective responses in the research paper. Additionally, the Post-CD Designer Professional Identity Survey and Where Will I Thrive research paper's self-reflective responses were compared with the Senior Portfolio Review Assessment Survey industry professionals' responses and were examined for convergent or divergent results. Diagram 1 shows the triangulation comparison between the artifacts.

Diagram 1

Diagram of the Study's Triangulation Comparison Between Artifacts
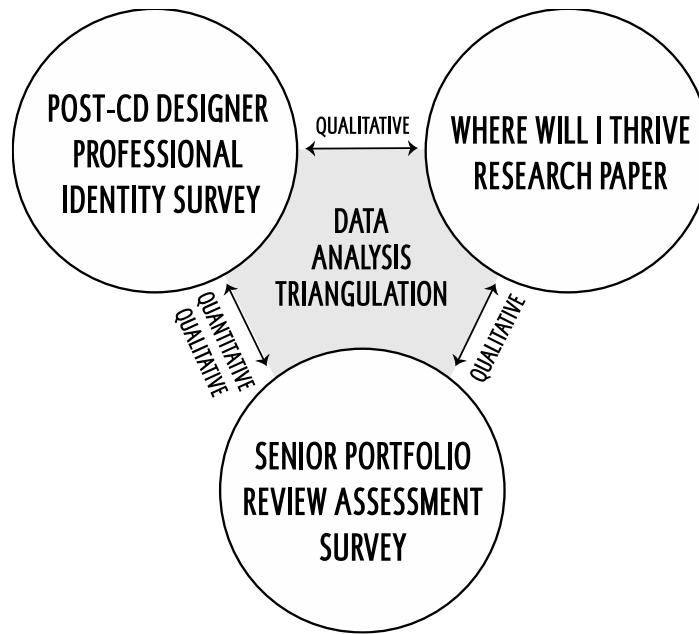
Security

Security and anonymity of collected data was of upmost importance and several

procedures were followed to assure that data remained secure. Survey data was collected and

recorded using Survey Monkey and Google Forms, secure web-based survey generators. Only I

had access to raw data. All identifying information was stripped from the data prior to coding,

analysis, presentation or publication. Pseudonyms were assigned to further protect the

identification of participants.

Records are kept in a password protected account associated with the online survey

program selected for distribution. Exported data are kept in a password-protected folder on the

principal investigator's personal computer. Printed records made from the online surveys and

archived data are kept in a locked filing cabinet within my private office. All printed records and

data will be held for 3 years after the conclusion of the study and then shredded. All digital and

online records and data collection will be retained for 3 years in password protected cloud-based

storage and then be securely deleted by deleting the files and deleting the account associated

with the selected online survey program. The inaccessibility of data after 3 years creates a potential limitation to the credibility of the study in the future.

Trustworthiness

To ensure credibility and trustworthiness, the qualitative data from the Pre- and Post-CD Designer Professional Identity Surveys, Senior Portfolio Review Assessment Survey and the Where Will I Thrive research papers collected were coded using peer review inter-rater reliability, a process in which multiple raters code the same artifacts to obtain a degree of agreement among raters. The peer coder for this study was a local school district gifted program coordinator whose own research interests explore the identity development in elementary school students. The peer coder was provided a detailed codebook, as shown in Appendix E, and anonymized electronic copies of all artifacts. The peer coder provided independent data analysis for all of the collected qualitative data by coding using Microsoft Word's review feature and submitted the coded data through secure email. A third coder, a communication design program faculty member, was involved when disagreements in coding arose between the first two coders. When the third coder agreed with one of the two original coders, then that decision was designated in the final analysis results.

I strove to minimize bias from this study in several ways. By transferring the distribution and collection responsibility of the Pre- and Post-CD Designer Professional Identity Surveys to the professional practices course professor, I removed myself from the participants' context. Utilizing the pre-existing Where Will I Thrive research paper artifact and Senior Portfolio Review Assessment Survey prevented me from introducing bias into the assignment's requirements or assessment survey questions.

Ethical Concerns

Maintaining ethical procedures for this study was priority and I followed the methods as outlined in this chapter. The informed consent form was distributed with the Pre-CD Designer Professional Identity Survey, as shown in Appendix D. I followed U.S. federal guidelines as outlined in The Belmont Report (1978) which states that informed content is required so that "respect for persons requires that subjects, to the degree that they are capable, be given the opportunity to choose what shall or shall not happen to them" and should include, "the research procedure, their purposes, risks and anticipated benefits, alternative procedures (where therapy is involved), and a statement offering the subject the opportunity to ask questions and to withdraw at any time from the research" (United States, 1978). The risks related to this study were minimal. All participants were over the age of 18 and did not demonstrate an impaired mental capacity. All were in good university standing. The Pre- and Post-CD Designer Professional Identity Surveys, Where Will I Thrive Research papers and Senior Portfolio Review Assessment Survey were the potential areas that could prove embarrassing to a participant if confidentiality was breached. To avoid this possibility, the quantitative aspects of the Pre- and Post-CD Designer Professional Identity Surveys and Senior Portfolio Review Assessment Survey were collected and scored by myself only. In all cases each individual was assigned a subject pseudonym prior to qualitative data analysis and no names were referenced during the data analysis phase.

Summary

This chapter outlined the methods used to answer the study's research questions. Procedure, study participants, data collection and analysis are discussed. Mixed methods surveys and qualitative artifacts were chosen for data collection. Design Based Research serves as the theoretical methodology for this study and is used to explore the role of reflective practices in

discovering how CD students' professional identities are developed through the communication design program. Validity, security, trustworthiness and ethical concerns are addressed. Chapter 4 provides the study results and demonstrates the methodology described in Chapter 3.

Chapter 4: Findings

In this chapter an examination of the results of the mixed methods study was conducted to answer the following research questions:

1. How can a university communication design program develop a strong sense of professional identity within its students?

2. How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?

3. What factors contribute to the development of strong professional identities among communication design students?

This chapter includes the analysis of the quantitative and qualitative data collected from four sources: Pre- and Post-CD Designer Professional Identity Surveys, Where Will I Thrive research paper and the Senior Portfolio Review Assessment Survey. Quantitative data was collected in the form of a four-point Likert scale from the Pre- and Post-CD Designer Professional Identity Surveys and in the form of a four-point university-approved rubric from the Senior Portfolio Review Assessment Survey. Qualitative data was collected from opened-ended questions as part of the Pre- and Post-CD Designer Professional Identity Surveys and Senior Portfolio Review Assessment Survey, as well as from the Where Will I Thrive research paper. Statistical analysis was used to analyze the quantitative data. Provisional, simultaneous and concept coding was employed to analyze the qualitative data to develop final codes and themes as described in this chapter. Included in this chapter are tables and diagrams to represent results of the data analysis and visualize code, theme and triangulations relationships. I share the quantitative data findings followed by the qualitative findings for each of the four collected data source surveys and the triangulation of all results.

Sample

Participants included 25 students identified as senior status in the CD program and were enrolled in a professional practices course. Of the 25 students, 20 students completed both the Pre- and Post-CD Designer Professional Identity Surveys. Participants varied in age, race, gender and socio-economic status. Two students enrolled in the course were excluded from the study because they were not CD students, but majors from a different program. The Where Will I Thrive research papers were collected from all 25 students, of which 12 were randomly selected to be used in the study to serve as a representative sample. 50 industry professional participants engaged with students during the Senior Portfolio Review with 23 industry professional participants responding to the Senior Portfolio Review Assessment Survey. Industry professional participants varied in age, race, gender and socio-economic status. The students and industry professionals participated during the Spring 2020 semester. To protect the privacy of the participants, all names were changed, and pseudonym initials were assigned to the Where Will I Thrive research paper authors. All names were deleted from the three surveys and participants are identified by their corresponding line number in the database spreadsheet.

Table 1

Summary of Collected Data

Summary of Collected Data			
Pre-CD Designer Professional Identity Survey	Post-CD Designer Professional Identity Survey	Where Will I Thrive Research Paper	Senior Portfolio Review Assessment Survey
20 seniors enrolled in professional practices course	*20 seniors enrolled in professional practices course*	*12 seniors enrolled in professional practices course*	*23 industry professionals*

Surveyed the first week of the semester	Surveyed the last week of classes	Collected in ⌜SEP⌝ Week 7	Distributed day after the Senior Portfolio Review
Mixed Methods	Mixed Methods	Qualitative	Mixed Methods
Likert scale and open-ended prompts	Likert scale and open-ended prompts	Writing prompts	Four-point university assessment scale and open-ended prompts

Quantitative Findings – Pre- and Post-CD Designer Professional Identity Surveys

The quantitative data includes the findings from the 60 question pre-survey and 62 question post-survey, as shown in Table 1, and allowed students to reflectively respond about how much they identified with pre-set self-statements and was divided into seven categories: knowledge about professional practices, experience with the profession, having the professional as a role model, professional self-efficacy, knowledge of professional self, knowledge of professional skills and identification of factors that influenced DPI. The quantitative survey questions' intent was to provide a holistic look at students' educational experiences and perceived professional outlook as guided by the CD curriculum and faculty both at the beginning and end of the Professional Practices courses during the students' senior year. Analyzing data used Paired Two Sample for Means t-Tests from the beginning of the class versus the end of the class shows which factors in the Professional Practices class show growth toward DPI as well as which factors did not.

Table 2

Pre- and Post-CD Designer Professional Identity Survey Questions

#	**Knowledge about Professional Practices (6 Items)**
3	I know the nature of the work I will do as a future design professional.
4	In most design environments, professionals with different backgrounds work together. I know of the different types of professionals I will be collaborating with

5	I have a good idea about the roles and responsibilities of my future design career
6	I know what kind of applications, technology and tools I will handle in my future design career
7	I am aware of the impact of the career decisions I make as a design professional in the industry
8	I have a good idea about ethical practices in the design industry
9	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Experience with the Profession (6 Items)
10	I have interned at or work part-time in a business related to what I am studying
11	I am part of an organization or club related to my profession
12	I know personally some people who work in my future design profession
13	I follow developments in my future design career path in social media, blogs, industry magazines, etc.
14	Before I entered the CD program, I had prior knowledge of the design profession
15	I have interacted with professionals in the industry outside of CD or through events organized by CD.
16	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Having the Professional as a Role Model (5 Items)
17	When working on assignments for class, I imagine myself to be in the shoes of a design professional in my future work environment
18	I concentrate in my studies on what I believe I would need to know and be able to do when I enter my future design career
19	I believe I can already think and reason like a design professional in a company or organization
20	I admire most those professors who are also professionals in the design industry
21	I admire professionals who are already working in my future work environment
22	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Professional Self efficacy (6 Items)
23	I am sure I will have no problems managing my professional behavior in my future work environment
24	I feel poorly prepared for a real job (Reversed)
25	I believe that I will easily get along with my future colleagues, comfortably cooperate, and have informal conversations with them
26	I'm confident that I will be successful and thrive in my future design career
27	I have no doubt that I will master all the skills necessary to succeed in my future design career
28	I am not sure about the kind of challenges I will face as a design professional (Reversed)
29	(Optional) Please share or expand upon the reason for any of your view/s listed above:

	Knowledge of Professional Self (2 Items)
30	I know what kind of design career/position I prefer to pursue after graduation
31	I am already pretty sure what kind of design work environment I want to enter after completing my CD degree.
	Knowledge of Professional Skills (8 Items)
32	My prior knowledge and life experiences influence my design work
33	When creating design solutions, I am often unsure of where my ideas come from (reversed)
34	I can articulate my design ideas well to others during presentation of my work
35	I have a clear understanding of the importance of the target audience and design parameters
36	I am thorough in exploring many possibilities when problem solving for best possible design solutions
37	I am often unsatisfied with my final work (reversed)
38	I effectively self-edit my design solutions prior to presentation
39	I have a hard time deciding which design ideas are best to move forward with (reversed)
40	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Factors That Influenced Your Professional Identity (10 items)
41	Your overall Communication Design education
42	(Optional) Please provide specific details on your response listed above.
43	Specific CD courses (please specify)
44	(Optional) Please provide specific details on your response listed above.
45	Feeling pride or success in your work/achievements
46	(Optional) Please provide specific details on your response listed above.
47	Professor involvement/mentoring/course instruction
48	(Optional) Please provide specific details on any of the listed above.
49	Internship experience/s
50	(Optional) Please provide specific details on your response listed above.
51	Development of final portfolio and branding materials
52	(Optional) Please provide specific details on your response listed above.
53	Guest speakers/Guest artists
54	(Optional) Please provide specific details on your response listed above.
55	Involvement in professional organizations/clubs
56	(Optional) Please provide specific details on your response listed above.
57	Involvement in departmental events/trips
58	(Optional) Please provide specific details on your response listed above.
59	Other Influences
60	(Optional) Please provide specific details on any of the listed above.

	Additional questions included on the post-survey only
61	How has Professional Practices or other KUCD courses supported your view, or changed your view, of your future design employment possibilities?
62	How has Professional Practices or other KUCD courses supported your view, or changed your view, of your own professional identity (who you are as a designer)?

Knowledge of Professional Practices

The Knowledge of Professional Practices category consisted of six questions, #3–8. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #3 statement "I know the nature of the work I will do as a future design professional," question #4 statement "In most design environments, colleagues with different professional and educational backgrounds work together. I know of the different types of professionals I will be collaborating with," question #6 statement "I know what kind of applications, technology and tools I will handle in my future design career," question #7 statement "I am aware of the impact of the career decisions I make as a design professional in the industry," and question #8 statement "I have a good idea about ethical practices in the design industry," Paired Two Sample for Means t-Test were conducted for the pre- and post-survey responses and the results determined that there was no statistical significance between the pre- and post-survey which indicates that students' self-perception of the aforementioned knowledge of professional practices statements did not vary greatly pre- and post-enrollment in the professional practices course.

Question #5 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "I have a good idea about the roles and responsibilities of my future design career" or answered *0 = Not Applicable*. A Paired Two Sample for Means t-Test was conducted to compare

the pre- and post-survey responses and the statistically significant result indicated that students had less knowledge about the roles and responsibilities of a professional designer prior to taking the professional practices course (m=3.4, sd=.60) than post-participation in the professional practices course (m=3.75, sd=.44) t(19)=2.33, p=.03.

The cumulative responses for the pre- and post-survey from the Knowledge of Professional Practice category's six survey statement questions were then compared using a Paired Two Sample for Means t-Test. The statistically significant result indicated that students had less overall knowledge of professional practices prior to taking the professional practices course (m=20.5, sd=2.26) than post-participation in the professional practices course (m=21.85, sd=1.53) t(19)=2.46, p=.002.

Experience with the Profession

The Experience with the Profession category consisted of six questions, #10–15. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #10 statement "I have interned at or work part-time in a business related to what I am studying," question #11 statement "I am part of an organization or club related to my profession," question #12 statement "I know personally some people who work in my future design profession," question #13 statement "I follow developments in my future design career path in social media, blogs, industry magazines, etc. ," question #14 statement "Before I entered the CD program, I had prior knowledge of the design profession," and question #15 statement "I have interacted with professionals in the industry outside of CD or through events organized by CD," Paired Two Sample for Means t-Test were conducted to compare the pre- and post-survey responses and the results determined that there was no

statistical significance between the pre-and post-survey which indicates that students' self-perception of the aforementioned Experience with the Profession statements did not vary greatly pre- and post-enrollment in the professional practices course.

The cumulative responses for the pre- and post-survey from the Experience with the Profession category's six survey statement questions were then compared using a Paired Two Sample for Means t-Test. The result indicated that there was no statistical significance between the pre-and post-survey which indicates that students' overall self-perception of Experience with the Profession statements did not vary greatly pre- and post-enrollment in the professional practices course.

Having the Professional as a Role Model

The Having the Professional as a Role Model category consisted of five questions, #17–21. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #17 statement "When working on assignments for class, I imagine myself to be in the shoes of a design professional in my future work environment," question #18 statement "I concentrate in my studies on what I believe I would need to know and be able to do when I enter my future design career," question #19 statement "I believe I can already think and reason like a design professional in a company or organization," question #20 statement "I admire most those professors who are also professionals in the design industry," and question #21 statement "I admire professionals who are already working in my future work environment," Paired Two Sample for Means t-Test were conducted to compare the pre- and post-survey responses and the results determined that there was no statistical significance between the pre-and post-survey which indicates that students' self-perception of

the aforementioned Having the Professional as a Role Model statements did not vary greatly pre- and post-enrollment in the professional practices course.

The cumulative responses for the pre- and post-survey from the Having the Professional as a Role Model category's five survey statement questions were then compared using a Paired Two Sample for Means t-Test. The result indicated that there was no statistical significance between the pre-and post-survey which indicates that students' overall self-perception of Having the Professional as a Role Model statements did not vary greatly pre- and post-enrollment in the professional practices course.

Professional Self-Efficacy

The Professional Self-Efficacy category consisted of six questions, #23–28. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #24 statement "I feel poorly prepared for a real job," question #25 statement "I believe that I will easily get along with my future colleagues, comfortably cooperate, and have informal conversations with them," question #26 statement "I'm confident that I will be successful and thrive in my future design career," and question #28 statement "I am not sure about the kind of challenges I will face as a design professional," Paired Two Sample for Means t-Test were conducted to compare the pre- and post-survey responses and the results determined that there was no statistical significance between the pre-and post-survey which indicates that students' self-perception of the aforementioned Professional Self-Efficacy statements did not vary greatly pre- and post-enrollment in the professional practices course.

Question #23 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "I am sure I will have no problems managing my professional behavior in my future work environment" or answered *0 = Not Applicable.* A Paired Two Sample for Means t-Test was conducted to compare the pre- and post-survey responses and the statistically significant result indicated that students had less confidence in managing their professional behavior prior to taking the professional practices course (m=3.35, sd=.67) than post-participation in the professional practices course (m=3.75, sd=.44) t(19)=2.37, p=.03.

Question #27 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "I have no doubt that I will master all the skills necessary to succeed in my future design career" or answered *0 = Not Applicable*. A Paired Two Sample for Means t-Test was conducted to compare the pre- and post-survey responses and the statistically significant result indicated that students had less confidence that they would master all the skills necessary to succeed in their future design career prior to taking the professional practices course (m=3.2, sd=.52) than post-participation in the professional practices course (m=3.75, sd=.44) t(19)=4.82, p=.0001.

The cumulative responses for the pre- and post-survey from the Professional Self-Efficacy category's six survey statement questions were then compared using a Paired Two Sample for Means t-Test. The statistically significant result indicated that students had less overall professional self-efficacy prior to taking the professional practices course (m=18.8, sd=2.55) than post-participation in the professional practices course (m=20.25, sd=2.45) t(19)=3.00, p=.007.

Knowledge of Professional Self

The Knowledge of Professional Self category consisted of two questions, #30 and 31. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #30 statement "I know what kind of design career/position I prefer to pursue after graduation," a Paired Two Sample for Means t-Test was conducted to compare the pre- and post-survey responses and the result determined that there was no statistical significance between the pre-and post-survey which indicates that students' self-perception of the aforementioned Professional Self-Efficacy statement did not vary greatly pre- and post-enrollment in the professional practices course.

Question #31 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "I am already pretty sure what kind of design work environment I want to enter after completing my CD degree" or answered *0 = Not Applicable*. A Paired Two Sample for Means t-Test was conducted to compare the pre- and post-survey responses and the statistically significant result indicated that students had less confidence knowing what kind of design work environment they wanted to enter after completing their CD degree prior to taking the professional practices course (m=3.35, sd=.67) than post-participation in the professional practices course (m=3.75, sd=.44) t(19)=2.37, p=.03.

The cumulative responses for the pre- and post-survey from the Knowledge of Professional Self category's two survey statement questions were then compared using a Paired Two Sample for Means t-Test. The result indicated that there was no statistical significance between the pre-and post-survey which indicates that students' overall self-perception of

Knowledge of Professional Self statements did not vary greatly pre- and post-enrollment in the professional practices course.

Knowledge of Professional Skills

The Knowledge of Professional Skills category consisted of eight questions, #32–39. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #32 statement "My prior knowledge and life experiences influence my design work," question #33 statement "When creating design solutions, I am often unsure of where my ideas come from," question #34 statement "I can articulate my design ideas well to others during presentation of my work," question #35 statement "I have a clear understanding of the importance of the target audience and design parameters," question #36 statement "I am thorough in exploring many possibilities when problem solving for best possible design solutions," question #37 statement "I am often unsatisfied with my final work," question #38 statement "I effectively self-edit my design solutions prior to presentation," and question #39 statement "I have a hard time deciding which design ideas are best to move forward with," Paired Two Sample for Means t-Test were conducted to compare the pre- and post-survey responses and the results determined that there was no statistical significance between the pre- and post-survey which indicates that students' self-perception of the aforementioned knowledge of professional skills statements did not vary greatly pre- and post-enrollment in the professional practices course.

The cumulative responses for the pre- and post-survey from the Knowledge of Professional Skills category's eight survey statement questions were then compared using a Paired Two Sample for Means t-Test. The result indicated that there was no statistical

significance between the pre-and post-survey which indicates that students' overall self-perception of Knowledge of Professional Skills statements did not vary greatly pre- and post-enrollment in the professional practices course.

Factors that Influenced Your Professional Identity

The Factors that Influenced Your Professional Identity category consisted of ten questions, #41, #43, #45, #47, #49, #51, #53, #55, #57 and #59. The survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree,* with the survey questions or feel the question is *0 = Not Applicable*. For the question #41 statement "Your overall Communication Design education," question #43 statement "Specific CD courses," question #45 statement "Feeling pride or success in your work/achievements," question #47 statement "Professor involvement/mentoring/course instruction," question #49 statement "Internship experience/s," question #55 statement "Involvement in professional organizations/clubs," question #57 statement "Involvement in departmental events/trips," and question #59 statement "Other factors," Paired Two Sample for Means t-Test were conducted to compare the pre- and post-survey responses and the results determined that there was no statistical significance between the pre-and post-survey which indicates that students' self-perception of the aforementioned Factors that Influenced Your Professional Identity statements did not vary greatly pre- and post-enrollment in the professional practices course.

Question #51 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "Development of final portfolio and branding materials" or answered *0 = Not Applicable*. A Paired Two Sample for Means t-Test was conducted to compare the pre- and post-

survey responses and the statistically significant result indicated that students had less confidence in the development of their final portfolio and branding materials prior to taking the professional practices course (m=1.95, sd=1.75) than post-participation in the professional practices course (m=2.85, sd=1.39) t(19)=2.07, p=.05. The pre-survey had 9 students choose *Not Applicable* while the post-survey only had 3 students answer *Not Applicable*. A zero (0) value "Not Applicable" was included in the metrics to allow for students who didn't understand the question, did not have an opinion, did not experience the question or didn't have an answer so as not to compromise the validity of the responses. CD students take a half-semester portfolio and self-branding class during their senior year along with the professional practices course. It is likely students had not yet taken the half semester course in which they create their portfolio and branding materials at the time of the pre- and/or post-survey hence the *Not Applicable* responses and lack of contribution toward the question's statistical significance.

Question #53 of the survey asked respondents to indicate whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the statement "Guest speakers/Guest artists" or answered *0 = Not Applicable*. A Paired Two Sample for Means t-Test was conducted to compare the pre- and post-survey responses and the statistically significant result indicated that students felt guest artists and guest speakers had less influence on them prior to taking the professional practices course (m=2.7, sd=1.49) than post-participation in the professional practices course (m=3.35, sd=.67) t(19)=2.37, p=.03. The pre-survey had four students choose *Not Applicable* while the post-survey had zero students answer *Not Applicable*. A zero (0) value "Not Applicable" was included in the metrics to allow for students who didn't understand the question, did not have an opinion, did not experience the question or didn't have an answer so as not to compromise the validity of the responses. It is

likely the participating students had not yet attended a lecture by a guest speaker or artist at the time of the pre-survey, hence the *Not Applicable* responses and lack of contribution toward the question's statistical significance.

The cumulative responses for the pre- and post-survey from the Factors that influenced Your Professional Identity category's nine survey statement questions were then compared using a Paired Two Sample for Means t-Test. The result indicated that there was no statistical significance between the pre-and post-survey which indicates that students' overall self-perception of Factors that influenced Your Professional Identity statements did not vary greatly pre- and post-enrollment in the professional practices course.

In summary, statistical significance was found in several survey questions as related to the categories of Knowledge of Professional Practices, Professional Self-Efficacy, Knowledge of Professional Self and Factors that Influenced Your Professional Identity. Students indicated that they has less knowledge about the roles and responsibilities of a professional designer, less confidence that they would master all the skills necessary to succeed in their future design career, less confidence in managing their professional behavior, and less confidence knowing what kind of design work environment they wanted to enter after completing their CD degree prior to taking the professional practices course than post-participation in the professional practices course. Students also indicated that they had less confidence in the development of their final portfolio and branding materials and felt guest artists and guest speakers had less influence on them prior to taking the professional practices course than post-participation in the professional practices course. However, these answers contained a larger number of not applicable responses indicating the students had not yet taken the portfolio development course or attended guest

lectures. Overall, students showed statistical significance and most growth in the categories of Knowledge of Professional Practices and Professional Self-Efficacy.

Qualitative Findings – Pre- and Post-CD Designer Professional Identity Surveys and Where Will I Thrive research paper

The qualitative coding results were formed from the open comments responses in the Pre- and Post-CD Designer Professional Identity Surveys and Where Will I Thrive research paper. Fourteen total artifacts were available for coding. Two artifacts contained the collected qualitative responses of the Pre- and Post-CD Designer Professional Identity Surveys. The other twelve artifacts were randomly selected from the Where Will I Thrive research paper submissions to provide a representative sample. My objective in using the survey and artifact was to understand how well the opportunity for reflection worked in allowing students to voice recognition of designer professional identity within themselves as related to research question two, "How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?" and what specific factors contributed to that recognition as related to research question three, "What factors contribute to the development of strong professional identities among communication design students?"

The theoretical frameworks of transformative learning theory and eudaimonic identity theory guided the examination of the artifacts to code for responses that revealed students acquired and examined life perspectives, and confidence in direction of their future path— becoming a professional designer. Coding was organized into the two designer professional identity traits categories, personal attributes and design skills. Personal attributes had 3 categories represented by 14 codes. Design skills had 4 categories represented by 24 codes. Through initial provisional coding it became clear that codes could be interpreted differently

based on the context in which a code was mentioned. Secondary simultaneous and concept coding was then implemented to code all potential traits as to make a determination of best represented context during analysis. Code context helped to identify factors referenced in research question one, "How can a university communication design program develop a strong sense of professional identity within its students?" The specific codes connect to recognition of DPI traits and factors referenced in research questions two and three. Four themes materialized from the codes to identify the reflection and development of students' DPI as related to all three research questions.

Codes

Personal Attributes

In the pre- and post-CD Designer Professional Identity Survey, 25 question statements were directly related to personal attributes—attributes that are related to a designer's experiences, values, beliefs, emotions, feelings, attitudes, personality, and behavior as relative to psychological traits (Kunrath, et. Al., 2018; Kunrath, et. al. 2017; Kunrath, et. al. 2016; Pfeiler-Wunder, 2017; Tracey & Hutchinson, 2016) and influence a student's assertiveness, social skills, management of themselves, and communication abilities in a professional setting. Each question provided an opportunity for students to further expand upon their Lickert scaled answer if they so desired in an open-ended qualitative question prompt. The qualitative responses were pulled from the pre-and post-surveys were placed into a single document artifact for coding, one each for the pre- and post-survey. The Where Will I Thrive research paper artifact asked the students to specifically reflect upon what personal attributes, they would bring to their future professional employment including values, beliefs and life experiences. The paper also prompted the students to reflect upon personal attributes they feel make them special or unique to allow them to stand

out compared to other emerging designers. Fourteen total artifacts were available for coding.

Two artifacts contained the collected qualitative responses of the Pre- and Post-CD Designer

Professional Identity Surveys. The other twelve artifacts were randomly selected from the Where

Will I Thrive research paper submissions to provide a representative sample. Specific codes were

sorted based upon frequency of aggregate number of coding instances referenced within the

fourteen artifacts and the aggregate number of artifacts containing the codes. Table 2 shows the

aggregate frequency of codes as related to their category and artifacts containing those codes.

Codes needed to have a frequency of fifteen or higher to be included in the findings.

Table 3

Personal Attributes Codes with a Frequency of Fifteen or Higher

	Aggregate number of	
Categories/Codes	Code Frequency	Artifacts Containing Codes
Cognitive		
Self-Realization	91	14
Making Connections	86	13
Self-Confidence	66	13
Motivation	41	14
Life Experiences	31	10
Passion	23	9
Determination/Resilience	15	12
Communication		
Openness	71	14
Social Abilities	19	10

Self-Realization. Students' self-realization occurs when they recognize or become aware

of their needs, desires, goals, or direction toward their professional career in a manner that was

not previously voiced (Dall'Alba, 2009; Kunrath et al., 2016). This recognition is often the result

of self-reflection. Self-realization was expressed in three ways as related to their education,

future workplace and personal traits. In education, students identified ways in which the CD

program or specific courses had influence. Future workplace self-realization was a result of a requirement of the Where Will I Thrive research paper (see appendix C) and foray into exploring various design workplaces. A recognition of personal traits of what either previously existed or emerged while enrolled in the CD program were a revelation to some.

Students exhibited a reflective awareness as a result of factors within the CD program and courses taken.

> *Professional Practices has definitely given me more confidence as a designer. It has made me appreciate that everyone is on their own journey and it's okay to not be in the same place as everyone else. Everyone is different and that is what makes you unique as a designer. It has made me appreciate my own style and identity more and to use that as a selling factor in my own work. I think the ability to concentrate in what I have interests in early on had a huge impact on how comfortable I feel as a designer. (Student 11 - Post-CD Designer Professional Identity Survey))*

Students focused on how the Where Will I Thrive research paper enlightened their perspective on working in a professional environment through the investigated companies' websites, analysis of the work culture or portfolio, employee reviews and other aspects of potential employment such as workplace location, hours or travel time.

> *I have learned so much about the industry, agencies, work environments, and just the design world in general these past few months. Coming to terms with reality such as salary, location, commute and cost of living has been really eye opening when it comes to picking a work place I would actually see myself thriving at. (BT)*

Last, two students' self-realization stemmed from their own lived experiences and recognition of personal personality traits.

In my own experience, I feel under prepared in some areas regarding experience in the design industry... I worry it will be a culture shock for me when I do get a real job. Or maybe I will fit right in and <shouldn't> overthink things... (Student 16 - Post-CD Designer Professional Identity Survey)

Design can be used for good and can be used to amplify the voices of those that have not been heard before. These values will align in my future creative environment as motivational tools I need to bring these ideas to life and make an impact on others. (JS)

Making Connections. Constructing connections between education, life experiences, and the design industry was notably present in the students' self-reflective opportunities. Students shared they made these connections in two general ways, classroom experiences and integration into the professional industry. Students' interactions with other students, course materials and field trips created an understanding of future expectations.

Learning how to know what is good versus bad, especially in your own work is a big step, in my opinion, for any creative professional. So, going through critique upon critique, it's really amazing to feel pride and success when hearing great feedback about your work from other creatives. (Student 16 - Post-CD Designer Professional Identity Survey)

Two students recognized that their personal attributes have a connection to their success in the professional environment.

I am a firm believer in global thinking as I am quite literally a mutt of all cultures. I would love to be able to apply it to design as it can reach more audiences as well as bridge a gap between cultures and groups of people, especially those that possibly never thought to comprehend one another. (TB)

When I get a design job, my beliefs and skills will become very useful in creating

products that succeed in appealing to audiences of different types. (SR)

Self-Confidence. Self-confidence is generally an intrinsic quality and students were

vocal in their reflections about feeling comfortable with their abilities as well as feeling self-

assured and knowing themselves (Crossley & Vivekananda-Schmidt, 2009; Dall'Alba, 2009;

Kunrath, et al., 2017). At times, their self-confidence bordered on self-importance. Students were

most reflective about their ability to succeed in the professional environment.

I feel much more confident in how I should approach job hunting, interviewing,

and networking. (Student 4 - Post-CD Designer Professional Identity Survey)

However, some students also expressed self-doubt while reflecting upon their future.

I have my own insecurities and doubts about my future work ethic, whether I can

bring better new ideas to the table to propel me further. (Student 19 - Pre-CD Designer

Professional Identity Survey)

Motivation. Throughout the course of the study, students used reflection to express their

desire and willingness to perform, participate, improve or create work toward the goal of

becoming a professional designer (Waguepack & Babb, 2017). Their work ethic is strong, and

students shared examples of what motivated them to succeed.

The amount of effort and meticulous detail that some of my soon-to-be colleagues

put into their work inspires me to not compromise for good enough, but to strive for my

absolute best whenever I can… Thanks to a competitive streak between me and my

roommate, I have always sought ways of improving my illustrating style and especially

my digital technique to keep pace with him, even if his major revolves around entirely

different professional fields. (BG)

For other students, the idea of helping the greater good and social justice causes motivated them to become stronger designers.

> *I care about being the voice for the voiceless, especially marginalized people groups and woman and children trapped in human trafficking. (CA)*

Two students indicated that they struggled with motivation when a professor was not engaged with the class or a project wasn't of interest.

> *However, I have a hard time focusing in the classes that have professors who aren't interactive with the students and just talk the entire time. (Student 13 - Pre-CD Designer Professional Identity Survey)*

> *Sometimes I feel forced into taking them or completing projects that have no interest to me (Student 14 - Pre-CD Designer Professional Identity Survey)*

Life Experiences. Students personal attributes have a wide range of influences including those outside the university setting. Students reflections show that they recognize that there's more to who they are becoming than just traditional educational experiences. External experiences have the ability influence and shape their designer professional identity (Blakeman, et al., 2020, Taylor, 2017, Victore, 2020). Many of the reflections include experiences from childhood, employment and recognition that everyone experiences life in different ways.

One student lived in another country during her preteen years which greatly influenced her views on experiences and their influence on interactions with others.

> *During my preteen years my family and I lived in Honduras as community development and relief work leaders. When people discover about my years living in Honduras they often ask, how was it? Having been over five years since I've returned, I've been able to master my responses. My time in Honduras was a transformative*

experience, it was often hard to try making friends while learning a new language. While

attending a private bilingual school and handling the complex transition of living cross

culturally I learned to understand the importance of clear communication and open

mindedness. I went to different private schools and was homeschooled for one year.

Because of the many transitions happening over the course of a short time I relied on my

family for emotional support. Despite being a difficult learning experience, I wouldn't

trade my years in Honduras for anything else. I am grateful for the perspective it gave

me. Fast forward to where I am now and where I want to be, I aspire to be a peacemaker,

the person that inspires everyone but can still be approachable and friendly. I'm very

grateful for the opportunities I've had to travel and live with my family and have realized

that many of my perspectives are based on that. I believe that progress is made when you

put someone in someone else's shoes. Even if you've never experienced something before

you can try your best to listen and encourage the person you're listening to. The empathy

I have for others is because of my cross- cultural experience. (CA)

Some students had a similar reflection stating that their own experiences taught them to

showing empathy and understanding for others, a valuable personal attribute in a professional

environment.

Lastly, I think my strongest attribute is my ability to be kind to everyone. Growing

up in a small town I felt I was sheltered from the world. I never really liked it because

everyone around me was the same. It has taken me going to college in a new place,

traveling to new cities, and meeting new people to recognize that everyone has their own

experiences: the good, the bad, and the ugly. You never know what is going on in

someone's life but if you can be anything to them, just be kind. It's simple, but treating

people the way you want to be treated makes life a lot better. It has allowed me to live my

life a lot happier. (LT)

Childhood and family also played a part in the development students' designer

professional identity and influenced their decision to enroll In CD program.

I was initially turned towards art because of my sister and always being

fascinated at her graphic design/art achievements through high school and college. Later

in the past summer, I found out that my great Aunt Rose, who I also pull much inspiration

from, was involved deeply in the art world and as an art student in her younger years.

(Student 19 - Pre-CD Designer Professional Identity Survey)

One student discussed how cultural experiences affected how they view themselves as

related to the design industry.

I like to stay culturally aware and know what's going on in the world. I am

constantly thinking about making the next big thing and how it can relate to our ever-

changing world… Like everyone, my background and experiences have shaped me for

who I am today, but I have recognized that they have allowed me to learn, grow, and

become a better person. (LT)

Emotionality. Students' ability to connect to others, feel passionate about what they do

and exhibit kindness emphasize an ability to work well with others. Professional environments

rely interaction with teams and clients—being able to emotionally connect as a professional

designer will contribute to their future success (AIGA, 2019). Passion for the design was

prevalent in students' reflective responses.

I have a deep passion to use my design and creative ideation skills to make the

world a better place. (JS)

Empathy and kindness were reflected by students as related to working with others.

I always treat everyone with the upmost respect and kindness. So, I know to always consider how my peers are feeling and understand that they may not always have the same perspective as me about certain situations. (CA)

Determination/Resilience. The ability to succeed as a professional designer includes the ability to recover from difficulties or setbacks and strive toward goals by being resolute toward outcomes (Dweck, 2016). Students reflect upon their determination and resilience through both life and educational struggles. Students examined how their failures early in their college career helped them succeed later on and gave them confidence in their professional future.

What makes me unique from many other designers is that I have failed and come back. When I first started college, I was used to high school where I never worried about learning new material or really pushing myself in those foundation classes I didn't find very interesting. Then I got my first F. This made me reconsider why I was going to school. I then worked 2 jobs over the summer to pay back for the extra class I would need to take to catch up. Though this time it reminded me of my drive to create and the idea that I wouldn't be able to do that as a career was horrifying to me. Then coming back to school, I tried to show my professor how I have changed my way and pushed harder. (MD)

Students indicated that overcoming challenges is how they found success.

My experience in life has shown me that everyone has traveled a different path to get to where they are today. My path to college was not exactly a simple and straight forward road, I had to challenge myself to overcome a lot of mental barriers to get to where I am today. (CN)

Openness. In order to thrive in a professional environment, emerging designers need to show willingness to be open to new experiences, take direction from creative directors and apply themselves to a variety of client work. Students who are receptive to ideas and experiences (Mezinrow, 1978; Waguepack & Babb, 2017) have an easier time transitioning from student to design professional.

Two students reflected upon where influences come from, both internal CD program inspiration and external experiences.

> *I think that within our classes, we have a great healthy competition in that we all want to see each other strive but also put our best foot forward. We are constantly helping each other out and teaching one another different things. (BT)*

> *I am always influenced and inspired by the world around me. I can find inspiration in other people, nature, pop culture, and many other sources. (CN)*

Students also cited CD alumni as having influence on their outlook on the future. Alumni can serve as role models and aspiration for emerging designers.

> *I always love hearing from CD alumni and their experience out in the world after they have found jobs and what a designer's life looks like post grad. (Student 12 - Pre-CD Designer Professional Identity Survey)*

Social Abilities. In addition to being open to experiences, the ability to relate to others and form relationships in the workplace is paramount to working collaboratively and is reliant on students' capability to socially interact in a professional manner (AIGA, 2019). Multiple students reflected that simply being friendly was of importance in a working environment.

As a person, attributes that I can bring to my occupation is my friendliness and

ability to work in a team setting... I get along with a lot of people by just being kind which

is crucial when working in a job that requires you to be around people all the time. (MQ)

One student discussed how well they get along with others indicating a social personality

also has influence on the professional environment.

Being around others and getting to know people is something that I am really

looking for in a workplace because that is how I work best... I have always been someone

who is very outgoing, outspoken, energetic and a people person... I can talk to just about

anyone about anything and I love being around people in general. (BT)

One student recognized the relationship between being social with the ability to focus on

work outcomes.

One trait that I have is that I am a natural leader. I like to take charge in

situations because I hold myself to high standards. This allows me to know that a job will

get done well. Throughout my life I've been the captain of two sports teams and a e-

board member in two different organizations. I am friendly and outgoing but can also

recognize when things need to be serious and start getting done. (LT)

Design Skills

In the Pre- and Post-CD Designer Professional Identity Survey, 18 question statements

were directly related to design skills—the cognitive, technical and behavioral skills taught as part

of the design process and are specifically related to design activity (Kunrath, et. Al., 2018;

Kunrath, et. al. 2017; Kunrath, et. al. 2016). Each question provided an opportunity for students

to further expand upon their Lickert scaled answer if they so desired in an open-ended qualitative

question prompt. The qualitative responses were pulled from the pre-and post-surveys were

placed into a single document artifact for coding, one each for the pre- and post-survey. The

Where Will I Thrive research paper artifact asked the students to specifically reflect upon what

design skills they will bring to the professional environment including conceptual skills,

technical and software skills, identification of target audiences, and team work-based

interactions. The paper also prompted the students to reflect upon design skills they feel make

them special or unique to allow them to stand out compared to other emerging designers.

Fourteen total artifacts were available for coding. Two artifacts contained the collected

qualitative responses of the Pre- and Post-CD Designer Professional Identity Surveys. The other

twelve artifacts were randomly selected from the Where Will I Thrive research paper

submissions to provide a representative sample. Specific codes were sorted based upon

frequency of aggregate number of coding instances referenced within the fourteen artifacts and

the aggregate number of artifacts containing the codes. Table 3 shows the aggregate frequency of

codes as related to their category and artifacts containing those codes. Codes needed to have a

frequency of fifteen or higher to be included in the findings.

Table 4

Design Skills Codes with a Frequency of Fifteen or Higher

Categories/Codes	Aggregate number of	
	Code Frequency	Artifacts Containing Codes
Knowledge Skills		
Specific Education	48	13
Ability to Apply Knowledge	23	9
Preparedness	15	6
Professor Involvement	15	5
Computer ability	15	9
Communication Skills		
Rapport Establishment	38	12
Collaboration	22	11
Empathize with Audience	21	7

Cognitive Skills		
Creative Thinking	45	11
Problem Solving	23	10

Specific Education. The ability to succeed in the design profession is partially reliant on the acquisition of specific education-learned skills and other experiences offered by a students' undergraduate program. Knowing which learned skills they possess and understanding how experiences influence their confidence allows students to feel more comfortable transitioning into the professional working environment (Crossley & Vivekananda-Schmidt, 2009; Dall'Alba, 2009). Several students indicated that advertising as a design specialization was unknown until taking courses in the CD program.

> *Advertising design courses in <the CD program> actually helped me find a passion I didn't know much about prior to and that I would love to move forward with. (Student 17 - Post-CD Designer Professional Identity Survey)*

Students referenced visits to creative agencies as a benefit to their educational experience.

> *I went on a NYC trip last semester with Professor L. We visited 3 ad agencies, and I learned so much, and got to speak with people who graduated from the CD program that are currently working in the design industry. IT WAS GREAT! (Student 5 - Pre-CD Designer Professional Identity Survey)*

Students also expressed confidence in specific design skills learned in the CD program.

> *One of the key skills graphic designers need to possess is typography. My aptitude for choosing fonts, creating logos and layouts, and designing and modifying type will be very influential to the quality of my work. Having this set of skills helps designers create posters, websites, advertisements, magazines, and anything with type, which means that*

they can do a variety of different design work. Because of this, I have the ability to bring

these skills to the table of many different agencies and design firms. (SR)

Ability to Apply Knowledge. Just learning specific skills isn't enough to create a successful designer. Students need to understand how knowledge and design ability is applied in the creative process (Dorst, 2006; Hong & Choi, 2011; Trede, et al., 2012). Without the ability to apply learned skills, designers will have a difficult time translating concepts to completion for client-based work. An inability to do so will also hinder a designer's opportunities for employment and progressing as a design professional. Students reflected upon their ability to apply design knowledge with specific course content and learnings.

Other areas of design that can be useful, is my special interest in color and detail.

Although these skills can still be applied in interactive design, I love striving for detail

and utilizing color especially in my advertising and graphic design work. Picking out the

best color combinations, fonts, and adding that last bit of detail is always my favorite

thing to do when designing something like a poster or logo. It gives me a satisfying

feeling that the project is coming together. (MQ)

Several students felt their personal motivation and willingness to apply learned knowledge was important.

My enthusiasm and willingness to try the unexpected can prove vital in making an

impact for different campaigns. (JS)

Preparedness. Overall university and CD program experiences and education contribute to the level of preparedness students' feel regarding their future endeavors. Having confidence in preparedness, or lack thereof, can influence students' pursuit of employment or freelance opportunities and affect their ability to transition from student to professional (Crossley &

Vivekananda-Schmidt, 2009; Dall'Alba, 2009). Students felt very confident about feeling

prepared to leave the university for the professional design environment.

> *While reading through my resume one could easily gather the broad range of my*
>
> *skills and experiences. I specialize in branding design, layout design, typography,*
>
> *photography, and interactive design. In addition, I have exceptional soft skills including*
>
> *being fluent in conversational and written Spanish. I have great organizational skills and*
>
> *take pride in dividing up my workloads to smaller achievable goals. One day I hope to be*
>
> *a leader and have a managing position. (CA)*

One student expressed concern about feeling prepared to enter the design profession.

> *I am a senior with no design internship aside from one where I am mostly a part*
>
> *time onsite graphic designer, not really much of an intern. (Student 14 - Post-CD*
>
> *Designer Professional Identity Survey)*

Professor Involvement. Mentorship, interaction and relationships with professors can

have a deep impact on students' educational experiences. Good professors can inspire creativity,

push for greatness in design abilities, provide care and understanding, and help contribute to the

relationship between success in education and success in the professional environment

(Blakeman, et al., 2020; Crossley & Vivekananda-Schmidt, 2009; Trede & Smith, 2012).

Students acknowledged how professors interact with students on a level that is both teacher and

mentor.

> *I did not always seek mentoring or professor involvement because I had been a*
>
> *shy or anxious person when it came to seeking help or guidance. Eventually, a few*
>
> *professors really cracked through that hard shell of mine and I realized how helpful it*
>
> *actually was. Just having these mentors to fall back on and talk to for advice was a*

helpful tool to better my work. (Student 16 - Post-CD Designer Professional Identity

Survey)

Students also credit their professors for inspiring them to always do better and to strive

for creating excellence.

My professors have pushed me farther than I have ever gone with my work before.

I have become a better designer, student, and person because of this. Because of my

professors, I now know that I can accomplish anything I set out to do. (CN)

Computer ability. The design industry heavily relies on designers' ability to not only

know how to use, but excel in the knowledge of, computer software and related technical skills.

The industry demands that emerging designers are capable of seamless integration into the

workplace and are confident in the skills needed to produce effective and well-executed client

work ready for introduction to the target audience (Dorst, 2006). Confidence in specific software

use was mentioned by a few students.

I bring many design skills to the work environment such as hand and digital

illustration, Advanced Adobe Photoshop and Illustrator knowledge. (CN)

One student also expressed confidence in their skillsets as they relate to producing client

work.

My technical skills lie in my interactive skills as well as my strengths in bringing

the best visuals to a campaign. Interactive skills such as website and app design, AR/VR

experiences, and motion design can bring a new twist to a traditional advertising

campaign. (JS)

Despite the overall confidence seen in computer skills, a couple of students expressed

concerns about their perceived lack of computer instruction in the CD program.

I would have liked to have been taught more in-depth uses of programs. (Student 20 - Post-CD Designer Professional Identity Survey)

Rapport Establishment. Working in teams is more common to the design industry, however students are used to working alone for their university coursework. The ability to connect and develop a relationship with coworkers or clients makes the transition from student to professional easier. Workplaces require good relationships to function well and learning the importance of these relationships begins in the classroom (AIGA, 2019). Students recognized the value in being able to review ideas with others.

Bouncing off ideas with my peers is something I enjoy. (JS)

Connecting with clients was also identified by students as an important interpersonal skill.

The last ability of mine is one that I previously touched on, which are my personable skills, and by that, I mean that my ability to identify and communicate with potential audiences or clients in a way that makes their identity feel uniquely validated. (BG)

Collaboration. As mentioned in rapport development, working in teams is common to the design industry. Beyond the ability to develop good coworker working relationships is the ability to work jointly with others to problem solve and perform work duties (Kunrath, et al., 2016; Kunrath, et al., 2017; Kunrath, et al., 2018). Designers rarely develop design work completely on their own. Often, multiple designers are working on the same client project at the same time. Ownership of concepts are shared, and attribution of creativity is assigned to the team as a whole. Students recognized collaboration as an important part of the design process and environment.

In addition to being a leader, I also have the ability to work well in a team. I enjoy being able to step back and watch someone else take the reins. Collaborating is my favorite thing to do. The best ideas really do happen when you work off one another. (LT)

Having the ability to work in a team is very important in our field also. A lot of CD students like me originally come from fine art backgrounds and had to get used to working in a team. Going through community college and this communication design program has helped me understand the importance of collaboration. (MQ)

Empathize with Audience. The design industry is service-based and revolves around producing client work. Clients rely on designers to understand both the clients' requirements as well as the scope of the intended target audience (Dorst, 2006; Hong & Choi, 2011; Victore, 2020; Waguepack & Babb, 2017). Emerging designers' ability to connect with and understand the client and target audience helps designers better create effective solutions. The ability to examine design challenges from different perspectives was touted as being a valuable skill by students.

I find it very interesting to experiment with different styles and colors in order to appeal to different demographic groups, and sacrificing my own personal design preferences is something that comes more easily to me now… Sometimes a designer gets caught up in the details and doesn't consider what the average viewer will see, so I try to get many different perspectives on my projects. (SR)

In addition, students reflected that comprehending target audiences are a necessity in client work.

I can help to find the best idea for the target audience… Without the drive to go

there and think of the most creative idea many brands would have fallen behind in

securing the attention of their audience. (JS)

Creative Thinking. Design is a creative thought process. Idea generation and creativity

thinking abilities are sought after skills when hiring emerging designers (Dorst, 2006;

Shaughnessy, 2005). A students' ability to use technical software is only half-effective if there

isn't a corresponding concept idea. The concept idea supporting a design is what makes it

successful. Students recognized that the creative thinking is an ongoing development process.

Personally, I am still working on becoming more than an idea person and

working on my whole process of development. (MD)

Students particularly enjoy the opportunity to creatively think.

I love to talk about big ideas and how they can change the world. (JS)

Problem Solving. Creative thinking is active work toward generating solutions to

problems. The first solution is rarely the final solution. Generating multiple options to design

problems allows design teams to produce the best possible solutions and strategies for the

clients' needs (Dorst, 2006; Hong & Choi, 2011; Kunrath et al., 2016; Shaughnessy, 2005). One

student reflected that problem solving isn't a once and done event. It often takes multiple tries to

determine the best possible solution.

I enjoy problem solving, and I am able to work really well with what I have. If

plan A doesn't pan out to how I thought it would work, I scrap that idea and move on to

plan B. (LT)

Another student explained that the challenge of the problem helps them feel more

creative.

I enjoy a challenge and finding solutions to the problems I encounter, which I

believe is why I really enjoy frontend design. I love the "what ifs" and "maybe this could

work" moments. (TI)

Themes

Four themes materialized from the provisional, simultaneous and concept coding process:

Willingness to Discover and Learn, Self-Awareness Through Reflection, Appreciation for the

Educational Experience and *Placing Value on Relationships*. In many cases, individual codes

leant themselves to more than one theme depending on context of the coded data thus creating a

web of interconnected codes and themes. The themes present evidence of how DPI can manifest

itself through both personal attributes and design skills. The themes speak to self-reflection,

educational opportunities, creative exploration, and personal and professional relationships.

Diagram 2 represents the relationship of codes to their corresponding theme or themes.

Diagram 2

Concept Map – Relationship of Codes to Themes

Relationship Diagram of Codes to Themes
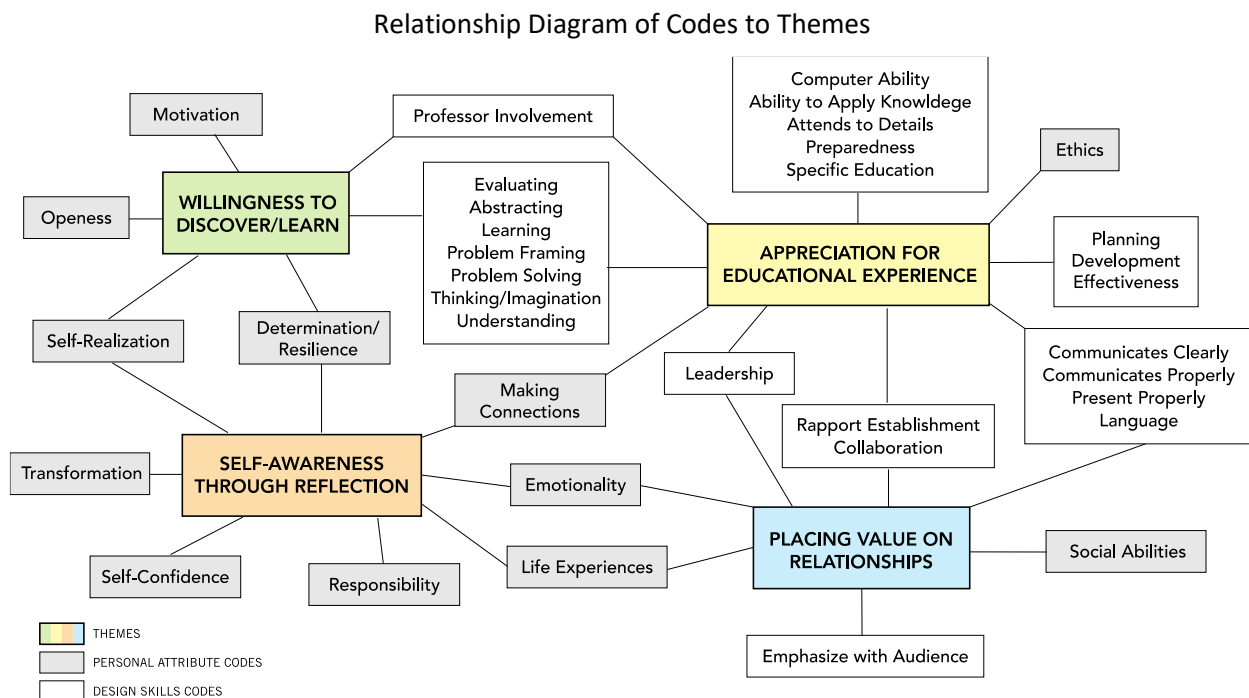
The research questions results are supported by the four themes. Table 4 presents the relationship of the themes, including definitions, to the research questions.

Table 5

Themes, Theme Definitions, and Theme Relationship to Research Questions

Theme	Theme Definition	Represented Research Question
Willingness to Discover and Learn	Description of openness, drive, and curiosity as related to the transition from student to professional	RQ2 - How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?
Self-awareness Through Reflection	Acknowledgement that reflection led to a greater understanding of oneself and of becoming a design professional	RQ 1- How can a university communication design program develop a strong sense of professional identity within its students? RQ2 - How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?
Appreciation for the Educational Experience	Recognition of specific and general factors in the CD program that led to designer professional identity growth and transformation from student to professional	RQ 3 - What factors contribute to the development of strong professional identities among communication design students?
Placing Value on Relationships	Awareness of relationships and their impact on identity growth and future professional interactions.	RQ 3 - What factors contribute to the development of strong professional identities among communication design students?

Willingness to Discover and Learn

Students' coded responses provided descriptions of their openness, drive, and curiosity as related to the transition from student to professional. Within the themes, several sub-themes emerged encompassing students' performance as emerging professional designers, their approach to working in the professional environment, and their thoughts on living life outside of the educational environment.

Several students specifically mentioned problem solving and critical thinking as related to their future as a professional designer.

> *I strongly believe in the saying, "Practice does not make perfect. Practice makes better." I also resonate with, "Sometimes in order to be good at something, you need to suck at it first." Both of these quotes have helped me step outside of my comfort zone many times, not only as a designer but as a person as well. (TI)*

> *I want nothing more than to constantly be learning when I work to grow as a designer as well as a critical thinker and problem solver. (TB)*

Being open to professional experiences was also important to students.

> *This paper has definitely been eye-opening for me. I cannot wait to do even more research about different companies that are out there. It was insightful to talk about the different qualities I have that will make me a great fit for a specific working environment. I am both excited and looking forward to seeing what the future has in store for me and how I will thrive. (LT)*

Living life with an open mind and willingness to take risks was reflected upon through a variety of responses.

> *My determination makes up a lot of who I am as a designer and person. I am naturally an anxious person, but I don't let it stop me from reaching my goals and doing*

the things that I love. I have always had the desire to venture out and learn new things

like attend college and do a study abroad program, despite nerves and overthinking. I've

always reassured myself that this is what I want to do, and I press on. (MQ)

Self-awareness Through Reflection

Throughout the student responses there was an acknowledgement that reflection led to a

greater understanding of themselves and of becoming a design professional. As previously stated

in the theoretical framework, reflection and self-examination is supported by transformative

learning theory through its promotion of critical analysis to understand one's personal and

professional identities and sense of self. Three sub-themes emerged from the responses and

include reflection concerning development of DPI, entering the professional workforce and

introspection into self.

Students' responses expressed a desire to continue to develop their DPI and reflectively

explained what it means to them.

I have never truly questioned what molds my professional identity until this year.

(TI)

Everyone is different and that is what makes you unique as a designer. It has

made me appreciate my own style and identity more and to use that as a selling factor in

my own work. (Student 10 - Post-CD Designer Professional Identity Survey)

Reflective exploration and examination of the professional environment contributes to an

understanding of what it is to become a professional designer.

Through this class [Professional Practices] I originally started not really

knowing or understanding how to highlight myself when talking to other design firms or

in a resume. I feel much more confident in going out into the real work to search for a job

in my field. I also feel more confident in being proactive with getting exactly what I want

out of a future job to launch me forward on my design path. (Student 16 - Post-CD

Designer Professional Identity Survey)

Growth in designer professional identity is as much about personal growth as it is

professional growth. Students exhibited an understanding in their reflection of self.

In addition to the aforementioned skills, something I've really learned to value as

a designer from my time at Kutztown is self-care. Through the years, I've watched myself

and my peers struggle and put their work before their own wellbeing, and at some point

in the last year or two, I became absolutely sick of seeing it. I loathe seeing my friends

not eat food and struggle to find hours to sleep because their work needs to get done- or

they're refining the details until they themselves dissolve into dust. No work is worth

becoming sick over, and that's something I think we've all learned. That being said, a big

part of my identity as a designer is making sure that there are specific times where I

refuse to work, to make sure I stay healthy mentally and physically. Has this come to bite

me at times? Sure; but I've remained happier overall because I've established this for

myself- and will continue to in the future. This doesn't mean that I'll sit at my job one day

and just refuse to work- this applies to working outside of the office and my work-life

balance there. (DH)

Appreciation for the Educational Experience

The university educational experience has the opportunity to develop students' DPI.

Recognition of specific and general factors in the CD program that led to DPI growth and

transformation from student to professional mindset is prevalent in the study's findings. Students

recognize the education received in the CD program has a marked influence on their ability for

future career success. The responses show the strength of the current program and indicate what factors should continue to be promoted in the curriculum. The theme had three sub-themes emerge and include reflections about the CD program in general, specific factors within the educational experience and expressions about the benefits of the professional practices course in which the study took place.

Students shared an appreciation for the CD program, professor and peers throughout the responses and indicated positive outcomes from enrolling in the program. Several students stated that their feeling of preparedness was a result of participation in the courses.

>*Our program is really well rounded in teaching students different areas of design and I feel will prepare us well to transition into the industry. (Student 12 - Post-CD Designer Professional Identity Survey)*

Specific student educational experiences were addressed including coursework and employment opportunities as identified factors that enhanced their education experience and helped them grow as designer professionals.

>*I am currently in the Interdisciplinary Team Project class, where I am working with two Computer Science majors to create a video game. I believe this experience will give me the confidence to share ideas and communicate with others, specifically when working with those that don't fully understand the scope of my job as a designer. (TI)*

>*I've found having a design job on campus has been extremely helpful in directly applying the things I'm learning in class to real projects. (Student 4 - Pre-CD Designer Professional Identity Survey)*

Professional Practices class, the class in which the study took place, centers around educating students about the professional environment—from resume building to learning how

to budget and from researching potential employers to listening to industry-based guest speakers. Student responses discuss how this specific class helped them feel more prepared to leave the university for the professional industry.

> *Professional Practices has made me feel prepared for the real world and what to expect when I get there. I enjoyed learning about budgets and contracts specifically because I think those are the things you are wondering about as soon as you get into the field. Are you going to be able to afford this place? Am I getting the right salary? All of these factors are things I was curious about and I'm very happy to have had the questions answered. It has made me feel like my dreams are achievable, when before this class I was unsure. (Student 10 - Post-CD Designer Professional Identity Survey)*

Placing Value on Relationships

Relationships are at the heart of most experiences, both personal and professional. Professionally, the ability to communicate, collaborate and get along well with coworkers is crucial for success. The design industry is reliant on teamwork—even freelancers must work with clients and creative directors. Students recognize the value in relationships throughout their responses, with sub-themes focusing on peer and professor interactions, and relationships in a general sense.

Students' responses show that peer and professor relationships are important to design education. Students have come to rely on these relationships for their personal growth as designers, with one student lamenting they wished there was more opportunity to build a mentorship situation.

> *I have formed some of the best relationships with my classmates and professors and I think that has really made contributed to the work I produced. (BT)*

It would be nice if I had someone there to mentor me in the beginning and

ultimately have my back. (LT)

Students place value on external relationships and in making others' experiences better. Students stressed having empathy for others.

It has taken me going to college in a new place, traveling to new cities, and

meeting new people to recognize that everyone has their own experiences: the good, the

bad, and the ugly. You never know what is going on in someone's life but if you can be

anything to them, just be kind. It's simple but treating people the way you want to be

treated makes life a lot better. It has allowed me to live my life a lot happier. (LT)

CD Senior Portfolio Review Assessment Survey

Quantitative Results

In order to inform research question one, the Senior Portfolio Review Assessment Survey was distributed to industry professionals who attended the Senior Portfolio Review event and reviewed students. 23 industry professionals responded to the survey. Since DPI includes the professionalism and presentation skills in the CD program's student learning outcome, which states "employ professionalism and best business practices through presentation", the industry professionals' perspective is helpful in determining how well the CD program cultivates students' sense of their DPI especially because they represent the viewpoint of a potential future employer. To gain a deeper understanding, industry professionals were asked to rate students with their overall impression using the rubric provided below in Table 5. The assessment survey was broken down into three parts that corresponded with the bullets under each rating in the rubric. The quantitative results were gathered through the use of a University approved four-

point Likert scale with the following options: expert (4), accomplished (3), emerging (2) and

novice (1). The scores were calculated and divided into percentages.

Table 6

CD Program Student Learning Outcome Rubric

Student Learning Outcome - Employ professionalism and best business practices through presentation. Description: Professionalism and best business practices include the ability to organize design projects, creation of business communication materials, presenting oneself in a professional manner, and/or ability to converse about design projects using industry language.			
4 Expert	**3** Accomplished	**2** Emerging	**1** Novice
• Conversation is well-constructed, confident, genuine in thought and use industry appropriate language.	• Conversation uses well-constructed responses, does not sound rehearsed, uses some industry language, but still may be somewhat hesitant at times	• Conversation is clear but sounds rehearsed or unsure, use of industry language is minimal.	• Conversation is halting, uses "yes' or "no" and fails to elaborate or explain; apologizes for, or points out, mistakes. No use of industry language
• Highly professional and proficient verbal communication. Is enthusiastic, motivating and engaging .	• Demonstrates an above average proficiency in verbal communication. Is engaging.	• Demonstrates average proficiency in verbal communication. Is generally confident.	• Demonstrates limited verbal communication with little confidence displayed.
• Design projects and/or business materials are professionally presented with consideration for detail, impact, practicality, communication, and appropriateness to career goals. The mounting/binding/display complements the work.	• Design projects and/or business materials are well presented. Consideration is given to most areas: detail, impact, practicality, communication, and appropriateness to career goals. The mounting/binding/display complements the work.	• Design projects and/or business materials shows evidence of an effort toward professional presentation, but needs improvement in mounting/binding/display and/or one or more of these areas: detail, impact, practicality, communication, and appropriateness to career goals.	• Design projects and/or business materials shows little evidence of effort toward professional presentation. The mounting/binding/display is inappropriate, and/or improvement is needed in the consideration of multiple areas: detail, impact, communication, and appropriateness to career goals.

Assessment Survey Part 1 Results. Part 1 asked industry professionals to rate their

overall impression of reviewed students on the following statement: "During the portfolio

reviews, students'... (4) Demonstrated highly professional and proficient verbal communication.

Were enthusiastic, motivating and engaging, (3) Conversation uses well-constructed responses,

does not sound rehearsed, uses some industry language, but still may be somewhat hesitant at

times, (2) Conversation is clear but sounds rehearsed or unsure, use of industry language is

minimal, or (1) Conversation is halting, uses "yes' or "no" and fails to elaborate or explain;

apologizes for, or points out, mistakes. No use of industry language." As shown in Table 6, 13

industry professionals (43.5%) rated the students as a 4 and 10 Industry Professionals (56.5%)

rated the students as a 3.

Table 7

Assessment Survey Part 1 Results

Assessement Survey Part 1 Results
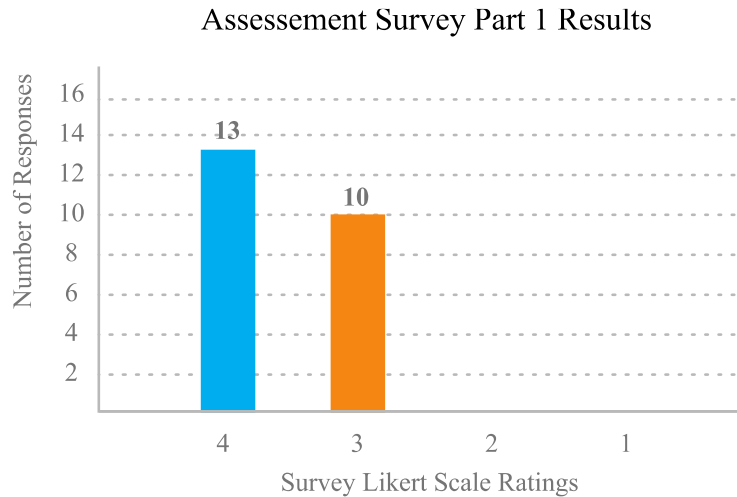
Assessment Survey Part 2 Results. Part 2 asked industry professionals to rate their overall impression of reviewed students on the following statement: "During the portfolio reviews, students'... (4) Conversation is well-constructed, confident, genuine in thought and use industry appropriate language, (3) Demonstrated an above average proficiency in verbal communication. Were engaging, (2) Demonstrates average proficiency in verbal communication. Were generally confident, or (1) Demonstrated limited verbal communication with little confidence displayed." As shown in Table 7, 14 industry professionals (60.9%) rated the students as a 4, 8 industry professionals (34.8%) rated the students as a 3 and 1 (4.3%) industry professional rated the students as a 2.

Table 8

Assessment Survey Part 2 Results
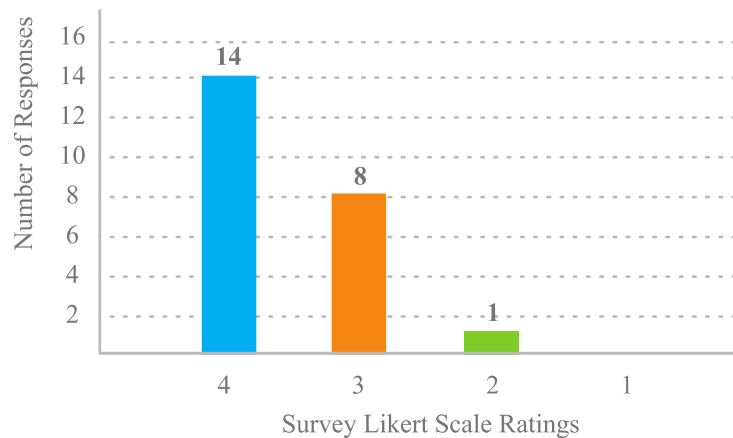
Assessement Survey Part 2 Results

Assessment Survey Part 3 Results. Part 3 asked industry professionals to rate their

overall impression of reviewed students on the following statement: "During the portfolio

reviews, students'... (4) Design projects and/or business materials are professionally presented

with consideration for detail, impact, practicality, communication, and appropriateness to career

goals. The mounting/binding/display complements the work, (3) Design projects and/or business

materials are well presented. Consideration is given to most areas: detail, impact, practicality,

communication, and appropriateness to career goals. The mounting/binding/display complements

the work, (2) Design projects and/or business materials shows evidence of an effort toward

professional presentation but needs improvement in mounting/binding/display and/or one or

more of these areas: detail, impact, practicality, communication, and appropriateness to career

goals, or (1) Design projects and/or business materials shows little evidence of effort toward

professional presentation. The mounting/binding/display is inappropriate, and/or improvement is

needed in the consideration of multiple areas: detail, impact, communication, and

appropriateness to career goals." As shown in Table 8, 10 industry professionals (43.5%) rated

the students as a 4, 12 industry professionals (52.2%) rated the students as a 3 and 1 (4.3%)

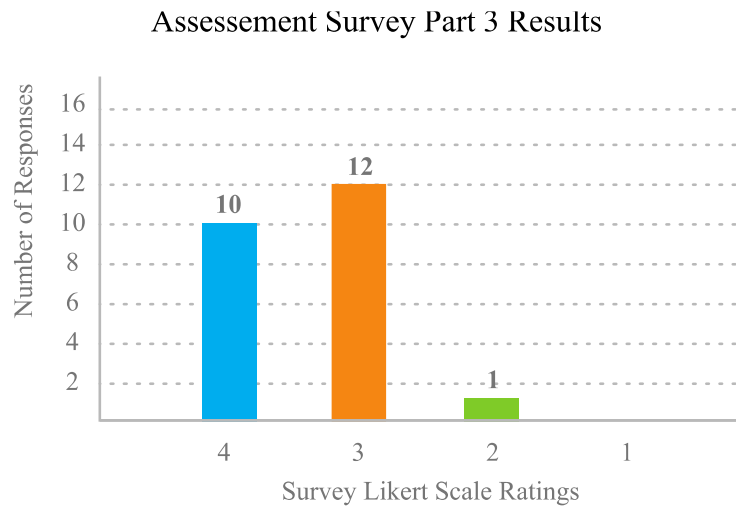industry professional rated the students as a 2.

Table 9

Assessment Survey Part 3 Results

Assessement Survey Part 3 Results

Qualitative Results

Industry professionals were also encouraged to further speak to the development of emerging designers DPI through open-ended questions. The seven open-ended questions were designed to ask industry professionals their opinion from the perspective of industry professionals and potential future employers about the design skills and personal attributes exhibited, necessary or lacking by emerging designers in the professional design environment. The open-ended questions are aligned with the research questions—questions one through five align with research question one, and question six and seven align with research question three.

Research Question One Alignment. On the open-ended survey given to industry professionals were asked to give their overall impressions of the mock interviewed and reviewed students by stating "We'd love to hear additional thoughts on the students, virtual review format, and overall impressions this year." Multiple industry professionals expanded upon the quantitative survey question responses by discussing the students' ability to present themselves and their work in an effective manner.

I only reviewed three students, but as a small sampling, I thought their work was

superb and communication skills were impressive. There's always room for improvement,

but I realize they've only had a small taste of real-world experience through internships.

Good stuff. (Industry Professional 5)

Industry professionals were also complementary of the students' ability to adapt to the

virtual review environment due to COVID restrictions.

Virtual format worked quite well, but we had fewer conversations than in person.

Students adapted well to the circumstances and it was clear they rehearsed their

presentations. The work was very strong overall. (Industry Professional 1)

Industry professionals were gracious in their constructive criticisms with regards to

student presentations of their work.

Overall, I felt that there was a lack of detail and explanation of process in most of

the reviews. The students just showed the visual in the portfolio and didn't really

elaborate until asked to speak to the process or concept development. Many did not

provide any additional information on projects that couldn't already be seen on the

portfolio site. This feedback was communicated to each student my company reviewed.

(Industry Professional 4)

The second question on the survey asked industry professionals "Typically, how well do

new junior designers in your company acclimate to the professional working environment?"

Industry professionals' answers ranged from affirmation that emerging designers are able to

acclimate quite well to identifying areas in which emerging designers would benefit from further

education and development.

Very well. The designers we have hired from the CD program are eager to learn and adapt to the working environment well. (Industry Professional 12)

The fast pace at which we work is often the hardest thing to adapt to. They also need a lot of direction and help, which is okay, but not if it ends up taking years to develop them. So we want to see improvement happening fast. There's definitely a window of time where they need to show they can work independently and grow on their own, without our constant help. So an eye for design is crucial, but so is a strong work ethic, a cooperative personality, and the ability to turn things around quickly. (Industry Professional 22)

The third question on the survey asked industry professionals "In general, what interpersonal, design and/or technological skills do newly graduated junior designers know or perform well?" Industry professionals' answers reflected many of the student response results in the Pre- and Post-CD Designer Professional Identity Surveys and Where Will I Thrive research paper artifacts. The responses indicate areas in which the CD program curriculum and course content is doing well.

It's great that students are starting to come to the workplace with experience with UX research and coding skills. Both are becoming more and more important to the digital/ tech industry and it's impressive to see students expressing interest in research. (Industry Professional 4)

They're usually full of knowledge of newer technologies / pop culture references that make me feel old! ha. they're always eager, which is a major ingredient needed to set themselves up for success. CD grads are very creative and detail-oriented, with a solid understanding of the Adobe suite. (Industry Professional 13)

The fourth and fifth questions on the survey asked industry professionals "Are there any interpersonal, design and/or technological skills you find are generally lacking in newly graduated junior designers?" and "What, if any, seem to be stumbling blocks for newly graduated junior designers? (not mentioned above)" respectively. Industry professionals answers reflected many of the student response results in the Pre- and Post-CD Designer Professional Identity Surveys and Where Will I Thrive research paper artifacts. The responses indicate opportunities in which the CD program could further develop its curriculum. Responses to the fourth and fifth questions were very similar.

> *How to present a project or concept to a non-designer. Trying to figure out what verbiage to use so that the senior non-design member or client can understand easily. (Industry Professional 2)*

> *Confidence – sometimes on either end of the spectrum! Some may come in feeling that they already know everything there is to know, and struggle to adapt to specs. Some have very little confidence and seek frequent validation. This is across the board, not specific to CD—just something to note! (Industry Professional 10)*

Research Question Three Alignment. The sixth question on the survey asked industry professionals "Do you notice any difference in professional preparedness between our CD students and graduates of other programs? If so, what differences do you notice?" Industry professionals' answers ranged from affirmation of the benefits of current CD program educational content to identifying areas in which the CD program could benefit from further development.

> *Yes, in general CD students have a better "toolkit" to draw from right away and can hit the ground running faster with client work. (Industry Professional 12)*

Portfolios are a big one. I don't think an "elevator pitch" in an interview is the

move. Just be personal and talk more about the agency than yourself. (Industry

Professional 3)

The seventh question on the survey asked industry professionals "What educational

content do our students need to better succeed in the industry? Please let us know if you have any

curricular suggestions for the CD program based upon your experience as an industry

professional." Industry professionals' answers provided specific factors that would assist CD

students in developing their DPI.

Digital and Social Media are becoming more and more important to businesses.

Even if a student is not an "interactive" student, understanding how to design or even

knowing what current best practices are for digital is huge. (Industry Professional 2)

Leadership - the industry often doesn't care that these fresh recruits are Jrs. It

sometimes forgets that there is so much they still might not know. I like that the CD

program focuses on professional practices. Perhaps adding leadership, time

management, and project management to the mix. (Industry Professional 23)

Real-world production...in other words, be creative to push the messaging

forward, but within the bounds of what is actually feasible within the client's budget and

production values. Usually, projects start with laying out the boundaries, then designing

within them. In school, it seems like it's more about embracing the possibilities, then

trying to figure out how to make it functional. (Industry Professional 14)

Triangulation Results – Tying it all together

Triangulation of the collected data assures the validity of research by cross-validating the

data and establishing a more comprehensive picture of the overall data. The mixed-methods

research data from the Post-CD Designer Professional Identity Survey and Senior Portfolio

Review Assessment Survey, and qualitative data from the Where Will I Thrive research paper

was analyzed and compared in relation to the themes and research questions as seen in Diagram

3. The survey questions selected for comparison and triangulation best represent responses that

reflect the students' confidence in their ability to transition from student to professional. Survey

questions 27 and 34 were chosen because they showed statistical significance between the pre-

and post-survey indicating growth in confidence levels from the beginning the professional

practices course to the end of the course in their ability to present, communicate and master the

professional skills necessary to succeed. Survey questions 26, 36 and 47 were chosen because

they represent responses that reflect students' confidence in their ability to problem solve, ability

to succeed and thrive in the professional environment, and the influence of professors and

mentorship on the students' professional preparedness. The culmination of these survey

questions data results demonstrate a holistic representation of the students' reflective self-

perception of, and industry professionals' impression of, the students alignment of personal

attribute and design skill traits.

Diagram 3

Relationship of Data Triangulation to Research Questions and Themes
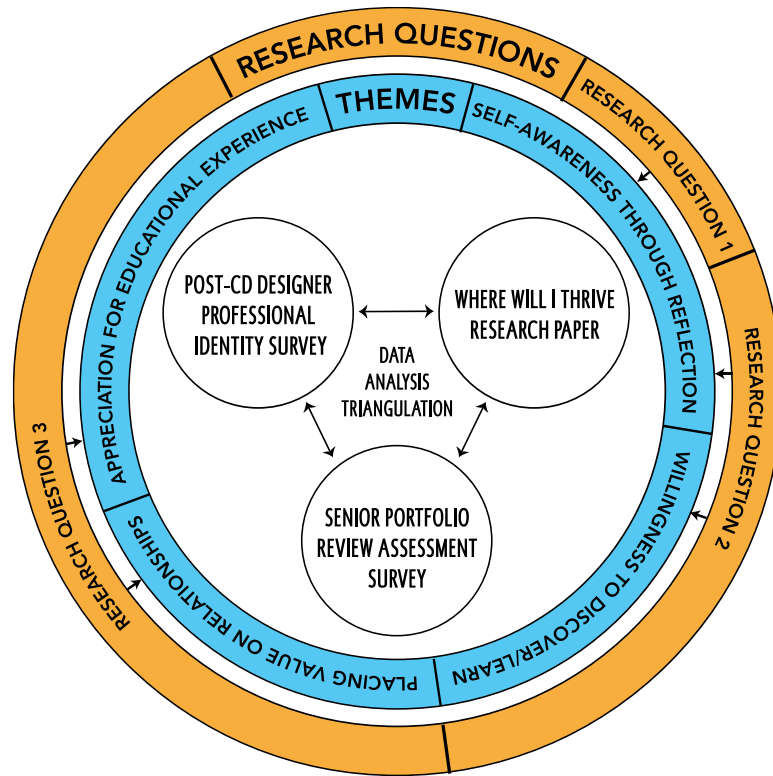
Research Question One: How can a university communication design program develop a strong sense of professional identity within its students?

      Presentation Communication. Presentation of work is a highly valued skill in the design industry and requires students to be self-assured in speaking about work and develop a rapport with creative directors and clients. Students who are self-aware of their abilities are more confident entering the professional environment and more likely to be cognizant of their DPI. The *Self-Awareness Through Reflection* theme is visible in the comparison quantitative data results from the Post-CD Designer Professional Identity Survey and the Senior Portfolio Review Assessment Survey as it's related to presentation communication skills and confidence levels. Question 34 of the Post-CD Designer Professional Identity Survey asked students to reflectively rate their self-perception for the following statement "I can articulate my design ideas well to others during presentation of my work" on a 4-point Likert scales indicating whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with

the survey question or answered *0 = Not Applicable*. 13 respondents (65%) rated the statement as a 4, 5 respondents (25%) rated the statement as a 3, and 2 respondents (10%) rated the statement as a 2.

       This question correlates to Part 1 of the Senior Portfolio Review Assessment Survey that asked industry professionals to rate their overall impression of reviewed students on the following statement: "During the portfolio reviews, students'... (4) Demonstrated highly professional and proficient verbal communication. Were enthusiastic, motivating and engaging, (3) Conversation uses well-constructed responses, does not sound rehearsed, uses some industry language, but still may be somewhat hesitant at times, (2) Conversation is clear but sounds rehearsed or unsure, use of industry language is minimal, or (1) Conversation is halting, uses "yes' or "no" and fails to elaborate or explain; apologizes for, or points out, mistakes. No use of industry language." 13 industry professionals (43.5%) rated the students as a 4, and 10 industry professionals (56.5%) rated the students as a 3.

       As shown in Table 9, while the scale used to rate the questions is not identical, relationship to the sentiment of the questions results is equal—both students and industry professionals are confident in the students' abilities to verbally present design ideas to the standard expected in the industry. However, given that the students did not rate themselves as all strongly agree, nor did the industry professionals rate the students as all highly proficient, the skill has potential to be strengthened in the CD program.

Table 10

Comparison of Presentation Communication Skills Between the Post-CD Designer Professional Identity Survey and the Senior Portfolio Review Assessment Survey

Senior Portfolio Review Assessment Survey
Part 1 Results

Post-CD Designer Professional Identity Survey
Question 34: I can articulate my design ideas well
to others during presentation of my work
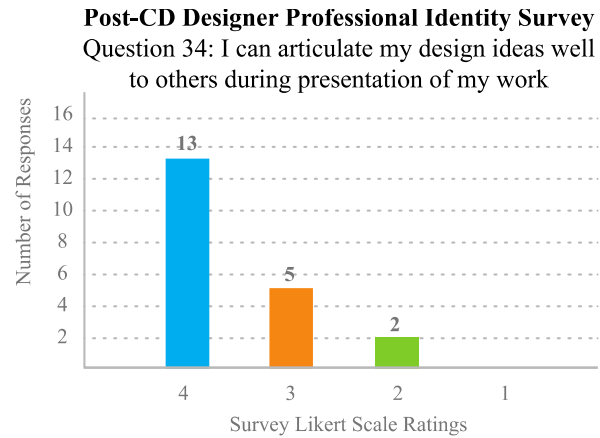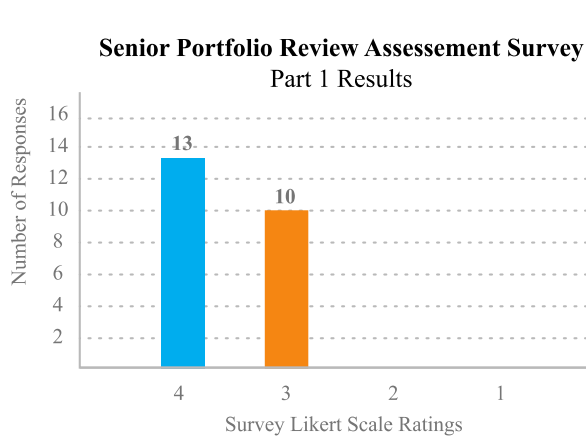
In addition, qualitative data from the Post-CD Designer Professional Identity Survey,

Senior Portfolio Review Assessment Survey, and the Where Will I Thrive research paper

indicate similar comments supporting the students' self-perception and industry professionals'

impression of the students' presentation skills. Table 10 shows the qualitative alignment of this

data.

Table 11

Qualitative Results - Triangulation for Presentation Communication

Qualitative Results - Triangulation for Presentation Communication		
Post-CD Designer Professional Identity Survey	Where Will I Thrive research paper	Senior Portfolio Review Assessment Survey
I feel much more confident in how I approach… presenting, interviewing, and networking. (Student 4)	*I am able to present my work confidently... I believe this skill will be helpful when talking to future clients during business meetings. (TI)*	*The students we saw were very well-presented and confident in their work! (Industry Professional 18)*

Research Question Two: How well does incorporating self-reflective opportunities within the

senior year cultivate students' self-perception of their professional identity?

Application of Knowledge. It's one thing to learn about design, but it's another thing for

students to recognize and understand how to apply learned knowledge to generate successful

design solutions. To do so, students must use a combination of creative thinking, expertise of computer skills and willingness to take risks to create novel solutions. Students must be able to create a variety of sound design possibilities and reflectively understand their own capabilities to successfully transition from student to design professional. The theme of *Willingness to Discover and Learn* encompasses these traits and includes codes of ability to apply knowledge, creative thinking and problem solving.

Question 36 of the Post-CD Designer Professional Identity Survey asked students to reflectively rate their self-perception of the following statement: "I am thorough in exploring many possibilities when problem solving for best possible design solutions" on a 4-point Likert scales indicating whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the survey question or answered *0 = Not Applicable*. 16 respondents (80%) rated the statement as a 4 and 4 respondents (20%) rated the statement as a 3 indicating that students feel very confident that they have developed their ability to apply learned knowledge to the design challenges they will face in the industry. Table 11 presents the results.

Table 12

Post-CD Designer Professional Identity Survey Question 36 Results
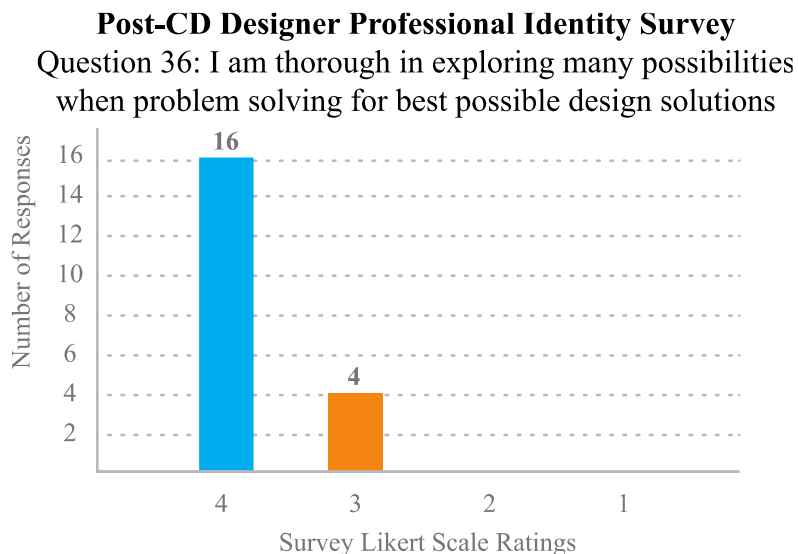
Post-CD Designer Professional Identity Survey
Question 36: I am thorough in exploring many possibilities when problem solving for best possible design solutions

Qualitative data from the Post-CD Designer Professional Identity Survey, Senior

Portfolio Review Assessment Survey, and the Where Will I Thrive research paper indicate

similar comments and support the quantitative findings. Table 12 shows the qualitative

alignment of this data.

Table 13

Qualitative Results - Triangulation for Application of Knowledge

Qualitative Results - Triangulation for Application of Knowledge		
Post-CD Designer Professional Identity Survey	Where Will I Thrive research paper	Senior Portfolio Review Assessment Survey
I usually only get stuck when I am in the very early stages of problem solving as I sometimes have too many ideas at first look. However, talking it over and brainstorming with other creatives helps buzz out the "bad seed" ideas. (Student 16)	*Design wise, I feel my strongest attribute is my ability to think full-circle. It's important that everything is connected for a reason. Whenever I come up with an idea the first thing I do is think about what the next steps are and how this idea can move forward. I like to think two steps ahead of everything and always have the next move planned. (LT)*	*Being graphic design & illustration dual concentrates, it was great to see some of their design work incorporate their own illustrations, while also offering a few pieces that used photo or just graphic layout to convey the message. (Industry Professional 15)*

Self-Confidence in Future Design Pursuits. Through the study's reflective

opportunities, many students came to realizations about themselves. For some it was their goals

toward their professional career and for others it was a recognition of abilities that were not

previously voiced in other venues. Self-awareness was expressed about their educational

achievements, future workplace strengths and concern, and acknowledgement about feeling

comfortable with who they are and who they became as designers. Feeling self-assured abut

understanding their DPI personal attributes and design skills better helps students transition from

student to professional. The theme of *Self-Awareness Through Reflection* encompasses these

traits and included the codes of self-confidence, creative thinking and problem solving.

Question 26 of the Post-CD Designer Professional Identity Survey asked students to

reflectively rate their self-perception of the following statement: "I am confident that I will be

successful and thrive in my future design career" on a 4-point Likert scales indicating whether

they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly*

Disagree with the survey question or answered *0 = Not Applicable*. 13 respondents (65%) rated

the statement as a 4 and 7 respondents (35%) rated the statement as a 3 indicating that students

feel confident, they have developed their designer professional identity, and will succeed upon

graduation. Table 13 presents the results.

Table 14

Post-CD Designer Professional Identity Survey Question 26 Results
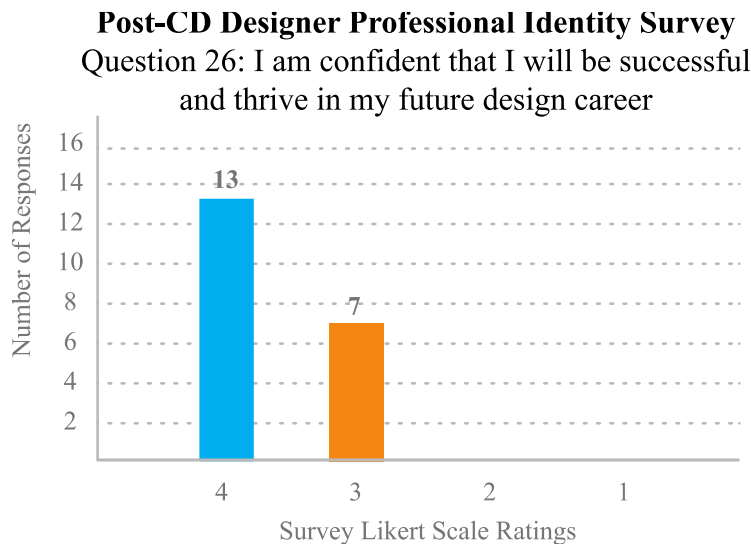
Qualitative data from the Post-CD Designer Professional Identity Survey, Senior

Portfolio Review Assessment Survey, and the Where Will I Thrive research paper indicate

similar comments and support the quantitative findings. Table 14 shows the qualitative

alignment of this data.

Table 15

Qualitative Results - Triangulation for Self-Confidence in Future Design Pursuits.

Qualitative Results - Triangulation for Self-Confidence in Future Design Pursuits.		
Post-CD Designer Professional Identity Survey	Where Will I Thrive research paper	Senior Portfolio Review Assessment Survey
The program as a whole has helped to show me that every skill has its place in the design world. It helped me feel like my niches are appreciated. (Student 9)	*I have an eye for what looks good. I have a strong sense of visual-verbal synergy where I can match type, photography, and color to depict specific emotions. It is this specific skill that makes me want to be an Art Director someday and why I have fallen in love with design so much. (LT)*	*As always, I left thinking another talented group of designers from the university are about to join the design world. (Industry Professional 8)*

Research Question Three: What factors contribute to the development of strong professional identities among communication design students?

Prepared for Industry Employment. Students and Industry professionals agreed on a

variety of factors within the CD program that prepare students for the professional industry and

contribute to the development of their DPI. A majority of student reflections supported the

Placing Value on Relationships theme and touted the benefits of professor involvement.

Professor involvement is often a given in a university program, however the level of

professorial support and relationship can make a significant difference in a student's professional

development. In addition, the delivery of programmatic content of a CD program can have a

similar influence. Question 47 of the Post-CD Designer Professional Identity Survey asked

students to reflectively rate their self-perception of the level of influence of the following

statement: "Professor involvement/ Mentoring/ Course instruction" on a 4-point Likert scales

indicating whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1*

= Strongly Disagree with the survey question or answered *0 = Not Applicable*. 15 respondents

(75%) rated the statement as a 4 and 5 respondents (25%) rated the statement as a 3 indicating

that professor involvement, mentoring and course instruction are important factors in developing

designer professional identity. Table 15 presents the results.

Table 16

Post-CD Designer Professional Identity Survey Question 47 Results
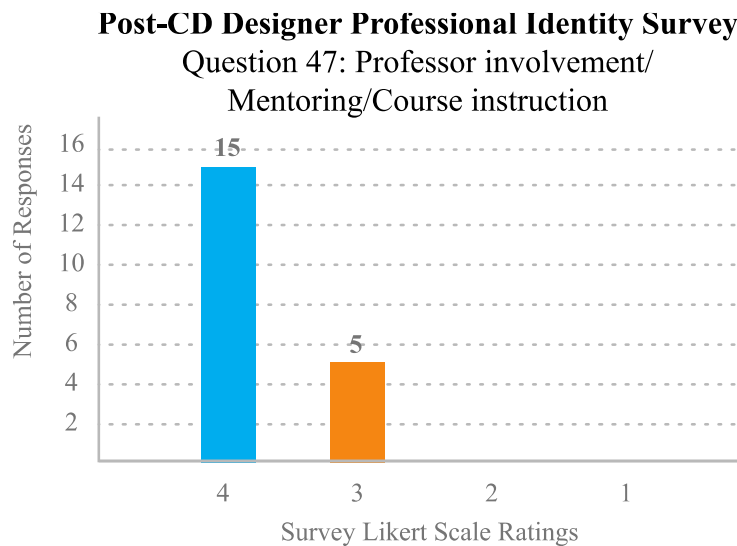
Post-CD Designer Professional Identity Survey
Question 47: Professor involvement/
Mentoring/Course instruction

        Qualitative data from the Post-CD Designer Professional Identity Survey, Senior

Portfolio Review Assessment Survey, and the Where Will I Thrive research paper indicate

similar comments and support the quantitative findings. Table 16 shows the qualitative

alignment of this data.

Table 17

Qualitative Results - Triangulation for Preparedness for Industry Employment

Qualitative Results - Triangulation for Preparedness for Industry Employment

Post-CD Designer Professional Identity Survey	Where Will I Thrive research paper	Senior Portfolio Review Assessment Survey
Through the classes and professors I've had, all of it has shaped me into the designer I am today. (Student 2)	*As I have gone through my college years, I have come to learn that an uncompromising desire to improve has been ingrained into me thanks to both my fellow students and my professors. (CN)*	*The University puts out solid graphic design students, ready to jump in from day one. (Industry Professional 22)*

Proficiency with Abilities. Proficiency with design skills and computer ability is a necessity for gainful employment in the design industry. *Appreciation for the Educational Experience* theme indicates that these skills are a significant factor in the development of a students' DPI since, as an industry professional, students must successfully and creatively complete client work. Students stated that their proficiency of design skills and computer ability was a direct result of being enrolled in the CD curriculum. Question 27 of the Post-CD Designer Professional Identity Survey asked students to reflectively rate their self-perception for the following statement, "I have no doubt that I will master all the skills necessary to succeed in my future design career" on a 4-point Likert scales indicating whether they: *4 = Strongly Agree, 3 = Somewhat Agree, 2 = Somewhat Disagree,* or *1 = Strongly Disagree* with the survey question or answered *0 = Not Applicable*. 15 respondents (75%) rated the statement as a 4 and 5 respondents (25%) rated the statement as a 3 indicating that students are very confident in their design abilities and succeeding in their future professional career. The results are represented in Table 17.

Table 18

Post-CD Designer Professional Identity Survey Question 27 Results

Post-CD Designer Professional Identity Survey
Question 27: I have no doubt that I will master all the
skills necessary to succeed in my future design career

Qualitative data from the Post-CD Designer Professional Identity Survey, Senior

Portfolio Review Assessment Survey, and the Where Will I Thrive research paper indicate

similar comments and support the quantitative findings. Table 18 shows the qualitative

alignment of this data.

Table 19

Qualitative Results - Triangulation for Proficiency with Abilities

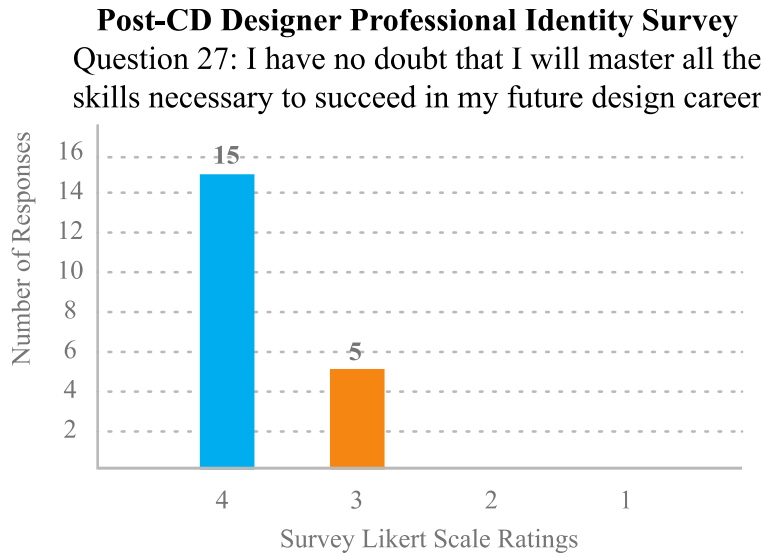| Qualitative Results - Triangulation for Proficiency with Abilities		
Post-CD Designer Professional Identity Survey	Where Will I Thrive research paper	Senior Portfolio Review Assessment Survey
Because of the many styles of courses CD offers I was able to expand and experiment in a broad range of skills. From creative coding to advanced typography, I never felt pigeon-holed. (Student 2)	*As far as overall design skills, I bring a vast knowledge of many different programs as well as a vision for layout and concepts… Using multiple programs, I have constantly worked on trying to become a diverse designer with a multitude of skills. (MD)*	*<The students were> very well rounded. As a web focused firm, we LOVE the emphasis on interactive and web design. It has been a while since I have looked at a full group of student portfolios at once, but the most exciting thing to see was the actual design of their websites. The use of online flip books and programming*

		and logo development and icons was truly remarkable. (Industry Professional 11)

Summary

This chapter contained the results of the data analysis and connects those results back to the research questions and emergent themes. Participants included 25 students identified as senior status in the CD program and 50 industry professional. Participants varied in age, race, gender and socio-economic status. The data collection consisted of mixed methods results from the Post-CD Designer Professional Identity Surveys which presented reflective prompts and open-ended survey questions to allow for further comment on those prompts. Data collection also included responses to the CD program's annual Senior Portfolio Review Assessment Survey which asked respondents to provide overall impressions of the mock-interview and portfolio presentations as well as offer feedback concerning the quality of the CD program. Qualitative data was collected from the Where Will I Thrive research paper which included students' reflections on potential employment opportunities and how they view their own DPI attributes. 20 Post-CD Designer Professional Identity Surveys were completed, 23 Senior Portfolio review Assessment Surveys were completed and 25 Where Will I Thrive research papers were collected, of which 12 were randomly selected to be used in the study to serve as a representative sample.

Statistical analysis was used to analyze the quantitative data. Provisional, simultaneous and concept coding was employed to analyze the qualitative data to develop final codes in the categories of Personal Attributes and Design Skills. Four themes resulted from this study that summarize how students view their designer professional identity development and align with the research questions. The themes of *Willingness to Discover and Learn, Self-Awareness Through Reflection, Appreciation for the Educational Experience* and *Placing Value on*

Relationships identify factors that are present in the CD program that help students develop a stronger sense of designer professional identity. Once themes were identified, triangulation was used to cross-validate the data and establish a comprehensive picture of the overall data.

There was evidence of students strengthening their DPI traits through self-reflection, and acknowledgement by industry professionals that students' DPI was developed. There is also identification of factors which contribute to the development of students' designer professional identity. Chapter 5 includes the summary for the critical analysis and discussion of the four themes and triangulated data.

Chapter 5: Discussion

The purpose of this study was to understand the factors which contribute to and strengthen CD students' DPI development in order to better prepare students to enter the design profession directly out of school and promote improved curricular development within the CD program. DPI is formative throughout a designer's life and is developed through life experiences and education. While understanding the general importance of a professional identity is often clear to recent graduates, developing it requires becoming self-aware of what traits constitutes DPI. I sought to understand how the university communication design program could develop a strong sense of professional identity within our students. The use of self-reflective opportunities as a means to study students' self-perception of their professional identity and what specific factors could be identified as contributing to students' DPI development was investigated. This chapter includes a discussion of the major findings of the study's mixed methods and qualitative data including the themes and triangulation of results. The chapter offers the limitations of the study, implications for research and practice, and concluding considerations.

Interpretation of findings

The participants in this study were seniors on the verge of graduating from a university communication design program and launching into their profession design careers. As emerging design professionals, it is important for students to understand the personal attributes and design skills that create their professional identity. As educators, it is important to understand if students recognize these traits within themselves and encourage DPI development. Using three student-driven methods of data collection, the Pre- and Post-CD Designer Professional Identity Surveys and Where Will I Thrive research paper, students had the opportunity to reflect upon their traits through Likert scale-based survey questions, open-ended survey prompts, and research paper

responses. The Senior Portfolio Review Assessment Survey allowed industry professionals to provide insight on the students' DPI development as they reviewed the seniors' portfolios and participated in mock interviews. Based upon the quantitative and qualitative data analysis, the results of this study suggest that self-reflection can help students recognize and identify the specific personal attributes and design skills that are incorporated into their DPI, which in turn, helps align the perception of themselves as a holistic designer. Self-reflection and self-awareness bring confidence into what it means to become a professional designer. Industry professionals agreed that the students' CD program experience prepared them well for the transition from student to professional.

Development of Design Professional Identity Traits – Personal Attributes and Design Skills

Values and beliefs are formative throughout a designer's life and are developed from life experiences, both in personal lives and through education. These experiences combine to create students' DPI, which, is configured from both personal attribute and design skills traits. However, the development of this full complement of DPI traits is often ignored and ill-supported in design education curriculum (Kunrath, et. al. 2018; Tracey & Hutchinson, 2016; Tracey & Hutchinson, 2015). Design skills tend to be the primary focus of undergraduate design programs, while attention to personal attributes is commonly overlooked. The students' exposure to the study's self-reflective opportunities—the mixed methods surveys and qualitative research paper—showed that students are generally confident in their DPI. Students became self-realized as a result of self-reflection. They made connections between themselves, their future career paths, lived experiences and educational opportunities. Self-confidence presented as a strong personal attribute which aligns with literature showing that when approaching professional situations, self-confidence is a key determiner as to whether a student feels qualified in his or her

profession (Crossley & Vivekananda-Schmidt, 2009) and therefore affects personal, professional and design skills decision-making abilities (Kunrath, et. al, 2018).

All students were equally as confident in the development of their design skills. Design skills are necessary to solving design problems which are comprised of predetermined requirements and intentions of the client, and the creative and strategic interpretations of the design problem by the designer (Dorst, 2006). The ability to solve these types of problems, also known as ill-structured problems, mean that students become more likely to make effective decisions and produce higher quality design solutions (Hong & Choi, 2011). Students were particularly confident in knowing which learned design skills they possessed and how they were applicable to the professional environment with many students citing their ability to create effective design solutions for a variety of design problems. The industry requires that designers continually generate ideas and seek out the best possible solution for clients' ill-structured problems. In addition, with most designers working with several, or more, client projects at any given time the ability to continually generate creative ideas is a necessity.

Confidence was also high regarding students' ability to relate to clients and understand target audience needs. Clients are the backbone of the design industry. Without clients, designers wouldn't have employment, therefore developing the client-designer relationship is incredibly important. Designers need to be able to relate and communicate design ideas to the client. The target audience is equally as important. They are the backbone of the client's business—they're the ones who purchase the client's products or services. Understanding the target audience allows designers to confidently create effective design solutions that are directed specifically to them.

Professor involvement was cited as a source for much of the students' success which aligns with literature stating that educators who listen to and engage with students help them gain appreciation for their skills (Trede & Smith, 2012). This positive rapport recognition is notable because professors guide students throughout their university career, both in and out of the classroom. They provide the foundation for students' relationships to design knowledge, design skills, and future career, and are responsible for promoting their DPI.

Themes

Four themes materialized from the data analysis: *Willingness to Discover and Learn, Self-Awareness Through Reflection, Appreciation for the Educational Experience* and *Placing Value on Relationships*. The themes present evidence of how DPI can manifest itself through both personal attributes and design skills. The themes speak to creative exploration, educational opportunities, self-reflection, and personal and professional relationships.

Willingness to Discover and Learn

The process of learning doesn't stop once students graduate from college. The process happens continuously over time and is supported by transformative learning theory that encourages students to investigate perspectives acquired throughout their lives and re-examine and reflect upon them (Mezinrow, 1978). The study's results showed a connection between students' openness and their future professional experience expectations. The majority of students reflected that they were willing to continue to practice skills to become better critical thinkers and problem solvers. Literature states that design problems can be solved in many ways through many different solutions (Dorst, 2006) and supports students' drive to continuously improve their critical thinking and problem-solving skills. Students also exhibited an eagerness to continue to discover new skills and take risks in order to acquire new knowledge. Design is

ever-changing especially with the rapid evolution of technology. Designers not only need to keep

up with industry trends and shifts in target audience requirements, but they also need to rapidly

learn new technologies particularly as related to internet and app development. Literature

supports the students' constant willingness toward learning and discovery because designers do

well when given motivation to endeavor toward fresh and innovative perspectives, meanings,

responses, and/or renditions in design (Waguepack & Babb, 2017).

As a professional degree, the primary CD program goal is to effectively transition

students to the professional industry. Students were genuinely excited about the prospect of

working as a professional and reflected in their qualitative statements about ways to continue to

grow their DPI upon graduation. Self-reflection helped students identify how their DPI

integrated into their professional goals and career. These statements indicate that a strong drive

was instilled in the students to continuously improve and grow as designers, and the results

contribute to the answer for research question two, "How well does incorporating self-reflective

opportunities within the senior year cultivate students' self-perception of their professional

identity?"

Self-Awareness Through Reflection

Reflection has a multitude of benefits, particularly in the design environment. Engaging

design students in reflective practice enhances both their competency in problem solving abilities

(Hong & Choi, 2011) and identification of their professional identity (Tracey & Hutchinson,

2018). Blakeman, et. al (2020) found that creative directors and other industry professionals

strongly felt that students and young designers with knowledge beyond the field—life

experiences, cultural experiences, art exposure, and other forms of diverse informal education—

had the best advantage for success in a creative environment. Through this study's self-reflective

opportunities, the students became self-aware of their acquired knowledge and, in turn, became

confident they would be able to apply that knowledge to the professional environment. Self-

confidence is key aspect of DPI. When students are confident in themselves as designers, it

manifests in their design solutions. The more they know and understand about themselves the

more they can apply that knowledge to the creative work. Students recognized that growth in

DPI is as much about personal growth as it is professional growth.

      An unexpected result in the findings was that students acknowledged through their

reflections that they recognize the necessity to show empathy for others and kindness to

themselves. Students reflected that the high stress and high demand placed upon designers can

come at the cost of mental health and by being conscious of the issues they can address concerns

as they arise. Design education has the opportunity to guide reflective practices in the classroom

so students may successfully negotiate their DPI and not lose their sense of self to the demanding

design industry. Exhibiting empathy to peers, professors, employers and co-workers speaks to a

students' ability to form effective working relationships. Good rapport establishment comes from

an understanding that everyone comes from a different background with varied life experiences

and exhibit distinct strengths and weaknesses. Acknowledging others' place in the world creates

better relationships particularly as designers are promoted to higher levels in leadership and

management.

      Students also recognized that the Where Will I Thrive research paper was an eye-opening

view into the professional environment and reflected that they were grateful for the opportunity

to investigate several potential future employers. Had this paper not been assigned it is unclear as

to whether students would have discovered the specific types of design environments suitable to

their DPI or had another opportunity to voice the personal attributes or design skills that form

their DPI. Asking students to reflect upon who they are as designers gives them an advantage when presenting themselves to potential employers. Confidence is noticeable when interviewing for positions, and when presenting work to a creative director. Emerging designers need to know their complete skillset in order to speak to how they will be a good fit for the industry position for which they are applying. However, from my lens as a seasoned educator and design professional, I was concerned about a few students' over-confidence in the assumption that the companies they investigated would hire them immediately upon graduation. Managing expectations in roles and responsibilities of new emerging designers needs to be healthily balanced with confidence. Students must prove their "good fit" through presentation of their portfolio and of their professional selves. This theme's results contribute to the answer for research question one "How can a university communication design program develop a strong sense of professional identity within its students?" and research question two, "How well does incorporating self-reflective opportunities within the senior year cultivate students' self-perception of their professional identity?"

Appreciation for the Educational Experience

In order for design students to successfully navigate their education and seamlessly enter the design profession, they not only need to develop their design skills, but also need to understand what design is, what designers do, and who they are as a designer (Tracey & Hutchinson, 2015). The results of the study imply that students recognize the value of their educational experience and understand the factors within the experience that contribute to their DPI development. These results point to an awareness and recognition of self through self-reflection. The literature supports the study results through transformative learning theory which states, "learning is understood as the process of using a prior interpretation to construe a new or

revised interpretation of the meaning of one's experience in order to guide future action" (Mezirow, 1996, p. 162; as cited in Taylor, 2017). Students' confidence in their educational experiences translated to confidence in navigating their future professional work environment. Students felt strongly that their CD program education was beyond satisfactory and would be the reason for their future successes. Providing students with authentic experiences (De Weerdt, et al., 2006) in the classroom help students feel as part of a professional group (Blakeman, et al., 2020; Crossley & Vivekananda-Schmidt, 2009). Encouraging the classroom-based exploration of their DPI as related to the professional environment develops a student's self-confidence on who they are becoming as a designer (Dall'Alba, 2009; Kunrath, et al., 2017) and should be incorporated into CD program curriculum.

Students identified a variety of factors in the program that helped create a holistic view of their DPI development and contributed to the answer for research question three, "What factors contribute to the development of strong professional identities among communication design students?" A few students disclosed perceived deficiencies in the CD program that can be considered for opportunities to strengthen the program coursework and curriculum and better contribute to students' DPI development. By understanding what these factors are, the CD program can make adjustments to course curriculum and have confidence in continuing to offer experiences that are beneficial to the students

Placing Value on Relationships

Relationships are crucial to the design industry—they are necessary between peers, superiors, clients and target audiences. In design education, however, one of the most important relationships is between the student and professor. Literature supports the student-educator relationship further by stating that the student-educator relationship is the most crucial when

guiding students through reflective practices and that reflection provide valuable insight for both

the students and educator (Trede & Smith, 2012). The study's reflective focus provided students

an opportunity to realize the role educators had on their education and self. Professors in the CD

program not only dedicate themselves to every student's success, but also strive to provide

educational experiences outside of the classroom. As stated previously, the student-professor

relationship is important. When professors take education outside of the classroom through the

introduction of industry-based extra-curricular activities, students develop a strong relationship

to the profession in which they are about to embark (Blakeman, et al., 2020; Crossley &

Vivekananda-Schmidt, 2009). The CD program should continue to offer as many industry-based

extra-curricular activities as possible and seek to offer more whenever possible.

The mentorship of professors had a profound effect on multiple students as did the

support of classmates. Relationships proved to be invaluable in self-realization of worth, talent,

confidence and DPI. Classmate interaction provided the means for healthy competition among

peers and contributed to the motivation to constantly improve design skills. In the professional

workplace designers are often part of a creative team and work together to develop solutions for

clients. Team members inspire each other to develop better solutions by encouraging each

other's strengths and collaborating on idea generation. When a creative team respects and

supports one another, they are productive and successful.

Unexpectedly, the study showed a deeper sense of understanding and empathy among

students thus broadening their personal attributes traits. Care, concern and kindness toward

fellow students, and others, was of upmost importance to them. The 2019 AIGA Design Census

(2019) supports the students' reflections. The professional industry group's survey results

revealed that empathy is one of the top ten most important skills to have in the professional

design workplace according to over 9000 professional industry respondents. Empathy allows students to connect with their peers, coworkers, clients, and target audiences. The results in this section contributed to the answer for research question three, "What factors contribute to the development of strong professional identities among communication design students?"

Outsider Perspective and Triangulation

CD program graduates who are well-prepared in both design skills and personal attributes are able to seamlessly transition into the professional industry environment. Literature supports the efforts of the CD program to teach students not only the benefit of learning what it means to act as a professional, but also what it means to become one (Dall'Alba, 2009). A student's DPI, if under-developed, can be a barrier to successfully transitioning from student to professional (Crossley & Vivekananda-Schmidt, 2009) and those hiring emerging designers have an expectation that graduates will be able to seamlessly transition. The less time employers spend on training and guiding new designers, the more time can be dedicated to creative client work. Industry professionals have confidence in the ability of CD program graduates to handle computer software, work with clients, produce creative solutions, communicate and present effectively and manage themselves in a professional atmosphere—essentially expressing confidence that CD program graduates have developed a strong sense of DPI and will become successful professional designers. Students agree with the industry professionals' assessment and their confidence is high regarding their transition into professional industry. The CD program should continue to encourage the skills noted by the industry professionals. These results contributed to the answer for research question one, "How can a university communication design program develop a strong sense of professional identity within its students?" and research

question three, "What factors contribute to the development of strong professional identities among communication design students?"

Limitations

As with any research study, this study had limitations that should be acknowledged. The first limitation was the small sample size. The study surveyed 25 students, with only 20 contributing to the final study. The sample size was too small to generalize findings, though this research could be transferable if used with a similar population (i.e. communication design students) in a similar context (i.e. a professional practices class). This study only captured a small snippet of the graduating class. A larger sample would be beneficial to corroborate findings, particularly those data that had only one or two results to determine if the data was an anomaly or more widely supported. The second limitation was the time frame. The study was conducted in the final semester during the students' senior year in the CD program. Although the study allowed students to self-reflect on their DPI development, this time frame did not allow for investigation into *when* DPI first begins to develop in students, only *how* students view their DPI in the semester before they graduate. Understanding *when* DPI forms could help focus targeted development opportunities in CD program curriculum.

While I was satisfied with the pre- and post-survey results, the study would have benefited from the opportunity to interview students to gain a more thorough understanding of survey responses thus revealing a third limitation. Survey results were based upon a 4-point Likert scale and optional open-ended comment prompts for students to further expand upon survey question ratings. Although all of the comments offered in the prompts were valuable and contributed to the study, of the 532 comment prompt opportunities in the pre- and post-survey, only 70 comments were offered, with 53 offered in the pre-survey and only 17 offered in the

post-survey. Outside of the optional open-ended prompts, I did not have the opportunity to inquire why ratings were given to certain questions. Furthering the conversation through interviews could lead to in-depth responses to discover more insights into the development of students' DPI.

The last limitation was the emergence of the COVID-19 pandemic. The pre-survey and research paper were completed prior to the university suspending all in-person classes. The university transitioned to online learning and canceled all in-person events for the last eight weeks of the semester. Two weeks of the semesters' classes were cancelled to allow faculty time to convert course materials for a remote format. The post-survey was administered to the professional practices course in the last week of the semester and did not have full participation like the pre-survey. In addition, the Senior Portfolio Review, which was normally held in-person, had to adapt to an online format. While the event was successful, industry professionals reviewed a reduced number of students in the online format compared to the in-person format—reviewing only three students on average versus five students, respectively. Furthermore, fewer industry professionals participated in the review than the previous year and fewer industry professionals completed the Senior Portfolio Review Assessment Survey compared to the previous year. Had the event been during a "typical" year I would have anticipated more data to review.

Implications for Research

Multiple journal articles indicate that investigation into DPI is necessary to further understand how educational programs can help nurture "world-ready graduates" (Bowen, 2016) by developing the professional identity necessary to smoothly transition from student to professional (Kunrath, et al., 2018). While the CD program strives to instill DPI in its students through program curriculum and coursework, some students indicated that the concept of DPI

was new to them and only came to light as a result of this study. Several students indicated that they recognized the professional industry expectations for their future career but did not give much thought as to how their personal attributes and design skills formed their DPI prior to the professional practices course and specifically disclosed that the professional practices course was the source of their self-reflection. However, other students indicated that they were well-aware of their DPI and preparedness began prior to their senior year and enrolling in the professional practices course. Further, they stated they felt all of their professors and classes shaped their DPI. The disparity in results leads to additional research opportunities to discover *when* students begin to formulate their DPI. It is important for students to recognize their DPI traits as early as possible, so they have the opportunity to reflect upon their strengths and acknowledge their weaknesses. Understanding their DPI earlier can provide them with design education goals and help them determine their design voice and style within their developing DPI.

In addition, to discovering when students develop their DPI traits, it is also important to understand if the integration of diversity, equity and inclusion (DEI) factors contribute to earlier DPI development versus later development and would assist design educators in developing curriculum and planning course content. A critical lens toward representation of race, culture, and LQBTQIA should be directed at the course content. We, design faculty, were educated in an era in which dominant culture content was the norm and it's often hard to shake bias that we may not know we have or even recognize exists. Anyon (1979) says it best: the content we learned and present very often takes "the form of omitting a fact or of subtle distinctions and emphases" (p. 363). It's not that diversity and equity is completely ignored, per se, it's that the content is downplayed to the point of negligent. It's to our advantage to ensure diversity is represented, and while 86% of professional designers are still white (Carroll, 2014), the target audiences for the

work we produce are not. Being a designer requires a deep empathy of people from all walks of life. Carroll (2014) says that, "diversity in design means diversity of experience, perspective and creativity". In order to design for and work in a diverse environment, designers need to understand it from a diverse and equitable perspective. "Design must openly embrace more diverse practitioners and retain them through inclusion," (Carroll, 2014) and, in order to do so, diversity should be integrated and embraced in our classrooms. In addition, our country is only getting more diverse each year, which means more diversity within the K–12 classrooms, and in turn, provides the potential for our university classrooms to become more diverse. There is a need for university courses, including the professional practices course, to present less dominant group culture materials, be more diversified in its perspective, and to shift thinking to be more inclusive of the diverse society in which we live.

These thoughts lead to a variety of questions. Is it possible to fully develop a student's DPI during the four years they are enrolled in a university CD program? Or does the development of an emerging designer's DPI begin while they are in school and continue once they gain industry employment? When does the majority of an emerging designer's DPI development occur? Can the development be enhanced by incorporating self-reflection and other DPI enhancing course content earlier in CD curriculum? Does the inclusion and exploration of more diverse educational materials influence designer's DPI? Will a stronger focus on DEI influence students' self-reflection so that they better recognize diversity in themselves and in the field? To investigate these questions, I propose to develop a mixed method longitudinal cohort study of CD students and alumni after the conclusion of this study. The study would survey and interview students over a four-year period of time and engage study participants at the end of their sophomore year, at the end of their junior year, at the end of their senior year and at the

conclusion of their first year of employment in the design industry. The proposed longitudinal study has the potential to contribute research to academic journals, at design and higher education conferences, and in design industry publications to further the understanding of DPI development. In addition, the study has the potential to identify key findings that can lead to programmatic and curricular changes for design education programs which, in turn, would directly benefit design industry creative directors who hire design graduates.

Implications for Practice

The study was designed to use self-reflection to investigate the self-perception of students' DPI and identify factors which contribute to that development. The ultimate goal was to gain an understanding of how design educators can assist students to better transition from student to professional because designers need a sense of their professional identity to recognize themselves as professional designers (Tracey & Hutchinson, 2015). The study results led to two main implications, curricular and accreditation.

Curricular Implications

First, students were vocal about the factors which contributed to their DPI development and identified both personal attribute and design skills components of the CD program. It would behoove the departmental faculty to review the findings to determine which factors can be further incorporated into course content and in the overall CD program curriculum. The encouragement of the design skills over personal attributes is common in design education as it more easily shows the physical manifestation of designer ability and historically advances students who are technically-savvy but are identity-deprived (Kunrath, Cash & Li-Ying, 2016; Tracey & Hutchinson, 2016). For students to fully investigate their DPI, the use of self-reflection should be further investigated for use in all classes, not just in the professional practices course.

One way to accomplish this is to alter course assignments to allow students to do a deep dive into meaningful subjects, such as lived experiences or social justice issues, prior to the implementation of design skills. Ensuring that students have an emotive connection to their assignment allows them to reflect a) why the subject is significant and b) how the subject relates to them as a designer. Another way to incorporate self-reflection is to allow students choices in the visual design execution of coursework thus allowing them to reflect upon their design strengths to decide upon the best possible solution. Allowing them to choose illustration over photography or create a poster instead of a brochure gives the students agency in their work and instructs them on how to seek the most appropriate design solution for the ill-structured problem at hand. In this way, students gain the opportunity to discover their aptitude for recognizing and implementing their DPI.

It would also be advisable for the CD program, and other design education programs, to continue to develop opportunities for students to investigate the design industry through interactive experiences identified by students as important factors such as field trips to agencies, internships, guest speakers and workshops by industry professionals. Eudaimonic identity theory supports identity self-discovery through the exploration of information to identify "a good fit with personal potentials, interests and inclinations" (Waterman, 2011, p. 369) which includes students' investigation of industry experiences to consider what factors are a good fit for them. Once changes are enacted and assessed, it would be beneficial to repeat the study with a new participant group to discover which changes were effective.

Furthermore, the results of the Senior Portfolio Review Assessment Survey indicated that the industry professionals were very impressed overall with the CD students' professional presentation, portfolio reviews and general interaction during the Senior Portfolio Review event.

However, industry professionals noted that some personal attributes and design skills were

lacking and that students could be more prepared for industry by developing skills to manage

short- and long-term projects, improving upon production skills, managing expectations of the

roles and responsibilities of junior designers, and advancing their presentation skills beyond

portfolio presentation. Knowing which DPI traits industry professionals feel emerging designers

lack development provides the CD program with opportunities for curricular improvement. Once

new course content and curricular changes are incorporated to address these missing traits, it

would be beneficial to repeat the study with a new participant group to discover which changes

were effective.

Accreditation implications

The second implication has a broader reach to the leaders and decision makers of the

National Association of Schools of Art and Design (NASAD). The CD program is accredited by

NASAD and adheres to the Standards of Accreditation as specified in the NASAD Handbook.

The CD degree, which encompasses the combined study of graphic design, advertising design,

interactive design and illustration, is defined by NASAD as a professional degree that "focuses

on intensive work in art and/or design supported by a program in general studies. Normally, the

intent is to prepare for professional practice" (National Association of Schools or Art and

Design, 2019, p. 85). The results of this study leads to a proposed policy change to CD program

Standard X.C.3.g., which currently states a CD program should promote "functional knowledge

of professional design practices and processes including, but not limited to professional and

ethical behaviors and intellectual property issues such as patents, trademarks, and copyrights"

(National Association of Schools of Art and Design, 2019, p. 123), to include language

addressing professional identity development through the exploration of skills needed beyond

technology, behavior and ethics. Curriculum that promotes a student's confidence, interpersonal skills, leadership, and openness in both an educational and professional setting teaches students not only what it means to act as a professional, but also what it means to become one. Students who receive these educational opportunities are more confident in their approach to gaining industry employment, perform better in portfolio reviews and interviews, and are shown to assimilate more quickly in an industry setting. When we can educate students beyond hard skills and develop their identities as a whole—answering "who am I as a designer?"—we produce professionals who are ready to enter the industry environment. I would like to propose changing Standard X.C.3.g. to read "Functional knowledge of professional design practices and processes including, but not limited to, *professional identity development*, professional and ethical behaviors, and intellectual property issues such as patents, trademarks, and copyrights" to allow our students to become more successful designers.

Conclusion

I started off this study by wondering how well CD students' sense of DPI was developed and how the CD program could further develop DPI in its students. The study inquiry was based upon my own experiences as a struggling emerging designer and as a veteran design educator who has assisted hundreds of graduating seniors in launching their professional careers. College is a time for students to develop their DPI so that they can seamlessly transition from student to professional. Successfully negotiating the professional environment requires students to not only learn to act like a professional, but also to thoroughly understand how to become one (Dall'Alba, 2009) so as not lose their sense of self to the demanding design industry.

Through the study I discovered that being able to self-identify personal attributes and design skills created confidence in students' perception of their DPI and in their ability to thrive

in the design profession. They were able to reflect upon and become self-aware of their own specific DPI traits, and made connections about themselves, their future goals, their external experiences, their interactions with others, and their educational learning experiences. The results of this study imply that self-reflection is a primary source for DPI development and reflective opportunities should be incorporated into a CD program. Students' DPI development was encouraged and identified through a variety of curricular and content—classroom content, internships, professor involvement and relationships with peers. Industry professionals agreed that the students' CD program experience prepared them well for the transition from student to professional.

In conclusion, the findings provide guidance for design educators to improve upon current curriculum offerings by encouraging student-professor relationships in the classroom and creating a variety of industry-based authentic experiences such as internships and guest speakers to help produce design professionals who can transition easily into the professional environment. In addition to suggesting that a professional practices course would be a beneficial inclusion at universities with a CD curriculum, it is recommended that self-reflection become embedded in all design education courses so that students have ample opportunity to explore who they are becoming as designers. Ultimately, it doesn't matter how well-developed a student's design skills are if their personal attributes are lacking and their DPI is underdeveloped—emerging designers won't transition well into the professional industry environment. In order to thrive, students need to embrace their DPI so they may successfully navigate the experience of becoming a designer.

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Appendix A
CD Designer Professional Identity Survey

CD Designer Professional Identity Survey that incorporates a modified Professional Identity Five-Factor Scale (Tan, et al., 2017) with an overlay of DPI personal attributes and design skills as identified by Kunrath, et al. (2016).

DPI traits overlay	Knowledge about Professional Practices (6 Items)
Self-Confidence	I know the nature of the work I will do as a future design professional.
Social Abilities	In most design environments, professionals with different backgrounds work together. I know of the different types of professionals I will be collaborating with
Responsibility	I have a good idea about the roles and responsibilities of my future design career
Computer Ability	I know what kind of applications, technology and tools I will handle in my future design career
Self-Confidence	I am aware of the impact of the career decisions I make as a design professional in the industry
Ethics and Ethical Virtues	I have a good idea about ethical practices in the design industry
	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Experience with the Profession (6 Items)
Openness	I have interned at or work part-time in a business related to what I am studying
Openness	I am part of an organization or club related to my profession
Rapport Establishment	I know personally some people who work in my future design profession
Openness	I follow developments in my future design career path in social media, blogs, industry magazines, etc.
Openness	Before I entered the CD program, I had prior knowledge of the design profession
Rapport Establishment	I have interacted with professionals in the industry outside of CD or through events organized by CD.
	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Having the Professional as a Role Model (5 Items)
Self-Confidence	When working on assignments for class, I imagine myself to be in the shoes of a design professional in my future work environment

Ability to Apply Knowledge	I concentrate in my studies on what I believe I would need to know and be able to do when I enter my future design career
Responsibility	I believe I can already think and reason like a design professional in a company or organization
Openness	I admire most those professors who are also professionals in the design industry
Openness	I admire professionals who are already working in my future work environment
	(Optional) Please share or expand upon the reason for any of your view/s listed above:
Professional Self efficacy (6 Items)	
Responsibility	I am sure I will have no problems managing my professional behavior in my future work environment
Ability to Apply Knowledge	I feel poorly prepared for a real job (Reversed)
Social Abilities	I believe that I will easily get along with my future colleagues, comfortably cooperate, and have informal conversations with them
Self-Confidence	I'm confident that I will be successful and thrive in my future design career
Self-Confidence	I have no doubt that I will master all the skills necessary to succeed in my future design career
Ability to Apply Knowledge	I am not sure about the kind of challenges I will face as a design professional (Reversed)
	(Optional) Please share or expand upon the reason for any of your view/s listed above:
Knowledge of Professional Self (2 Items)	
Self-Confidence	I know what kind of design career/position I prefer to pursue after graduation
Self-Confidence	I am already pretty sure what kind of design work environment I want to enter after completing my CD degree.
Knowledge of Professional Skills (8 Items)	
Life Experiences	My prior knowledge and life experiences influence my design work
Problem Solution Development	When creating design solutions, I am often unsure of where my ideas come from (reversed)
Communicates clearly/Present Properly	I can articulate my design ideas well to others during presentation of my work
Empathize with audiences	I have a clear understanding of the importance of the target audience and design parameters

Problem solution developing	I am thorough in exploring many possibilities when problem solving for best possible design solutions
Problem Solving	I am often unsatisfied with my final work (reversed)
Evaluating	I effectively self-edit my design solutions prior to presentation
Evaluating	I have a hard time deciding which design ideas are best to move forward with (reversed)
	(Optional) Please share or expand upon the reason for any of your view/s listed above:
	Factors That Influenced Your Professional Identity (10 items)
Openness	Your overall Communication Design education
	(Optional) Please provide specific details on your response listed above.
Specific Education	Specific CD courses (please specify)
	(Optional) Please provide specific details on your response listed above.
Self-Confidence	Feeling pride or success in your work/achievements
	(Optional) Please provide specific details on your response listed above.
Professor Involvement	Professor involvement/mentoring/course instruction
	(Optional) Please provide specific details on any of the listed above.
Openness	Internship experience/s
	(Optional) Please provide specific details on your response listed above.
Ability to Apply Knowledge	Development of final portfolio and branding materials
	(Optional) Please provide specific details on your response listed above.
Openness	Guest speakers/Guest artists
	(Optional) Please provide specific details on your response listed above.
Openness	Involvement in professional organizations/clubs
	(Optional) Please provide specific details on your response listed above.
Openness	Involvement in departmental events/trips
	(Optional) Please provide specific details on your response listed above.
	Other Influences

	(Optional) Please provide specific details on any of the listed above.
	Additional questions on post-survey only
	How has Professional Practices or other KUCD courses supported your view, or changed your view, of your future design employment possibilities?
	How has Professional Practices or other KUCD courses supported your view, or changed your view, of your own professional identity (who you are as a designer)?

Appendix B
Senior Portfolio Review Assessment Survey

Note: The study focuses on the CD program student learning outcomes (SLO) 5 and the qualitative responses. SLO 3 is not included as part of this research study.

KUCD Senior Portfolio Review Assessment Spring 2020

Thank you for agreeing to review our senior portfolios! The results of this survey will be used as part of our Assessment Committee review process to analyze current and future curriculum, and make improvements if necessary.

This year we are focusing on two specific KUCD Student Learning Outcomes—skills we want to make sure our students have upon graduation. We are asking you to rate your OVERALL impression of the work you saw based upon the criteria below.

We want our program to be the best. We value (and need) your feedback to do so. We genuinely appreciate your time, support and dedication to our KUCD students. Thank you!

* Required

STUDENT LEARNING OUTCOME 3 - Create and develop visual form in response to communication problems. DESCRIPTION: Visual form includes the construction of meaningful images, the application of principles of visual organization/composition, information hierarchy, symbolic representation, typography and/or aesthetics.

SLO 3, part 1 - Students' portfolios show that they can... *

○ 4 - Create innovative design solutions or ideas that are appropriate to the discipline

○ 3 - Create original design solutions or ideas that are appropriate to the discipline

○ 2 - Successfully and creatively adapt appropriate design standards to his/her own project specifications

○ 1 - Reproduce existing design standards.

SLO 3, part 2 - Students' portfolios show that they were able to... *

○ 4 - Achieve novel, unconventional or unique ideas, questions, formats, solutions or products applying design principles to create innovative visual images or responses and/or a visual image or response that crosses boundaries

○ 3 - Execute unconventional or unique ideas, questions, formats, solutions, or products creatively using the application of design principles.

○ 2 - Produce creative conventional and well-executed ideas, questions, formats, solutions, or products exercising the application of design principles.

○ 1 - Restate existing ideas

SLO 3, part 3 - Students' portfolios show that they were able to... *

○ 4 - Transform design principles, ideas or solutions into entirely new and original forms

○ 3- Synthesize design principles into novel ideas or solutions forming a coherent whole

○ 2 - Connects ideas or solutions in expected but creative ways

○ 1- Recognizes existing connections among ideas or solutions

STUDENT LEARNING OUTCOME 5 - Employ professionalism and best business practices through presentation. DESCRIPTION: Professionalism and best business practices include the ability to organize design projects, creation of business communication materials, presenting oneself in a professional manner, and/or ability to converse about design projects using industry language.

SLO 5, part 1 - During the portfolio reviews, students'... *

○ 4 - Conversation is well-constructed, confident, genuine in thought and use industry appropriate language.

○ 3- Conversation uses well-constructed responses, does not sound rehearsed, uses some industry language, but still may be somewhat hesitant at times

○ 2 - Conversation is clear but sounds rehearsed or unsure, use of industry language is minimal.

○ 1 - Conversation is halting, uses "yes' or "no" and fails to elaborate or explain; apologizes for, or points out, mistakes. No use of industry language

SLO 5, part 2 - During the portfolio reviews, students... *

○ 4 - Demonstrated highly professional and proficient verbal communication. Were enthusiastic, motivating and engaging .

○ 3 - Demonstrated an above average proficiency in verbal communication. Were engaging.

○ 2 - Demonstrates average proficiency in verbal communication. Were generally confident.

○ 1 - Demonstrated limited verbal communication with little confidence displayed.

SLO 5, part 3 - During the portfolio reviews, students'... *

○ 4 - Design projects and/or business materials are professionally presented with consideration for detail, impact, practicality, communication, and appropriateness to career goals. The mounting/binding/display complements the work.

○ 3 - Design projects and/or business materials are well presented. Consideration is given to most areas: detail, impact, practicality, communication, and appropriateness to career goals. The mounting/binding/display complements the work.

○ 2 - Design projects and/or business materials shows evidence of an effort toward professional presentation, but needs improvement in mounting/binding/display and/or one or more of these areas: detail, impact, practicality, communication, and appropriateness to career goals.

○ 1 - Design projects and/or business materials shows little evidence of effort toward professional presentation. The mounting/binding/display is inappropriate, and/or improvement is needed in the consideration of multiple areas: detail, impact, communication, and appropriateness to career goals.

Comments - We'd love to hear additional thoughts on the students, virtual review format, and overall impressions this year.

Your answer

CURRICULUM IMPROVEMENT FEEDBACK - This section of feedback is to contribute to curriculum improvement and is not intended to be specifically about KUCD students, but newly graduated junior designers in general.

Typically, how well do new junior designers in your company acclimate to the professional working environment?

Your answer

In general. what interpersonal, design and/or technological skills do newly graduated junior designers know or perform well?

Your answer

Are there any interpersonal, design and/or technological skills you find are generally lacking in newly graduated junior designers?

Your answer

What, if any, seem to be stumbling blocks for newly graduated junior designers? (not mentioned above)

Your answer

Do you notice any difference in professional preparedness between KUCD students and graduates of other programs? If so, what differences do you notice?

Your answer

What educational content do our students need to better succeed in the industry? Please let us know if you have any curricular suggestions for the KUCD program based upon your experience as an industry professional.

Your answer

Email Address - For survey response tracking only. Email address will be deleted for data analysis and assessment. *

Your answer

THANK YOU! We can't do this event without you and we greatly appreciate your feedback!

Confirmation message:

Thank you for participating in the CD Senior Portfolio Review Assessment. We value your feedback and genuinely appreciate your time, support and dedication to our CD students. Thank you!

Appendix C
"Where Will I Thrive" Research Paper Assignment

PROJECT 2: PAPER / WHERE WILL I THRIVE?

WORTH 10% OF YOUR FINAL GRADE | **DUE FRIDAY, MARCH 6, 2020 AT 1PM**

THIS DUE DATE IS THE DAY BEFORE SPRING BREAK. WE DO NOT MEET AS A CLASS BUT YOU NEED TO HAND IN A PHYSICAL PAPER BY 1PM FOR THE PROJECT TO BE ACCEPTED. YOU CAN LEAVE IT OUTSIDE MY OFFICE. SUBMITTING JUST ON D2L IS NOT ACCEPTABLE AND IF YOU DO THIS YOU WILL GET A 0.

PRINTED PAPER + DIGITAL FILE UPLOADED TO D2L.

IF YOU NAME IS NOT ON THE TOP -5 PTS WILL BE DEDUCTED FROM YOUR GRADE.

This paper is two-fold!

PART ONE: RESEARCH

First, you are to research designers, studios or agencies using tools such as: The AIGA, The Art Directors Club, Society of Illustrators, The One Club, The Type Directors Club, Behance, Gooooooogle, OR research from any design resource including the actual studio/agency website! You research can be about a studio, agency, in-house department, a start-up, or independent designer. Pretty much any creative environment goes!

To get started you must first research several studios, agencies, companies or independent designers etc you feel are unique or noteworthy in the industry. **Narrow your list down to your top 3. From this list of 3 you will pick 1 superstar you wish to write a bit more extensively on, and then 2 that are your "runner ups" which you will summarize.** Research a few before making your final decision and try to have a reason for your selection other than "I really like their work".

The goal of this portion is to get you started on the process of examining different work environments—the structure and work they produce, the or in the case of an individual, the trajectory of their career path. In turn, this will help you identify what setting or concentration you may find inspiring and pursue for employment after graduation.

This research portion should not just contain statistics or a list of the awards they received or simple mundane facts--but what is YOUR perspective. Why you are interested in them? What about this creative environment makes you feel as though you will THRIVE there? How did you first discover them-was it at a lecture in class, or a guest speaker, or you viewed their work online? What do you feel is important about this designer or company? Have they contributed to ideas or projects that have a philanthropic goal? What projects or campaigns have they worked on that you were attracted to? Do they have a mentor program? Do the designers get to travel on photo shoots? Have they won a awards or written any books? (Look on their social media pages, you can get a good idea of what the day to day is like based on the work they are posting (or not posting), the office social functions they may have say on Fridays or company team building events.) Considering all the previous questions but also a personal interpretation of their career or history (if it is an agency or studio), what it may be like to work along side of this person or work in the agency that you have profiled. It would help if you can find some information about the physical environment or offices—what is incorporated into the work environment to be creative or exciting or inspiring? Maybe they have an "all pets are welcome policy" and that would make you super happy, then I want to hear about it!

For the 2 "runner-ups" you will write in total 250 words for each. Maybe the work was not diverse enough, maybe the size of the studio after looking at your other options was not for you, maybe it was the distance to where you think you want to live, maybe it was the type of clients they worked with, maybe you noticed they have a high turn over rate (meaning employees seem to leave quickly), maybe the office looked dark and dull... Your reasons are your reasons! I am looking for you to express what they are.

The one superstar you find to be the most interesting or intriguing, the one that you feel strongly you would like to work at or for after graduation, you will write a minimum of 700 words.

YOUR TOTAL WORD COUNT FOR <u>PART ONE</u> **IS MINIMUM OF 1200 WORDS.**
250 + 250 + 700 =1200

*****If you would like to hand in a page with of examples of work from the superstar you focused on, then you will receive +3 points on your project grade. You must show at least 5 examples of work for it to count. Your grade will not be able to exceed 100% *****

CONTINUED....

PART TWO: REFLECT

Once the research part is written, write a minimum of 500 words to describe your **professional identity** as it relates to your future design environment. What design skills will you bring to the environment that make you fit in. Is it your conceptual skills? Your technical skills? Your mastery of all things motion? Your innate ability to identify the right target audience? Or your ability to mind map the heck out of something? You have unique skills—tell me about them.

Also, what **personal attributes** will you bring to your future design environment? What are your values and beliefs? How or why do they or will they align with your future design environment? How have your experiences (life and college) shaped the designer you are today? What factors influenced you? What makes you special/unique compared to all the other designers out there? I want to know who you are as a designer!

YOUR TOTAL WORD COUNT FOR <u>PART TWO</u> IS MINIMUM OF 500 WORDS.

WHAT YOU ARE HANDING IN ON FRIDAY, MARCH 6 BY 1PM
• 1 hard copy, stapled, with your name on top, handed in the beginning of class
• Digital file (MS Word or PDF only) uploaded to D2L before the beginning of class

D2L
Course Elements
 > Content
  > Week 5
   > PROJECT 02: PAPER/ WHERE WILL I THRIVE?

YOU WILL BE GRADED ON THE FOLLOWING CRITERIA:
1) Grammar, punctuation and spelling, for every mistake I find it will be -1 pt
2) Proper sentence structure
3) Uniqueness of your writing
4) Does the writing flow well, is it easy to follow?

Appendix D
CONSENT FORM

You are invited to participate in a research study being conducted through Kutztown University. We ask that you read this form and ask any questions you may have before you decide whether or not you want to participate in the study. The University requires that you give your signed agreement if you choose to participate.

This study is being conducted by Denise Bosler, Professor, Kutztown University of Pennsylvania

Title of the Study:

How Will I Thrive? Developing Designer Professional Identity Among Undergraduate Communication Design Students

Purpose of the Study:

The purpose of this research study is to investigate how senior communication design students perceive their own professional identity and identify the factors that contribute toward its development.

The study will last one semester.

Procedures:

If you agree to participate in this study, you will be asked to complete an online questionnaire. The questionnaire is estimated to take 30 minutes. The researcher will also review your "Where I Thrive" assignment from CDE 398. Names will be removed from the questionnaire and assignment during data analysis.

Alternate Procedures or Course of Treatment

The questionnaire is also available as a paper version upon request.

Risks or Discomforts, and Benefits of Being in the Study:

There are no foreseeable risks associated with this study. The benefits to participation is the possibility for self-discovery toward one's own professional identity. The information collected may not benefit you directly in any other way. The information learned in this study may be helpful to others.

Confidentiality and Anonymity:

Records will be kept private and will be handled in a confidential manner to that extent. In any report or presentation, we will not include any information that will make it possible to identify a research study participant. You will remain anonymous.

Voluntary Participation:

Your participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Contacts and Questions:

The researcher conducting this study is: Denise Bosler, Department Chair and Professor, Communication Design Department, 610-683-4531, bosler@kutztown.edu

You may ask any questions you have now. If you have questions later regarding the research study, you may contact the researcher listed above. If you have any questions or concerns about the rights of research participants, please contact the IRB Committee at Kutztown University at 484-646-4167.

Compensation:

No compensation will be offered for participation in the study.

Future Research Studies:

Identifiers will be removed from the identifiable private information that, after such removal, the information could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you if this might be a possibility.

Statement of Consent:

I have read the information described above and have received a copy of this information. I have asked questions I had regarding the research study and have received answers to my satisfaction. I am 18 years of age or older and voluntarily consent to participate in this study.

_____

Signature of Participant   Date

Thank you for your participation.