

DEVELOPING PROFESSIONALISM IN HIGHER EDUCATION: CONCEPTUALIZATION
AND PEDAGOGICAL APPROACHES

by

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(Under the Direction of Ikseon Choi)

ABSTRACT

The underlying purpose of higher education lies in enhancing the well-being of society and in supporting the development of relevant professional skillsets that adhere to a level of professionalism in students so they may address social needs. Although universities and academic disciplines focus on the development of students' professionalism with the goal of enhancing their abilities to engage knowledge and skillsets within communities, professionalism and its components represent a wide spectrum of ideas and are not clearly defined in higher education.

Presented as three journal-ready manuscripts, the dissertation consists of the following three chapters which include theoretical and practical examinations of professionalism. The first manuscript (Chapter 2) proposes a conceptualized three-dimensional framework for the development of professionalism in higher education. The three dimensions include domain-specific knowledge and skills, communication with epistemology, and responsibility with reflection. Implications for instruction in higher education are discussed. The following two manuscripts consist of two empirical studies to examine how professionalism is perceived by students and professors. In the second manuscript (Chapter 3), a qualitative study is employed to

understand four incoming graduate students' perceptions of professionalism and learning experiences that promote their development. The findings indicate that community-engaged and interdisciplinary collaborative experiences support the development of professionalism of graduate students. The third manuscript (Chapter 4) reports findings of interviews with three professors in a research institution to understand their perceptions of professionalism and experiences that promoted their development throughout their careers. Findings imply that professors understanding the impact research activities can have on societies, making meaning of their work through research, and interdisciplinary collaborative real-world experiences are related to how they perceive professionalism. The dissertation concludes with overall implications of the three studies, and limitations and suggestions for future research in Chapter 5.

INDEX WORDS: Professionalism, Higher education, Instructional design, Epistemology, Reflection, Community engagement, Interdisciplinary collaboration, Real-world problem solving, Research

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DEDICATION

This dissertation is dedicated to my beloved family. To my father who role-modeled how to live each day to its fullest, thank you for the endless support you have provided for me to achieve my dream. To my mother who selflessly showered me with love, thank you for the unconditional encouragement for me to value this experience and overcome all challenges. To my brother who ensured me I was never alone since day one, thank you for always reassuring me that I have made the right choice. Last but not least, to my husband who inspired me to put in my very best in completing this dissertation, thank you for being my rock and the better half of me. I can't wait to start our new beginning together.

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CHAPTER 1

INTRODUCTION

The well-being of all citizens on local and global levels is directly impacted by the roles that professionals have in the social context. With the three-part mission of higher education adhering to the goals of research, teaching, and service (Binder, Chermak, Krause, & Thacher, 2012), we, as educators, are obligated to train, teach, and develop the kind of professionalism that responds to social needs. Within education, one identified area that can respond to the interconnections between education, training, and societal problems is through the development of professionalism in higher education.

All professionals in higher education, including faculty members and the students preparing for the workforce, should develop professional skills to appropriately apply to different contexts as needed. For example, embracing communities as a partner to negotiate the problems to co-construct meaningful solutions to address global needs can respond to the mission of higher education (Fitzgerald, Bruns, Sonka, Furco & Swanson, 2012). This idea is central in responding to the mission of universities to act as responsible members of society and build the capacity to form a learning community that reflects civic responsibility (Ramaley, 2000). As universities play a significant role in generating a democratic society, professionals should be trained with the potential abilities and attain the accountability to work toward achieving the public good (Ramaley, 2000). For higher education to move forward the ideas of working with communities and valuing social needs, the community of learning should focus on promoting students'

development of professionalism and their abilities to apply their knowledge and skillsets to serve the public as professionals and responsible scholars.

The development of professionalism in connecting knowledge to societies has been frequently discussed in the literature, but there are limitations in this line of research. Ideas around professionalism in higher education have continued. As workers began claiming professional status based on their knowledge (Kunitz, 1974), a search for new self-identities in higher education in relation to professional cultures and social roles emerged (Dzuback, 1993). Nonetheless, professionalism remained a complex and multi-dimensional construct that varied across time and across different contexts (Hodges et al., 2011). Though the awareness of the importance of professionalism has enabled higher education institutions to train learners to contribute knowledge and skills and provide service to the society as professionals, the current fundamentals of professionalism remain content-specific (Fruehwald, 2015; Shrank, Reed, & Jernstedt, 2004; Van der Vorst, 2007). There is no consensus on the best ways to implement professionalism in teaching and learning across disciplines (Foucault, Dube, Fernandez, Gagnon, & Charlin, 2015).

Therefore, to set the groundwork to implement professionalism across higher education, there is a need to theoretically conceptualize the concepts to use as an overarching foundation. The grounded conceptualization of professionalism in higher education will also support the development of learning environments, as currently, professionalism lacks the components to form a generalized awareness across disciplines. The results of the following studies will inform the core of professionalism and the ways to design learning environments that could promote its development.

This dissertation has a strategic approach to 1) define professionalism based on the historical and theoretical foundations and what has been done in practice, and setting a solid groundwork for how professionalism could be trained and reflected in society; and 2) support the sustainable design of generalizable learning environments for professionalism development in higher education, particularly focused on the values of academics and societal needs.

Dissertation Overview

The dissertation encompasses three individual manuscript articles to be submitted for publication. Through an exploratory research design, the studies examine the foundation of professionalism, followed by ways it is perceived by individuals in higher education and possible directions to design learning. The foundation and theoretical conceptualization of professionalism in higher education are reviewed in Chapter 2, and two empirical studies are conducted to gain a better understanding of how professionalism is being perceived by graduate students (Chapter 3) and faculty (Chapter 4) and ways it can be promoted in higher education.

The first manuscript (Chapter 2), *Conceptualizing Professionalism: Toward Design Guidelines to Promote Professionalism in Higher Education*, theoretically justifies the need of professionalism and the level of impact it has on society and reviews the historical development of professionalism. Next, through an extensive review of disciplines in higher education that focus on professionalism, a three-dimensional framework of professionalism is proposed to set the groundwork of professionalism. Types of instructional strategies of professionalism across different fields are then reviewed to discuss the gaps between current instruction and the proposed framework. The paper ends with the implications of the three-dimensional framework of professionalism for instructional design.

The second manuscript (Chapter 3), *Exploring Meaningful Experiences Promoting the Development of Graduate Students' Professionalism*, aims to understand incoming doctoral students' experiences that promoted the development of professionalism. A multiple-case study was employed to conduct interviews with incoming doctoral students that participated in a challenge-based professional skills training program. Experiences in the training program, as well as other professional experiences that influenced the development of professionalism informed the findings. The paper also discusses implications that can enhance the development of graduate students' professionalism.

The third manuscript (Chapter 4), *Exploring the Professors' Perceived Understanding of Professionalism and Ways to Promote the Development in Higher Education*, investigates professionalism of tenured professors with over 20 years of experience in a research institution. The professors' definitions of professionalism, components of professionalism, and experiences that promoted their understanding of professionalism were reviewed and analyzed to inform the grounded ideas that enabled them to take part in community-engaged research activities. The findings also discuss future directions to continue promoting the development of professionalism in higher education.

Chapter 5 presents a summary of the key ideas and implications of the three manuscripts. Limitations of the study and recommendations for future research are also discussed.

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CHAPTER 2

CONCEPTUALIZING PROFESSIONALISM: TOWARD DESIGN GUIDELINES TO
PROMOTE PROFESSIONALISM IN HIGHER EDUCATION¹

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Abstract

One of the goals in higher education is to train learners as professionals of a specific discipline. The ideas of professionals applying the knowledge and skills in the workplace are discussed and valued across different disciplines, but there are gaps in the ways professionals respond to and embrace societal values and needs. This has eventually led to a lack of such emphasis across higher education and has become a challenge for instructional designers to design and implement learning environments prompting professionalism that meet social needs. As a response, this paper discusses and examines professionalism and ways it could be promoted in higher education. The paper begins by theoretically conceptualizing professionalism and proposes a three-dimensional framework of professionalism, including domain-specific knowledge and skills, communication with epistemology, and responsibility with reflection. The three-dimensional framework of professionalism is then used to categorize the various constructs of professionalism across different disciplines. Based on the conceptualization and current reviews of professionalism, instructional interventions and strategies are proposed to guide the development of design guidelines that can be used to promote professionalism in higher education. The paper concludes with future directions for research.

Keywords: professionalism, empathy, reflection, instructional design, learning environments, higher education

Importance of Professionalism for Our Society

Individuals are associated with various groups, but it is oftentimes the professional group that counts as the most significant in an individual's professional life (Adams, Hean, Sturgis, & Clark, 2006). Such close connection an individual has with one's professional being reflects the importance of training as a successful professional. As the design of social structures represents professionals being held accountable in identifying problems and formulating solutions, professionals consider society as an area for their development (Schön, 1983). Although societies and professionals are independent of each other, the nature of such relationships results in professionals being held responsible for the occurring problems in society (Schön, 1983). Roles taken in society are important for individuals as those roles relate to how they perceive themselves within the social context (Cohen, 2008). Therefore, there is profound meaning to understand the interconnections between how professionals identify and position themselves as well as ways they reflect on professionalism to adhere to societal values and needs.

The nature of the relationship between professionals and social structures highlights the degree of influence professionals have in society. The process of "professionalization" of professionals, which is an attempt to translate the acquired special knowledge and skills towards broader society (Larson, 1977; Scott, 1983), describes how the specific knowledge and skillsets of professionals can be embedded in social structures. Thus, supporting learners' development as professionals is essential not only for one's development as a professional but also to respond to the needs of society. Despite the relationships between professionals and social structures, there is a lack of discussion in ways the professionalism of professionals can be reflected towards the broader society and what roles they can take to respond to societal needs.

For learners to acquire appropriate knowledge and skills along with the awareness of social needs, it is important to identify and train learners of the development of professionalism. Higher education was founded on a civic mission for faculty and students to apply their skills, resources, and talents to address important issues affecting communities (Gibson, 2012), and to support the formation of professionalism as learners are trained of those professional cultures and the roles of expertise in society (Dzuback, 1993). With this goal in mind, higher education should provide a naturally transformational process for the learners to develop as professionals with the knowledge, skills, and responsiveness to social needs.

Current Challenges in Education

Research has emphasized the importance of preparing learners as professionals through professionalism development training in higher education programs across various disciplines (Kunitz, 1974; Lueddeke, 2003), but its actual developmental process has rarely been stated in the curriculum (Hurst, Cleveland-Innes, & Hawranik, 2013). Although some fields have integrated the development of professionalism as part of the curriculum, the nature of it being content-specific shows variations in what professionalism entails and how it can be equally promoted across disciplines. For example, there are variations in the types of knowledge and the portrayal of skills and behaviors across different disciplines, as well as in the descriptors of professionalism.

Following these different descriptions and perceptions of professionalism across disciplines, ways to design learning environments that support the development of professionalism also remains unclear. To respond to this ambiguity, it is important for the field of learning, design, and technology (LDT) to be mindful and design learning that promotes professionalism and move forth to make instructional contributions to other disciplines.

Although LDT continues to identify various types of teaching and learning approaches to respond to different forms of learning outcomes (Jonassen, 2000), there is very limited discussion of professionalism and how LDT can act to serve the public expectations in society (Yusop & Correia, 2012). Thus, understanding the needs and developing appropriate instructional strategies and/or learning designs to facilitate learning of professionalism in higher education should become the foundation in promoting the development.

Numerous studies around what defines professionalism exist (Kouchaki, 2015), but limitations are found in the review and analysis of characteristics that are required to reflect professionalism in learning, along with instructional strategies that promote the development of professionalism. The identified challenges facing the research around professionalism remain unclear as it has multiple characteristics and descriptions, it is under-researched and lacks a solid theoretical foundation (Kolsaker, 2008). The limitations around what professionalism is and how it can be promoted are the ambiguity that currently lies in the line of research.

Through this paper, we argue the importance of professionals portraying professionalism as expected by society and make an attempt to propose ways to integrate the development of professionalism into learning. We leverage the foundation of professionalism and instructional strategies that can guide educators and instructional designers to promote the development of professionalism. The structure of the paper explores constructs of professionalism through a review of literature to inform a theoretically conceptualized understanding. Professionalism is first introduced through a historical review to set a solid foundation. The three-dimensional professionalism framework is then founded on a common ground that sets up a theoretical premise to guide professionalism. Next, the dimensions of the framework unfold to examine the constructs of professionalism currently being applied in different disciplines. Instructional

interventions and strategies to develop design guidelines for professionalism development in higher education are discussed, and the paper concludes with directions for future research.

Professionalism: Setting Up its Foundation

A critical historical review of professionalism has meaning to better understand how the terminology has developed and positioned itself over time. As professionalism is rooted within the terms including *profess*, *profession*, and *professional*, understanding how these terms have evolved over time and have been defined throughout history will empirically set the foundation of how professionalism should be discussed.

History

The history of the term *profess* traces back to the early 14th century (Webster dictionary). The term is stemmed from the Latin noun *professio*, and its past participle *professus* of the verb *profiteri*, which means to “declare publicly, own freely, acknowledge, avow,” which was adopted into the English language (Kimball, 1992). In the 14th century, *profess* was used to describe an act that administers the vow of a religious order, and in the 16th century, the term *profession* was being used as a noun to describe the work.

Profession followed the cultural ideologies and historical events of its time and was first used to refer to religious vocations. Eventually, *profession* referred to both religious vows as well as learned vocations or professions. Those who were licensed to teach subject areas in the universities (e.g., theology, law, medicine, educators) soon began to take on the name of profession and professionals (Sullivan, 2005). By the 19th century, the aspiration to look into diverse fields of knowledge for human advancement emerged in society, and the nature of those in higher social classes being able to pursue higher education at the time became capable to establish themselves as professionals (Burns, 2014). The elites became interested in the new

ideas of science as an intellectual authority of new discoveries, and soon professions were used to represent the elites' level of knowledge as well as their social standings (Burns, 2014; Kimball, 1992).

By the early 20th century, the university systems began reconstructing in the United States, and the emergence of specialized knowledge and disciplines allowed universities to adapt and teach various disciplines (Sullivan, 2005). This marked the period for the rise of modern professions (Sullivan, 2005), and *professor* was being used to refer to educators in the universities, which eventually distinguished the two terms, professional and professor (Kimball, 1992). This period conceptualized the ways professionals were represented. Over time, the concept of the elites were being rejected by society, and the rise of egalitarianism, modern professions, as well as economic and social changes structured the professions to question the values and viability of professional work as beneficial for the public or private sectors (Cochran Jr., 2014; Sullivan, 2004). Following the trends since the 20th century, the conceptions and debates of what makes a professional and whom the professionals are benefitting is still in question with the advancement and the emerging professions in society today.

All in all, historical trends imply that those who were scientifically trained, licensed, and professed an ethic of service to clients in the public began being referred to as professionals (Sullivan, 2005). By examining the historical roots, it can be assumed that the professions were specifically geared towards disciplines or vocations of the individuals that were granted with educational opportunities. The cultural ideologies since the medieval times have made it possible for those individuals with vocations or the elite groups to be identified as those having professions with moral dedications by practicing theology, law, medicine, and eventually professors. Professionals in the past were responsive to the emerging cultural ideologies during

the time, which has transitioned over time. However, following the current cultural ideologies in our postmodern contemporary society, educational opportunities are no longer geared towards specific groups and social classes, but a standardized form that provides learning opportunities for all. Therefore, although it is important to embrace the historical roots of a professional, following the trends of the current society to examine how professionals should reflect professionalism is necessary.

Our Definition of Professionalism

Following egalitarian principles of the early 20th century, there have been variations in how scholars have defined professionals and professionalism. The origin of discussing professionals in higher education can be traced back to Flexner, who first evaluated and proposed the needs to promote professionalism in medical schools across the United States. Traditionally, a professional has been described as a “professional” as someone who takes the opposite roles of an “amateur” (Flexner, 1915). A professional was classified as a person being identified as a professional with the following characteristics: (a) one who makes contributions outside of just an academic degree, (b) devotes entire time into work, (c) is altruistic with motivation, and (d) is involved in essentially intellectual operations with large individual responsibilities. In defining professionals and the work they do, Kunitz (1974) described professionals as individuals with special knowledge and claims a professional status. Further, Freidson (2001) distinguished professional work from craft-work. He described craft-work as a work product that does not ask for further interpretation from the public, and professional work as work that responds to the changing technological and social situations that are needed for professionals to interpret and translate the results of the work to the public. Evans (2008) proposed three categories of professionalism: *demand* or *request*, which demands specific

professional service levels or requests made from occupational groups; *prescribed*, recommended professional service levels by analysts; or *enacted*, professional service that is observed, perceived, and interpreted. Evans (2008) asserted that enacting professionalism is a meaningful conception as it the only category that reflects the reality of it. She then conceptualized professionalism as a reflection of daily practices: “professionalism-influenced practice that is consistent with commonly-held consensual delineations of a specific profession or occupation and that both contributes to and reflects perceptions of the profession’s or occupation’s purpose and status and the specific nature, range and levels of service provided by, and expertise prevalent within, the profession or occupation, as well as the general ethical code underpinning this practice” (p. 29).

We define professionalism as a standardized concept that transfers the individual’s acquired knowledge and skills into the broader society. Professionalism is an intellectual activity that is connected to a specific responsibility (Flexner, 1915), and as a way for professionals to engage with societal values (van Mook et al., 2009). This social responsibility, which all professionals should adhere to, therefore, the act to apply their specific knowledge and skills into social constructs.

Three-dimensional Framework of Professionalism

To propose and guide learning to promote professionalism across different disciplines, we analyzed features across different domains and disciplines to develop a three-dimensional framework of professionalism that leverages its ideas in a common form. Some ideas related to professionalism described through literature included the following: professionals developing knowledge and skills (Butler, 2016), understanding the current needs of self, others, and society (Iser, 2003; Koehn, 1991), forming self-identities within the social context (Brownlee &

Berthelsen, 2008), and being aware of the socially responsible goals within their acknowledged professions (Mahajan, Aruldas, Sharma, Badyal, & Singh, 2016; Wollenburg, 2004). These ideas were interwoven to the three-dimensional professionalism framework, which was developed by taking the following steps. An initial literature review to understand the current descriptions of professionalism was conducted, by searching for the following key terms: professionalism, and higher education and/or graduate education. Forty scholarly reviewed journal articles that provided general descriptions and discipline-specific descriptions (e.g., medical education, engineering, teacher education) of professionalism were reviewed. After the themes and descriptions of professionalism were identified through the initial review, the findings were categorized into three dimensions. After the dimensions were developed, the key themes of the dimensions and its attributes were further reviewed. As a result of this comprehensive review, we propose the following as the three dimensions of professionalism: *domain-specific knowledge and skills*, *communication with epistemology*, and *responsibility with reflection*.

Domain-specific knowledge and skills describe the knowledge and skill the professional holds, which can be extended out from academic settings and adapted to meet real-world needs. Communication with epistemology focuses on professional meaning making, such as developing and validating new knowledge and information to expand on those meanings, then becoming accustomed as professionals to meet the requirements expected by society. Responsibility with reflection is the understanding and the willingness of the professionals to look beyond oneself and be able to apply the professional knowledge and skills into the larger community to provide benefits to society.

These descriptions of the dimensions translate from the professional acquiring the competence in knowledge and skills in a professional discipline and then transfer the competency towards social contexts as the levels of epistemology and a sense of responsibility for the real world increase. The definition and aim for each dimension are presented in Figure 2.1. The three dimensions are represented through a Venn-diagram because the founded ideas of the dimensions and attributes may overlap across each dimension through the transfer of features between knowledge acquisition and the societal applications.

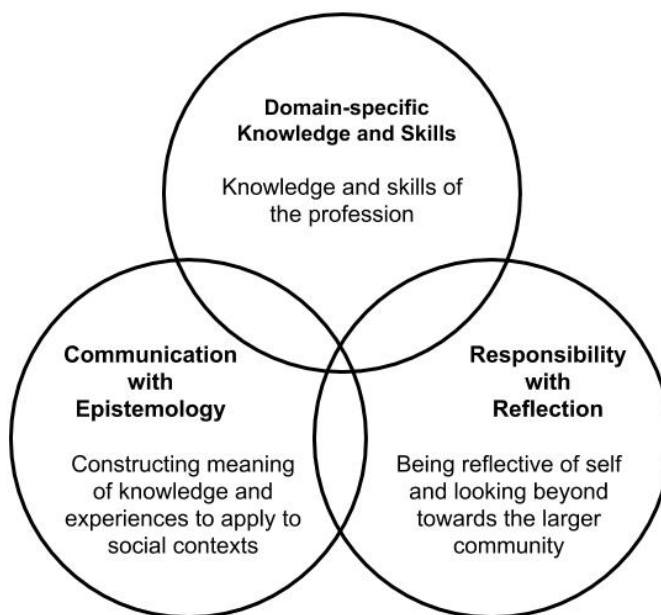


Figure 2.1. A three-dimensional framework for the development of professionalism

The rationale for each dimension is further elaborated below with descriptions of its attributes, as well as how these professionalism dimensions should be reflected by professionals.

Dimension I: Domain-specific Knowledge and Skills

Domain-specific knowledge and skills both serve as the foundation for the professional to perform deemed tasks in the academic setting as well as in the real-world context, which highlights and follows the historical values of how professionalism has developed over time

through education. Ideas of how professionals can overcome the disparities between academics (knowledge) and the real world (society) by using the domain-specific knowledge and skills in one's field and utilizing the expertise to contribute to and solve societal needs should be the goal all professionals to be mindful of. However, there is no existing manual to follow for professionals to work within the nature of the real world (Ryan & Carmichael, 2016) in considering ways for professionalism can be reflected in the context. Knowledge and skills are both essential to work performance and complement each other (Freidson, 2001), and being competent in acquiring knowledge and skills of the profession is a critical skill set of a professional. Thus, the professionals' competence of the knowledge and skills should be structured to meet the demands of society. Ways in which domain-specific knowledge and skills are defined and needed for the development of professionalism are further discussed below.

Knowledge. Knowledge refers to the information known in each context (Reigeluth & Carr-Chellman, 2009). The extent of knowledge in professionalism includes the individual having disciplinary, technical knowledge and skills in one's field of expertise (Hancock & Walsh, 2014; Stern, 2006), and having the capabilities to engage in interdisciplinary discussions with others (Hancock & Walsh, 2014). A professional's acquired knowledge can oftentimes be reorganized as one's own elements of ideas and/or thoughts (Romiszowski, 2009). Particularly in higher education, aside from acquiring the content knowledge, understanding the knowledge construction process to transfer knowledge to meet various situational demands should be a necessary skill for all learners to develop (Adams et al., 2006). Following these ideas behind how knowledge is developed and processed, the ways in which knowledge is structured describes the professional's construction of what one knows and how that is being understood. As one of the essential features in the development of professionalism lies in the professional having a

knowledge base from a theoretical and practical sense (Bastian & Yakel, 2005), the process in which theoretical knowledge is structured and how that can be used in practice in the real world is a key feature in competency development.

Skills. Skills refer to the capacity of the individual to perform given tasks and abilities to execute those tasks (Romiszowski, 2009), and can oftentimes be developed through experience and practice (Reigeluth & Carr-Chellman, 2009). Because executing skills is an outcome of what the individual knows, skills are generally applied after the individual has learned the applicable knowledge that follows (Schön, 1983). Likewise, real-world applications of skills are driven by relevant professional knowledge and understanding of the professions. As professional knowledge is directly related to solving problems in society (Cohen, 2008; Larson, 1977; Scott, 1983), the application of problem-solving skills through the integration of professional knowledge and skills is also critical. Problem-solving skills, recognized as one of the most important learning outcomes for learners (Jonassen, 2000), are skills all professionals should possess as it is oftentimes related to solving unpredictable problems faced in everyday practices (Hong & Choi, 2011; Jonassen, 1997).

Within the context of professionals applying the acquired knowledge and skillsets in society, building a level of competence through bridging the gaps between the classroom and the real-world context for a successful application is important to consider in designing instruction. The individual's critical and active engagement with academics, and having real-life experiences with other students and professionals in related fields can provide the necessary skills to develop as a professional both in and out of the classrooms (Ryan & Carmichael, 2016), as well as developing pedagogical understanding of the real world outside of academics (Hancock & Walsh, 2016).

Dimension II: Communication with Epistemology

Along with the importance of professionals applying knowledge and skills, it is also essential to understand the context in which the knowledge and skills get applied. In professionals applying what they know, it is essential for them to be aware of the influences their practices can have on the context (Freidson, 2001). The history of professionalism has shown the different criteria of professional remarks, which were heavily influenced by the political, economical, and social conditions during that time. Freidson (2001) suggests that because the knowledge and skills have varying degrees of influence it has across disciplines, the scope of professional epistemology should vary. We focus our definition of epistemology as a form of communication, through professionals making meaning of their work and having empathy.

Literature has suggested that knowledge is the action in itself and should be responsibly applied and used to solve problems and provide solutions (Schön, 1995). In acknowledging knowledge as applicable as action, the features of personal epistemology explain the nature of knowledge, including its certainties and uncertainties, complexities and beliefs about oneself and how he or she learns are known (Louca, Elby, Hammer, & Kagey, 2004; Schommer-Aikins, 2004; Schön, 1995). Therefore, the epistemic beliefs become more relevant in representing professionalism as an action as the professional's perceptions of knowledge and skills, and how those philosophies can be placed and for what purpose it is valued upon are all highly dependent on those beliefs, which can also influence ways knowledge is applied and communicated in society. The ideas of knowledge and social contexts intertwining and influencing society also responds to the historical foundation of how professionals worked for the public good.

Epistemology is an area of philosophy concerned with the nature and justification of human knowledge, and its development and beliefs are focused around "how individuals come to

know, the theories and beliefs they hold about knowing, and the manner in which such epistemological premises are a part of and an influence on the cognitive processes of thinking and reasoning” (Hofer & Pintrich, 1997, p. 88). As professionals come to understand their knowledge and beliefs and ways to apply them, communicating the ideas become critical as they position themselves as professionals. In response, we have classified and categorized the traits of epistemic behaviors that can influence ways professionals to reflect their competence and beliefs in the context. Specifically, professionals creating meaning of their knowledge and having a sense of empathy in interaction with others are further discussed.

Creating meaning beyond knowledge. Professionals applying their knowledge and skills to society depend on their personal justifications of beliefs. As how it is applied influences the context, it becomes critical for the professional to consider their levels of knowledge, as well as others’ perspectives and viewpoints. Such an understanding adheres to the characteristics of professionalism as the professional comes to consider and understand the meaning of their behaviors in relation to the well-being of others and the social contexts. In particular, the development of epistemological beliefs from a social constructivist perspective describes the process of learners constructing and making meaning of experiences through what those experiences mean to them based on their current perspectives and interpretations of the context (Baxter Magolda, 2004). Therefore, it is imperative for professionals to develop their scope of meaning by envisioning the extent to which their knowledge and skills can be communicated and applied in society.

In the process of knowledge development, along the lines of interdisciplinary mindsets being critical, generating solutions for social and practical problems are also critical in justifying the needs for such knowledge to come into place (Nissani, 1997). Hence, it is important for

professionals to develop their scope of meaning by envisioning the extent to which their knowledge and skills can be communicated and applied to society. As the increase in knowledge allow professionals to shift their existing epistemological beliefs to a greater extent (Schommer-Aikins, Duell, & Barker, 2003), looking into the process of meaning making to interpret and communicating knowledge based on social constructs, and having their epistemological beliefs become socially constructed is recommended as a way to frame how they make meaning beyond knowledge.

Empathy beyond sympathy. Sympathy explains one's compassion or concerned response to the other person's plight and hardships (Gruen & Mendelsohn, 1986; Wispé, 1986), whereas empathy is the shared affective state of experiences of whom the person is empathizing with (Steinberg, 2014), and is the capacity of the individuals to experience other's feelings, ideas, and consciousness (Eisenberg & Strayer, 1990). Whereas the act of sympathy is to understand the situations of others, the act of empathy goes beyond sympathy and objectively experiences the situation. In interacting with others, both sympathy and empathy can influence the relationships and in ways the interactions occur. However, there are differences between sympathy and empathy in the capacity of understanding others' points of views. As empathetic behavior is essential in relation to communication skills (Carrell, 1997), these behaviors become important in interacting with others. Empathy is epistemologically necessary as "empathizing with others helps the person gain information about the other that would have been unavailable via other means" (Masto, 2015, p. 85). In meeting the expectations of professionals as anticipated by society, professionals are expected to portray epistemic responsibilities through empathy, as it helps fill in the gaps in areas epistemic beliefs could not adhere to (Steinberg, 2014). For example, as individuals draw on personal beliefs and values to shape understanding

and respond to professional situations (Hannah, Ingram, Kerr, & Kelly, 2014), having a developed sense of empathy lead professionals to communicate and engage with others through a level of interaction that is beyond sympathy. Some of the known principles of empathy include the individual being open-minded of the situation, and at the same time portray intellectual and altruistic behaviors (Crandall & Marion, 2009), which reflects professionalism in a mutual way but relates to other people and situations at the same time. As professionals should be mindful of their surroundings, developing a sense of empathy can influence the premises of their thinking and reasoning of self as well as of others.

Dimension III: Responsibility with Reflection

Throughout the 19th century, professionals secured their positions within social constructs, which has eventually enabled them to be responsible and maintain public values by utilizing the knowledge and skills that were needed (Sullivan, 2005). To successfully use the professional knowledge and skills in ways it benefits the society, we propose the following two criteria that are needed of professionals: being reflective of the profession, and understanding the accountability as well as the responsibility that is demanded by the profession.

One way for professionals to develop their self-identities as professionals while withholding the appropriate responsibilities as needed is by being reflective of their surroundings (Neve, Lloyd, & Collett, 2017). As professionals become reflective of themselves and their surroundings, they become more mindful of the various contributions they can make based on their social standings. To that end, the final dimension focuses on the significance of reflection in professionalism and argues the importance of professionals being reflective of oneself as well as of the social context.

Reflection of self. Reflection is a mental process that allows individuals to look internally and reflect on themselves, as it helps develop greater insights and thoughts of their own practice (Ixer, 2003). The professionals reflecting on their doing process allow them to apply the knowledge into context (Schön, 1995). Being reflective allows individuals to consider their possible course of action to decide on the knowledge and skills that can be best applied in various situations (Ryan & Carmichael, 2016), and to solve ill-structured, real-life problems (Jonassen, 2000). Although there is no existing blueprint in professionalism to deal with the complexities and unexpected events, professionals reflecting on their competence can help in making effective decisions and appropriate actions to pursue (Fruehwald, 2015; Ryan & Carmichael, 2016). As professionals are aware of and build on reflective skills of uncertain problems found in the real world, it enables them to naturally become aware of their surroundings in social situations.

During the reflective process, individuals not only think about what is being done but also about what can be done during the ‘doing’ process (Schön, 1983). These self-reflection processes allow them to undergo significant personal transformations (Mezirow, 1997). The process of reflection, therefore, allows the individuals to reflect on their understanding that was formed due to past experiences, and are able to identify contributions or changes that can be made to current situations (Schön, 1983). These ideas suggest that professionalism should not only be identified with the professional’s competence but that being reflective is a “legitimate form of professional knowing” (Schön, 1983, p. 69). Instead of professionals focusing on the knowledge and skillsets as the only factors that represent professionalism, being reflective of how their expertise can be utilized towards solving real-world, societal problems support the successful implementation of competence.

Reflection for social responsibility. Although there is a lack of criteria for solving the complexities and unexpected events in society in the literature (Ryan & Carmichael, 2016), it is known that people naturally become mindful towards society as they become aware of their own reflective skills (Johns, 2000). Professionals should progress with abilities to see beyond the scope of self-development and develop skills to look at the larger scope of knowledge being applied in society. Professionals reflecting on their act of doing as well as on the result of those actions (Schön, 1995) should enable them to become socially responsible and work to meet social expectations (Hurst et al., 2013).

For professionals to develop social responsibility, training them to possess abilities to be reflective and practice those skills in context should be one of the learning goals in higher education, as it aligns with the idea of professionals being developed into socially responsible thinkers (Mezirow, 1997). As individuals should have intellectual, emotional, and social complexity to meet societal needs, they should be trained as professionals that have reflective skills and abilities to apply knowledge into their own practice to identify and support the need of social contexts (Chickering, 2010).

Our proposed three-dimensional framework explores professionalism constructions through a review of literature to inform a theoretically conceptualized understanding of its nature and ways to expand out on the professionals' abilities towards the community and the larger society.

Exploration of Professionalism in Education

To set the three-dimensional framework as a common form for different disciplines to use to guide the learning of professionalism, we first examine instructional strategies that are currently being used in higher education. We review ways professionalism is discussed and

implemented in different disciplines in higher education, to deconstruct professionalism features and categorize them through the framework.

Why Do We Need Professionalism in Higher Education?

Higher education has been identified to respond to social issues on local and international levels, as well as to have responsibility for the well-being of human development (Yob, 2016). As higher education supports the formation of professionalism of learners as they become trained of their professional contexts, designing learning environments founded on the professionalism framework will add to a new scholarship that allows learners to develop their own culture, values, and goals of learning.

In higher education, ways to promote learners' development of the desired skill is to expose and guide them to experiences that help them develop and enhance specific skills as required by the field upon graduation (Paglis, Green, & Bauer, 2006) and meet societal expectations (Austin, 2002). This implies the need to design learning in ways learners have opportunities to progress into professionals as expected by the discipline and society. Moreover, although various disciplines support the development of professionalism of learners, there is a limitation as the variations do not account for different professional groups (Dzuback, 1993; Geison, 1983). Current research also has gaps in responding to how professionalism can be structured and developed in higher education (Geison, 1983; Hurst et al., 2013).

For all higher education programs to uniformly design instruction that supports students' development of professionalism, it is imperative to understand how different disciplines are currently promoting professionalism to propose design guidelines that are commonly grounded.

Conceptualizing Professionalism Across Disciplines in Higher Education

As discussed previously, the development of professionalism in higher education has been context-specific in its discussion. By reviewing the different concepts of professionalism, we conducted a review of the three most prominently discussed disciplines that had significant volumes of literature around professionalism development in the curriculum.

Medical education. Medical education has been active in promoting the development of professionalism within the curriculum, with professionalism being one of the core factors that provide high-quality patient care (Li, Ding, Zhang, Liu, & Wen, 2017), and defined as the ultimate goal of doctors (Barilan & Brusa, 2013). Professionalism education was commonly associated with emphasizing the practitioner's decision-making abilities, skills determining medical errors, relationship building with patients, as well as the patients' levels of satisfaction and their health outcomes (Archer, Elder, Hustedde, Milan, & Joyce, 2008). The medical field perceived professionalism through clinicians having technical as well as clinical competence, good communication skills, and ethical and legal understanding, and their principles resting on excellence, humanism, accountability, and altruism (Fishbein, 2000; Stern, 2006). Although Inui (2003) described role modeling as one of the most powerful influences on the development of professionalism, there were no instructional models to support the design and development of the medical curriculum to teach and assess professionalism, which accounts as an explanation for a rather unsuccessful training of professional skills in the field (Archer et al., 2008).

Engineering. Engineering societies have associated engineering and professionalism to work towards benefit for humanity and proposed an Engineering Code of Ethics to ensure public safety, health, and welfare (NSPE, 2017). The code of ethics has been controversial due to the misalignment between engineering implications and individual ethics (Lynch & Kline, 2000;

Stieb, 2011). Nonetheless, professionalism and its related ethics have been described as “aspirational ethics,” which explains the use of professional knowledge to promote human good (Harris Jr., 2008), and included ethics as a professional responsibility, which is defined as an individual’s ethical responsibility that arises from special knowledge (Herkert, 2000). Domains of professional education reported in engineering included having demands for engineers to acquire specialized knowledge and good judgment for the service of society (Sheppard, Colby, Macatangay, & Sullivan, 2007). Aside from societal issues, the importance of engineers acquiring professional skills in addition to technical knowledge such as collaboration, problem-solving and decision-making abilities, conflict resolutions for success in the workplace, were also identified (Mohan, Merle, Jackson, Lannin, & Nair, 2009).

Teacher education. The professionalism of teachers have discussed the importance of developing personal epistemological beliefs (Brownlee, Thorpe, & Stacey, 2005), and ethics training to help the teachers reflect on their actions and ethically consider their practices (Maxwell & Schwimmer, 2016). Besides the types of professionalism training that are necessary for teachers to acquire the professionalism characteristics, other discussions were focused on how teachers personally perceived their performance of professionalism. For example, for child educator professionals, strong professionalism was defined through having high levels of satisfaction and competence in the workplace and receiving frequent recognition as a professional from others (Harwood & Tukonic, 2016). As for characteristics of a professional, “professional educators” were suggested to being reflective and self-critical as leaders in their workplace (Dalli, 2007), as well as being reflective of past experiences (Cohen, 2010). Nevertheless, ever since the public-school system was introduced in the 19th century, questions

around what professionalism is, how it can be defined and by whom, were found to be consistent struggles in the field of education (Bourke, Lidstone, & Ryan, 2015).

The review of the overarching descriptions and necessary skills of professionalism across different disciplines reveal the variations in how it is constructed. Values are put toward the professionals' obtained knowledge and skills and how they reflect the knowledge, as well as how the knowledge and skills can be applied into social contexts. Such findings add to our argument in selecting higher education as an appropriate learning context to apply training of professionalism. To denote the effectiveness of using the professionalism framework as the foundation to promote its development in higher education, we deconstruct the features of professionalism found in literature and categorize them through the proposed framework. Refer to Table 2.1.

Table 2.1

Conceptualizations of Professionalism Across Different Disciplines

Disciplines	Discipline-specific professionalism features	Discipline-specific skills of professionalism	Three-dimensional framework professionalism attributes	Three-dimensional framework professionalism
Medical education	Technical competence (Stern, 2006)	Determining medical errors (Archer et al., 2008) Decision making (Archer et al., 2008)	Knowledge, skills Knowledge, skills	Domain-specific knowledge and skills Domain-specific knowledge and skills
	Clinical competence (Stern, 2006)	Patients' health outcomes (Archer et al., 2008)	Knowledge, skills, reflection for social responsibility	Domain-specific knowledge and skills; Responsibility with reflection
	Good communication skills (Stern, 2006)	Patients' satisfaction (Archer et al., 2008)	Creating meaning	Communication with epistemology

	Professional obligations (Stern, 2006)	Relationship building with patients (Archer et al., 2008) Excellence and commitment (Stern, 2006)	Creating meaning, empathy Knowledge, skills, creating meaning, reflection of self	Communication with epistemology Domain-specific knowledge and skills; Communication with epistemology; Responsibility with reflection
		Humanism (Stern, 2006)	Empathy	Communication with epistemology; Responsibility with reflection
		Accountability (Stern, 2006) Altruism (Stern, 2006)	Reflection of self Empathy	Communication with epistemology; Responsibility with reflection
Engineering	Moral and vocational satisfaction (Lloyd, 1973)	Responsibility (Lloyd, 1973)	Reflection of self and social context	Responsibility with reflection
		Ethics of service (Lawson, 2004)	Creating meaning, reflection	Communication with epistemology, responsibility with reflection
		Motivation for service and self-expression (Lloyd, 1973)	Reflection of self	Responsibility with reflection
		Social duty (Lloyd, 1973; (Sheppard et al., 2007)	Reflection of self and social context	Responsibility with reflection
	Engineering practices (Sheppard et al., 2007)	Specialized knowledge (Lawson, 2004; Sheppard et al., 2007)	Knowledge, skills	Domain-specific knowledge and skills
		Problem-solving skills (Mohan et al., 2009)	Knowledge, skills, reflection of self	Domain-specific knowledge and skills; Responsibility with reflection

		Decision making (Mohan et al., 2009)	Knowledge, skills, reflection	Domain-specific knowledge and skills; responsibility with reflection
		Conflict resolution (Mohan et al., 2009)	Skills	Domain-specific knowledge and skills
Teacher education	Competence (Harwood & Tukonic, 2016)		Knowledge, skills	Domain-specific knowledge and skills
	Job satisfaction (Harwood & Tukonic, 2016)	Recognition from others (Harwood & Tukonic, 2016)	Reflection for social responsibility	Responsibility with reflection
	Personal traits	Reflective (Dalli, 2007)	Reflection of self; for social responsibility	Responsibility with reflection
		Self-critical (Dalli, 2007)	Reflection of self	Responsibility with reflection

Aligning the Professionalism Framework to Higher Education

The three-dimensional professionalism and its attributes have been unfolded through categorizing the components of professionalism across different disciplines. The categorization evidently supports the feasibility of the professionalism framework; therefore, the ability for individuals to integrate knowledge and skills, develop epistemology and communicate the understanding, and be responsive and reflecting on self as well as the social contexts can be reflected as a basis of professionalism.

Professionalism is compiled of ideas based on scholarly pursuits or knowledge through individual traits, behaviors, and cognitive processes, and should be devoted towards the development of common social good (Flexner, 1915; Sullivan, 2004). For learners in higher education to respond to the connections between knowledge and society, all components should be interconnected while the integration of knowledge and the real world is acknowledged. When

the three-dimensional professionalism framework is grounded in learning, the interconnectedness of knowledge and society will be uniformly promoted across all disciplines and train professionals as responsible scholars.

Implications of the Three Dimensions for Instructional Design and Education

Three-dimensional Framework

A three-dimensional framework for the development of professionalism was developed based on literature reviews to integrate the ideas and concepts across different disciplines and propose a theoretically conceptualized form of professionalism. The initial development of the framework has reflected the overarching ideas of professionalism currently being discussed and perceived in higher education, which can be used to continue to promote professionalism as it has proposed possible directions that may guide successful development. The framework may also promote the preliminary development of the design guidelines that can be used in designing learning environments as it can indicate ways in which learners develop as professionals through instructional models and interventions. The below section reviews and discusses the possible instructional interventions that may be used in promoting learners' development of professionalism.

Design Guidelines to Promote Professionalism in Learning

To provide adequate learning experiences for professionalism in higher education, implications for designing instruction are needed. Therefore, we reviewed literature that implemented instructional interventions in learning to categorize them based on the features of the three-dimensions. As a result, we propose the following instructional implications to guide instructors to design learning environments that promote professionalism as both a learning goal and a learning outcome.

Reviewing different instructional strategies to develop professionalism revealed variations in the types of instructional models and instructional interventions. Therefore, we created three different categories of instructional models, *educational programs*, *learning models*, and *learning strategies*, and classified each instructional intervention into the three models. The instructional interventions were then further reviewed to align the purpose as well as ways it can promote domain-specific knowledge and skills, communication with epistemology, and responsibility with reflection.

Instructional interventions that engage learners through learner-centered inquiry-based approaches and application authentic contexts were learning environments that support professionalism (See Table 2.2). Specifically, external supports that focus on professionalism development were described (e.g., professionalism development retreat (Chauvin, 2002), workshops (Hurst et al., 2013), community engaged experiences (Freeman, Chambers, & Newton, 2016)). Moreover, instructional interventions that are learner-centered and train for self-development, support collaboration, and integrate real-world contexts into learning experiences were commonly found (e.g., process-facilitating strategies (Sheppard et al., 2007), practical training (Mahajan et al., 2016), inquiry-based self-learning (McNair et al., 2011), problem-based learning (Goldie, Dowie, Cotton, & Morrison, 2007), case-based learning (Elliott et al., 2009), role modeling (Fishbein, 2000), reflective activities (Branch Jr., 2010, Fruehwald, 2015), peer learning (Tai, Canny, Haines, & Molloy, 2017)). Table 2.2 further details the instructional models and interventions that can be used to support the development of the three dimensions.

Table 2.2

Instructional Interventions of Professionalism

Instructional models	Specific instructional interventions	Developmental category		
		Domain-specific knowledge and skills	Communication with epistemology	Responsibility with reflection
Educational programs	• Professionalism development (Chauvin, 2002)			✓
	• Community experiences (Freeman et al., 2016)	✓	✓	✓
	• Workshops: skills building, resource building, personal management strategies (Borsen & Antia, 2013; Hurst et al., 2013)	✓		✓
	• Seminars (Koehn, 1991)	✓		
Learning models	• Problem-solving (Archer et al., 2008; Sheppard et al., 2007)	✓		✓
	• Process-facilitating strategies (Sheppard et al., 2007)	✓		✓
	• Enquiry-based self-directed learning (EBL) (McNair et al., 2011)	✓		✓
	• Problem-based learning (Goldie et al., 2007)	✓		✓
	• Practical-training (Mahajan et al., 2016)	✓		
	• Experiential learning (Branch Jr., 2010)		✓	✓

	• Integration of interrelated topics (Herkert, 2000)	✓		✓
	• Case-based learning (Elliott et al., 2009)	✓	✓	✓
Learning strategies	• Reflective activities and learning (Branch Jr., 2010; Chauvin, 2002; Goldie et al., 2007; Fruehwald, 2015; Hancock & Walsh, 2016; Knapp, Gottlieb, & Handelsman, 2017) • Role-modeling (Fishbein, 2000; van Mook et al., 2009) • Situational contexts: ethical and moral situations (Foucault, Dube, Fernandez, Gagnon, & Charlin, 2015) • Peer learning (Tai et al., 2017) • Point-of-view writing (Shapiro, Rucker, Boker, & Lie, 2006) • Case-discussions (Elliott et al., 2009)	✓	✓	✓
		✓	✓	✓
		✓	✓	✓
		✓	✓	✓

These instructional interventions imply the importance of enhancing disciplinary knowledge and skills and continuously advancing learning to extend out to real-world contexts to transform learners to take accountability of the competence and society as professionals. For this reason, designing learning environments by embedding these instructional interventions across

higher education will be valuable in equally supporting professionalism development, so all forthcoming professionals become immersed to find meaning in the work they do.

Conclusion

Although characteristics of a professional and what knowledge and skills one should obtain in specific disciplines continue to be discussed, an overarching framework reviewing the development of professionalism, and uniformly set of instructional strategies that contribute to its development were missing in the literature. In response, a three-dimensional professionalism framework was proposed to emphasize professional effectiveness from a generalized scope, by extending the learner's professional abilities towards the community as well as the larger society. By honing in on the importance of the development of professionalism in higher education, the framework examined various characteristics of professionalism, and based on the review, proposed theoretically conceptualized dimensions that can shed light to promote the development of professionalism. Through the dimensions including domain-specific knowledge and skills, communication with epistemology, and responsibility with reflection, the framework considered the ideas of applying knowledge to societies for the public good. The dimensions outlined the components that should be included in the development of professionalism in higher education as it is a context that supports learners to become professionals.

As professionals continue to follow the changing social and cultural constructs (Geison, 1983), we propose instructional implications that can guide higher education in designing learning environments to follow social expectations.

Future Directions

The three-dimensional framework was developed to indicate the dynamics of what is required of professionalism and to propose a common ground to promote professionalism in

higher education. Higher education support learners to develop the necessary knowledge and skills to navigate through the internal and external demands within the learning context (Freeman et al., 2016), so the act to conform to the demands are critical. As this paper notes, professionalism development in higher education is content-specific, so a generalized instructional curriculum is needed to leverage the importance of professionalism. Future research should continue to review literature and conduct relevant empirical studies to enhance the grounded ideas of the framework. Moreover, the development of instructional guidelines that integrate the three-dimensions that interconnects the professional competence and responsiveness to the demands of society may be needed. Continuous efforts to find directions for professionalism to be embedded and used in learning must be addressed to guide instructional designers to design a well-suited learning environment that can be appropriately applied. Lastly, developing methods to evaluate professionalism of learners will inform the areas that are needed for further training and sustainable development.

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CHAPTER 3

EXPLORING MEANINGFUL EXPERIENCES PROMOTING THE DEVELOPMENT
OF GRADUATE STUDENTS' PROFESSIONALISM²

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Abstract

Graduate education influences students as they develop advanced competencies and skills that prepare them as representatives of a specific field. Providing various learning experiences should support graduate students to progress as socially responsible professionals that meet role expectations. Learning experiences that support the development of students' professionalism are discussed in the research, but limitations lie in investigating the details of the development, as well as in generalizing it across different fields. Therefore, this study examines formal and informal learning experiences that influence graduate students' understanding of professionalism across various disciplines and relevant learning experiences that support the development of professionalism. The study concludes with the implications of possible instructional strategies that can be used to promote professionalism in higher education.

Keywords: professionalism, instructional design, learning environments, graduate education

Introduction

In response to the three-part mission of higher education that adheres to the goal of research, teaching, and service (Binder, Chermak, Krause, & Thacher, 2012), graduate students should have the learning experiences to successfully perform these acts upon graduation. It is known that research studies being conducted within universities are mainly driven by graduate education, all while graduate students engage in the activities alongside their mentors and are trained as scientists and scholars of their disciplines (Reithmeier et al., 2019). To promote students' development as researchers responding to the mission of higher education, it is essential for higher education to focus on offering meaningful learning experiences that foster the development. Past studies have informed the importance of students being exposed to research experiences early in their graduate programs to support their research productivity (Paglis, Green, & Bauer, 2006). Through these research experiences, students are able to develop as scholars and producers of research (Feldon, Maher, Roksa, & Peugh, 2016). For graduate education to support students' development as producers of research that provide service to society, an emphasis on research that embraces sustainable scholarly activities should be integrated into the learning experiences to promote their long-term engagement. To sustain students' performance as researchers after graduation, understanding the truly grounded meaning of higher education as well as exploring the role of students can be helpful in responding to the types of research activities they should engage in upon graduation.

Higher education has historically shifted from reaching out to communities to deliver expert knowledge toward engaging with communities to co-create solutions on local, national, and global levels, which are acts of scholarship that advance knowledge and make contributions to society (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2016). Along those lines, professionals

are described as individuals who instill their special knowledge to the needs and values of the social systems and go beyond to provide service to the public (Kunitz, 1974; Larson, 1977). The similarities found between the role of higher education and professionals providing service to society should be intertwined to meet both expectations, with higher education supporting students' development so they become responsible professionals that hold value to respond to public needs and sustain their work as leaders after graduation.

There are various descriptions of professionals discussed in the literature, but the distinctive expectations of professionals lie on their abilities to apply their knowledge in social settings and on the level of contributions they make in societies (Flexner, 1915; Schön, 1983). The act of meeting those social expectations as socially responsible professionals are oftentimes referred to as one withholding and reflecting *professionalism* (Flexner, 1915; Sullivan, 2004). As graduate students enter the field to take roles that directly influence the communities upon graduation, it is critical for them to be aware of the significance of their positions and the level of social responsibility they must adhere to. To instill the significance and meaning of higher education, research, and related activities towards serving the public for graduate students to develop as professionals over time, this study attempts to understand experiences that influence their development as professionals, and learning environments that can be designed in graduate education to support their development as professionals that embrace scholarly activities over time.

Professionalism in Graduate Education

Graduate education has been the learning platform that provides various opportunities for students to engage in meaningful learning experiences, so they develop as socially responsible professionals. However, the process of graduate students' development as professionals have

been rarely discussed (Hurst, Cleveland-Innes, & Hawranik, 2013). As professional identities of individuals develop as they gain insight into the development and actual practices of their professions (Schein & Schein, 1978), graduate students should have the opportunities to learn about their professional identities including the attitudes, values, knowledge, beliefs, and skills (Adams, Hean, Sturgis, & Clark, 2006) and ways to provide service to the public as professionals (Larson, 1977).

Graduate education has emphasized the development of professionalism in the past, but there have been variations in the knowledge and skills describing students' training as professionals. For example, professionalism was described as the professional having acquisition of knowledge that focuses on the development of both knowledge and practice for real-world applications (Bastian & Yakel, 2005), or as the degree in which professionals exhibit unique attributes of that profession (Johanson, 2005). Literature indicates that different academic fields also have varying definitions of professionalism, with the instruction of professionalism development being context-specific and based on the need of the field. For example, medical education, which is a field that has actively engaged in research and development of professionalism in instruction, has historically changed their perceptions of professionalism overtime. Seeing the importance of ethical virtues as professionalism in the beginning has shifted toward physicians portraying behaviors and competencies of professionalism, and currently discusses physicians forming their identities around a community of practice as a construct of professionalism (Irby, 2017). On the other hand, the field of engineering focuses on the students' professional development of technical, societal, and cultural skills needed to become globally competent engineers (Barakat, 2014).

Although different fields have various measures describing professionalism, the descriptions should be highlighted and intertwined for the training of professionalism in graduate education.

Learning Environments in Graduate Education

Graduate students have more value of their attained skills and research activities when the topic becomes not only personally valuable but socially recognized as well (Pabst, 2011). This aligns with the previous discussion that graduate education should be designed for the students to progress as professionals that can naturally engage with the social contexts to serve the communities. As research productivity implies one's commitment to investigate a problem in question (Pabst, 2011), an imperative step to enhance graduate students' professionalism is to design learning environments that expose them to socially-relevant activities and develop commitment to solve real-world problems.

Literature covers a spectrum of learning experiences that instill community engagement of students in higher education. Ever since the imperative mission of higher education to promote service-learning and community engagement was proposed in the mid 1990s (Saltmarsh, Janke, & Clayton, 2015), universities have focused on students' development by developing community-engaged experiential learning environments, such as internship-based learning, service-learning, and curriculums emphasizing work and service (Kovarik, 2010; Perrin, 2014). The different learning pedagogies focused on increasing students' engagement in communities through extending professional knowledge to be used in real-world situations for problem-solving (Perrin, 2014), emphasizing relationship building with communities (Perrin, 2014), and improving academic experiences so then it becomes relevant and meaningful (Kovarik, 2010). These learning activities enabled students to engage in autonomy and

accountability for real-world implications, develop a sense of peer support, strengthen academic learning, and recognize the potential benefits of service-learning.

Moreover, additional efforts are made to design learning strategies that enable students' active engagement in community-related activities. The strategies include experiential learning (Burrell, Finch, Fisher, Rahim, & Dawson, 2011; Karri & Kode, 2011; Lucas, Sherman, & Fischer, 2013) and service learning (Bright, 2016; Levkoe, Brail, & Daniere, 2014; Richards, 2013), in which both strategies integrate theoretical (competence) and practical (real-world) experiences for learners, and provide opportunities for them to find value of their knowledge and skills in the real-world and develop as reflective innovators of knowledge (Harkins, Kozak, & Ray, 2018; Kuk & Holst, 2018). However, despite the effort to set the groundwork for designing learning environments, limitations are still found to enhance students' socially responsible mindsets. All in all, more research should be conducted to examine learning experiences that can be used in instruction to enhance the development of graduate students' professionalism.

Research Statement

Based on the overarching goal of graduate education to promote students' professionalism and the learning environments that can support the development, this study examines the overall experiences of graduate students which influenced their understanding of professionalism, as well as learning experiences that informed understanding of professionalism.

This study will contribute to graduate education as the findings will provide insights of both formal and informal experiences that influenced students' development of professionalism, which can be used to promote learning environments that support professionalism. The study will set the groundwork for how professionalism development can be generalized and implemented across graduate education by examining the following: a) ways first-year graduate

students in different fields perceive professionalism before and after participating in a cross-disciplinary professional skills training program, b) experiences that were significant and influenced their professionalism overtime, and c) learning experiences that promoted understanding of professionalism.

Through analyzing the qualitative data, the study aims to answer the following research questions:

- 1) What are the changes in the students' professionalism before and after the cross-disciplinary professional skills training program?
 - a) In what ways did their perspectives of professionalism change?
- 2) What are learning experiences in the program that can be suggested to promote the development of professionalism of graduate students?
- 3) What personal experiences and/or moments do students believe promoted their professionalism?
 - a) In what ways did the students perceive those specific experiences?

Methods

Research Design

A qualitative study was selected to understand the participants' perception of professionalism across the cross-disciplinary professional skills training program as well as other personal and professional experiences. Qualitative research, which is an open-ended form of research supports the meaning of data that is "socially constructed by individuals in interaction with their world" (Merriam, 2002, p. 3). Under the constructivist paradigm, open-ended questions were used so participants can openly discuss, share, and construct the meaning of their perspectives and experiences, in which patterns of meaning associated with the study were

developed (Creswell, 2014). In collecting and analyzing data, a multiple-case design was employed. Case studies are an “intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community” (Merriam, 2002, p. 8), and it investigates a contemporary phenomenon (the “case”) in depth and within its real-world context (Yin, 2014). As the objectives of the studies were to understand participants’ experiences across different disciplines, a multiple-case design was used to reflect each research participant’s personal and professional experiences as well as their program participation experiences (Baxter & Jack, 2008).

Research Context and Participants

This study was designed and carried out by recruiting participants in a cross-disciplinary professional skills training program, which was funded by the National Science Foundation. A two-semester professional skills training program that provide early exposures to support incoming doctoral students’ development of professional skills that enable them to go beyond academic knowledge and work across disciplines, engage with communities, and develop problem-solving skills to provide sustainable solutions in the real-world context was designed and implemented as a pilot study for three years. Each cohort group of the three-year implemented training program consisted of 13-15 incoming doctoral students that enrolled in a six-week summer leadership academy course during the summer followed by a semester-long challenge course in the fall as they officially enter their program of disciplines. Each week of the summer leadership academy consisted of activities including workshops and guest lectures, panel discussions, and field trips to local communities, and focused on developing students’ problem-solving, leadership, effective communication, teamwork and community engagement skills. The workshops were organized and facilitated by the course facilitators, and content experts and

community leaders were invited as guest lecturers and to participate in panel discussions. All topics were pertinent toward enhancing students' professional skills. During the fall challenge course, students applied their knowledge and skills in collaboration with community experts to design community-related projects that addressed local issues, so they can provide feasible plans and develop sustainable solutions in underserved communities. Students worked in collaboration to engage across disciplines to develop leadership skills and work together to solve community issues.

The nature of this training program in developing graduate students' professional skills through engaging with communities and solving real-world problems was aligned with the objectives of the study. Given the purpose of the study to understand students' professionalism, it was feasible to recruit participants from the training program that contextualized students' development of those skills through formal and informal learning opportunities. Therefore, participants from the training program were recruited as research participants, and a total of four incoming graduate students in the same cohort with 12 students were finally recruited for two pre- and post-interviews. All participants were from diverse disciplines and enrolled in the University to obtain a Doctor of Philosophy degree. Pseudonyms are used across the findings and discussion, with Mia, Lauren, Will, and David as the participants. The four participants were equal in gender distribution with two females and two males, which was not intended in the recruitment process.

Data Collection

Following the constructivist approach, open-ended semi-structured face-to-face interviews (Roulston, 2010) were conducted to gain compelling details and insights on how participants perceive professionalism, and the experiences as well as instructional strategies in

the training program and their personal and professional lives that promoted the development of professionalism.

Interviews are a powerful way to gain insight into educational contexts through understanding the experience of the individuals (Seidman, 2013), and are considered as one of the most important sources of data and a technique most case studies employ (Yin, 2014). To gain insight into participants' experiences before and after the training program, pre- and post-interviews that lasted about one hour were conducted. The questions for both pre- and post-interviews were sent to the participants directly after each interview was scheduled. All interviews were audio-recorded and then transcribed for analysis (check Appendix 3.A for the interview protocol). The researcher met with each participant for the pre-interview at the beginning of the program and asked some of the following questions such as:

- What is your current understanding of professionalism?
- What is a personal experience that has led changes in how you perceive professionalism?
- How do you hope to develop your professionalism through the training program?

The post-interviews were conducted at the end of the training program, which occurred about six months after the pre-interview. Some examples of the interview questions included:

- What is your current understanding of professionalism?
- Through the training program, were there changes in your understanding of professionalism?
- What are some learning experiences in the training program that promoted this change?
- What is a personal experience that has led changes in how you perceive professionalism?

After each data collection, a coding system was employed to use random research numbers to link the codes with the participants for anonymity, and direct identifiers related to the codes were saved in password-protected files.

Data Analysis

Analysis. The research questions guided the analysis of the interviews by coding the data based on each participant's understanding and experiences of professionalism, as well as instructional strategies that promoted the development of professionalism. For research question #1 that examined the participants' changes of professionalism through the training program, pre- and post-interviews were coded to compare and track the changes of their perspectives. As research question #2 aimed to understand personal experiences that promoted changes in the participants' professionalism, both pre- and post-interviews were analyzed to extract personal occurrences. Finally, as research question #3 identified learning experiences that promoted the development of professionalism, examples in post-interviews were analyzed.

For all research questions, concept coding was initially used to generate codes based on participants' experiences to extract the represented meaning and provide a bigger picture of the data (Saldaña, 2016). Generated codes were then themed to further probe the meaning of the coded data, and as a result, overarching themes were found to represent a coherent narrative of the findings (Saldaña, 2016). The themes were then grouped into categories or experiences. A cross-case analysis is used to discuss the overarching findings of the research questions discussion (Yin, 2014).

Trustworthiness. To respond to the uncertainty of data quality and lack of reliability of case studies (Yin, 2014), the following procedures were taken to ensure the credibility of data. First, following the constructivist paradigm (Creswell & Miller, 2000), the interviewer developed

rapport with the research participants by spending time in the training program. The interviewer took notes during data collection as well as after data analysis to develop ideas, and to note any issues as well as personal reactions (Maxwell, 2012; Saldaña, 2016). A peer debriefing process was used to receive feedback on the analysis and interpretation of the generated codes as well as themes. The first author (also the interviewer) generated the initial codes and themes, and the second author provided feedback to reach an agreement of the analysis. The second author continued to check the plausibility of the emerging codes as well as themes (Merriam, 1995), and reviewed the transcription and its initial assertions made all throughout the ongoing analysis (Roulston, 2010).

Findings

Following a multiple-case design, this section discusses findings of the participant's experiences related to their changes of professionalism overtime through the challenge-based professional skills training program. Categories and its related themes are identified through interview excerpts from the beginning of the summer (pre-interview) and at the end of the fall (post-interview).

Research Question #1: What are the changes in the students' professionalism before and after the professional skills training program?

The overarching categories and themes of professionalism that emerged across the four participants included the following: perception of research, relationship building, development of identity, competence, interdisciplinary collaboration, and communication skills. As the participants' interviews were analyzed to understand their personal perceptions and experiences, the finding for each participant is listed below.

Mia. Mia's experiences over a period of six months of the training program reflected noticeable transformations in how she perceived professionalism. The categories of changes found across pre- and post-interviews were the following: perception of research and development of identity.

There were profound changes that drove Mia's perception of research. In the pre-interview, Mia reflected on the idea that research was conducted in areas with need. In the post-interview, Mia questioned the primary purpose of conducting research and saw the values, meaning, and real world relevance of research activities.

The training program emphasized the need for community engagement and interdisciplinary collaboration and helped students develop an awareness of community problems and interact with people across disciplines. Through the learning opportunities in engaging with others across different contexts, Mia highlighted the development of identity as professionalism. In the pre-interview, Mia frequently discussed her concerns with self-awareness. For example, her understanding of professionalism was dominantly related to how other people perceived her. While discussions in the pre-interview surfaced around being self-aware and how she positioned herself in groups, these themes were not found in the post-interview. In the post-interview, a central topic of discussion was around sharing her developed understanding of how she positioned herself in her field and the efforts that can be made for her work. The overarching categories and themes in pre- and post-interviews, and examples of interview quotes are listed in Table 3.1.

Table 3.1

Changes of Perception in Professionalism Through the Training Program (Mia)

Categories	Theme and pre-interview quotes	Theme and post-interview quotes
Perception of research	Understanding the abilities of research - I mean, get my research for the rest of my life, get it in the right hands so that it can be used. ..to jump from the idea stage and actually get to the doing something about it stage.	Understanding the meaning of research - I'm kind of the type of person who like questions why are we doing this research, like why is it important, why would somebody want to publish this paper, why would somebody want to fund this. - I think that I'm of value in that way in that I'm curious and I want to find these things out and be able to argue the relevance of what we're doing. I noticed that some people around me don't really have –I guess I would call it like I'm very curious, yeah, I like to ask questions and answer them kind of, defend the validity of what I'm doing, have a reason behind everything that I'm doing, not just blindly follow orders. So, like if somebody tells me, hey, I want you to do this project, I'm not just going to, okay, I'll do it, I'll do it but I'm also going to investigate why am I doing this, why does it matter, like that type of thing.
Development of identity	How others see me You're probably perceived as professional in what you do if you have self-awareness when you set out to do that. So, I guess that means always being conscious about what you're doing and deliberate about it.	How I position myself Being able to maintain a balance between caring about other people and being concerned about other people and being concerned about yourself and your own work.

• Self-awareness in that how am I acting when I'm trying to accomplish my goals, how am I interacting with other people, how might I be perceived, am I doing everything that I can to guarantee the success of this goal, that type of thing. So, professionalism is about the goal but it's also about your interactions with other people, having self-awareness of both of those things.	• I just really want to believe in my work and I feel like I don't believe in it right now, but anyways, that's – I'm trying to prove that what I'm doing, prove to myself that what I'm doing is important.
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Lauren. Emerging themes that changed Lauren's understanding of professionalism were related to how she developed her identity in her field, and the ways she built relationships. When asked what professionalism was in the pre-interview, Lauren described professionalism as her belonging in the field, with the idea that professionals not only represent themselves but are also representatives of an organization. This perception shifted in the post-interview as Lauren began seeing professionalism in how the professional was situated in the field. For instance, professionalism was perceived as not only belonging in the field but how her awareness and action as a professional may influence her engagement with the outside context. Lauren had broadened her awareness in terms of ways she would be perceived by other people she interacts with, which could influence how she situates herself as a professional. Lauren also began making connections between her understanding of professionalism and her research.

Relationship building was another topic of discussion across the interviews. In the pre-interview, Lauren described professionalism as related to her interactions, in ways she interacted with others, and how she would be perceived through those interactions. In the post-interview, Lauren saw professionalism as a behavior that was not just related to interactions, but herself

being aware of the responsibilities she would have. She also discussed how she should situate herself as a professional through the interactions. These findings reflect Lauren's changes of professionalism from being more abstract to concrete. The overarching categories and themes in pre- and post-interviews, and examples of interview quotes are listed in Table 3.2.

Table 3.2

Changes of Perception in Professionalism Through the Training Program (Lauren)

Categories	Theme and pre-interview quotes	Theme and post-interview quotes
Development of identity	Belonging in the field • They're not just representing themselves, they're representing some type of organization or institution and so professionalism is then how they conduct themselves within that capacity.	Situated in the field • My actions affect how people perceive and interact with the other organizations I'm connected to probably. • Something I'm thinking about that's just kind of like very humbling is you know I want to work in a foreign country and I'm at a southern university and a lot of the disparities and challenges that exist are left over from – there are left over from these colonial and slave trade relationships that existed, and it's not like a direct connection but it's like it's really important thing to be aware of and think about my relationship and my role in that and how to not continue those types of kind of colonial or imperialist engagements.
Relationship building	Interactions with others • ..communicating and working through complex situations and trying to get a workable solution that most people are satisfied with, I think I'm able to do that and being a good listener.	Being present in the moment of interaction • I think that I'm relatable and I try not to be too busy– I try to like actually be in the moment when I'm interacting with someone..

	• I think I am pretty good at building relationships, maybe not initially when meeting people, but I think that I'm good at building trust and rapport, I guess, eventually.	• My work is usually somewhat long-term, like a year, so I mean I don't really know if it would work if I didn't have good relationships with whoever I was working with. And wanting it to have some kind of benefit, I think you have to have some manner of relationship .. everything is very relational, you can't just have this – okay, here's your product and I'll implement it or whatever, here's some recommendations, it's like this kind of ongoing interaction.
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Will. The cultural influences that were connected to competence were evident in how Will came to understand professionalism, which showed changes before and after the training program. The learning environment Will grew up in influenced how he perceived learning, as he grew up in a culture that reinforced education simply to get admission to a prestigious university and obtain a successful career. According to Will, growing up in this culture did not give him opportunities to think about his interest. However, as Will began taking ownership of learning as an undergraduate, he began developing a passion for learning and perceived passion as quality of professionalism. After the training program, Will implied the ideas of developing thinking and reasoning skills in relation to his competency, and strategically working to meet the goals of research activities. Will's understanding of the scientific thinking and design skills (reasoning skills) he developed through the training program had influenced his perception of professionalism.

Another idea that showed changes of professionalism was related to collaboration. Will saw interdisciplinary collaboration as a component of professionalism in the pre-interview, as working with people from different disciplines can be inspiring and helpful in forming more

ideas. In the post-interview, Will focused on the effectiveness and the application (results) of interdisciplinary collaboration and acknowledged and valued others' experiences and how it can realistically benefit the work that was set out to be done. The overarching categories and themes in pre- and post-interviews, and examples of interview quotes are listed in Table 3.3.

Table 3.3

Changes of Perception in Professionalism Through the Training Program (Will)

Categories	Theme and pre-interview quote	Theme and post-interview quote
Competence	Passion in learning I don't think they had passion during high school.. My passion started during my sophomore - junior year. I was thinking about my future career and figuring out if I was only doing the class work I chose to take. I mean, those classes – that's not quite enough for either becoming a professional or becoming a worker in the industry (...) Nowadays I read all about climate change, health issues, disease outbreak, which are my passion, but I don't know where it came from.	Developing thinking and reasoning skills - Now I'm thinking professionalism means acting like a professional, like you need to have scientific thinking and design skills. - We have limited time, limited resources, we need to decide what we want to accomplish; which would be carried on in the future – being able to deliver to probably other organizations too, which would also be carried out for this organization for probably years, not just for a semester or two semesters. So I think during this process, we all get experience in scientific thinking and design skills as we share ideas with each other.
Interdisciplinary collaboration	Importance of collaboration One person might have limited ideas, but if we are working as a team, we can gather more ideas, inspiration from others, maybe other subjects and current research might re-inspire you, new interdisciplinary	Real-world effectiveness of collaboration I cannot finish my idea by myself and it might be not much – not realistic, so I need to get advice, suggestions, and probably if they have experience with using the methods I use or I

	connections between not only in your area, not only science but in anthropology or in social science.	was thinking about, so it's really important.
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David. David elaborated on communication skills and the relationship that can be developed with others to describe professionalism across the two interviews. In the pre-interview, David described communication as a component of professionalism, in effectively communicating with others and in applying his expertise and accommodating their needs. As well, David noted that people learn from others regardless of their levels of expertise, so having respect for each other was an additional component of professionalism. These descriptions highlighted the importance of communicating ideas in meaningful ways. After the training program, David still emphasized the importance of communication, which was more focused on its effectiveness. For example, he stressed the importance of clearly communicating expectations. Being set out to clearly communicate the expectations was a component of professionalism as it may enable the professional to articulate the expectations clearly and would be mutually beneficial on both sides, and help people effectively obtain a better understanding of the given situations.

Building relationships was an emerging theme that reflected changes before and after the training program. David described the importance of relationship building as a component of professionalism before the training program, which shifted towards him being more mindful and collegial in the process of building relationships. In the pre-interview, the process of building relationships by engaging with others (e.g., in discussing, listening to others, reaching out) were described. However, how David perceived relationship building became more tangible after the program, as he described the mutual level of collaboration professionals can have with others

they work with, and how that can establish authentic relationships. The overarching categories and themes in pre- and post-interviews, and examples of interview quotes are listed in Table 3.4.

Table 3.4

Changes of Perception in Professionalism Through the Training Program (David)

Categories	Theme and pre-interview quote	Theme and post-interview quote
Communication skills	Communicating in meaningful ways - Professionalism is not kind of talking amongst other professionals, it's talking with the non-professionals and communicating what we do and trying to understand how we can best modify our methods to match their interests and desires. - I think that professionalism is, like I said, respect for and from everyone because I think that even we as grad students have an authority of our own and a knowledge and understanding that people who have been doing it for 30 years professionally might not have, so I think we can learn from each other.	Effectiveness of communication - I've just kind of become a little bit more committed to ideas that I already had just about– putting expectations out clearly and early. - Clear and constant communication of expectations and making that communication of those expectations as quick as possible.
Relationship building	Process-oriented I guess just being more mindful and more deliberate in kind of how I deal with the information that I want to express or with my emotional reactions to the topic being discussed, just kind of stepping back and trying to understand both myself and the person or people with whom I'm discussing something with.	Collegiality - Colleagues, whether they're superiors or subordinates, it should be more friendly, I think, more collegial. I think a leader is supposed to lead from beside his or her team rather than kind of telling the team which direction he or she wants to be pulled. - I guess I see my colleagues as friends, so I treat them with the respect of friends and I think

	• There's reaching out, I think that's one of the most important skills a professional has, just the willingness to reach out and ask how someone's research is going or, if they're my students, how their other classes are going or something like that, just willing to listen in some capacity.	that might be another kind of catalyst for that kind of respect and honesty that I was mentioning earlier. Friends are always more comfortable being honest with each other and then just kind of acquaintances who maybe share an office or see each other around every now and then. I think when your colleagues are your friends, then the professional side of that relationship is going to be more authentic, I guess.
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Research Question #2: What are the learning experiences that can be suggested to promote the development of professionalism of graduate students?

In this study, the participants were asked to share learning experiences in the cross-disciplinary professional skills training program that promoted their understanding of professionalism.

Four learning experiences the participants identified included: community engagement projects, real-world applications, interdisciplinary panel discussions, and reflective opportunities. With community engagement projects, the participants were able to broaden their scope of research as it enabled them to discover other possibilities for research. Real-world applications helped participants see broader perspectives. Opportunities to listen to various guest speakers who were invited to panel discussions to share their experiences in doing community engaged work were also beneficial for the participants to obtain different perspectives and increase awareness for community engagement. Through reflective opportunities that were embedded all throughout the training program, the participants were able to reflect on themselves as well as through communicating and interacting with instructors of the program, which enabled them to

be attentive of their development of professionalism as researchers. See Table 3.5 for a list of learning experiences and example interview quotes describing how those experiences influenced their professionalism.

Table 3.5

Learning Experiences of Professionalism in the Cross-disciplinary Training Program

Learning Experiences	Interview quotes explaining how the experiences promoted understanding of professionalism
Community engagement projects	• Just in doing our projects, I mean that's really helped me empathize mostly because I'm doing a project that concerns an issue that I didn't even ever think about before. • I think the training program is great because .. I guess they want to try to inspire us to be people who can take our research and actually learn how to make the connections we need to make so that it can be pulled into the actual community.
Real-world applications	• This semester, the (real-world) experience has really helped (..) just working with the project and learning one example of something that I'm not familiar with that's a problem, it kind of opened my eyes to the fact that there must be so many problems that I don't even think about that these people are experiencing.
Interdisciplinary panel discussions	• We also interacted with a lot of panelists and community members and so just – I mean, simply through that and like – those people have so many different experiences than what I have or the faculty in my department have that really just – it kind of increased my awareness of opportunities for community engagement, service learning, and then how to do those. Like lessons that they learned in their process of pursuing those goals.
Reflective opportunities	• The kind of constant level of interaction that we had with the instructors helped us I think develop trust so that we could talk about things that were a bit more difficult or awkward and kind of actually try to make progress in those areas and I think a lot of reflection kind of helped in that process.

	• The exercise during the summer semester I remember like how do you narrow down your research topic I think, yeah. So we wrote down what problem you want to solve in the end, but it's usually something that you – impossible to finish even in decades and we're picking up the target of the question and keep – there's several steps and finally you will get a research question that's doable like in years, even in months. So that exercise is pretty neat.
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Research Question #3: What experiences and/or moments do students believe promoted their professionalism?

Personal experiences that promoted each participants' professionalism were also explored. Finding for each participant is discussed below.

Mia. Mia was a recent college graduate and had just entered the doctoral program to pursue her degree. Therefore, most of the experiences she shared that promoted understanding of her professionalism was related to the training program and her experiences during her first semester in her doctoral program.

Mia described that mentoring experiences she had will influence her role as a professional in her field in the future. The in-class discussions about mentoring in the training program helped her identify the gaps between the current professionals (e.g. professors) in her field and the type of a mentor she hopes to become, which was established through learning about the different mentoring styles. These opportunities allowed her to understand the different types of professional/mentors, and the personal traits she would want to have as a mentor (i.e. being passionate about sharing knowledge, being empathetic), which she described mentors typically do not have.

Through interdisciplinary collaboration and engaging with communities in the training program, Mia also learned the value of collaboration. In particular, Mia recognized empathy and

caring for others as a vital factor that can play a role in successfully working with others. The experiences and examples of interview quotes discussing how the experience promoted understanding of professionalism are listed in Table 3.6.

Table 3.6

Overall Experiences that Promoted Understanding of Professionalism (Mia)

Experiences	Interview Quotes
Mentoring experiences	I'm using kind of professionalism and mentoring styles synonymously right now, I guess, but you don't – it's not this one set thing, you can be a lot of different types of professionals, a lot of different types of mentors and that's okay and there's nothing wrong with being an empathetic type of person. And I'm really excited that I kind of was able to figure that out because I really think it's important to carry that forward because I think there's such a shortage of people, I look around me and I don't see a lot of people in academia or necessarily passionate about their students, passionate about sharing knowledge and empathetic and that type of thing.
Interdisciplinary community engagement opportunities	I think that there's this important element of being concerned about other people and like facilitating sort of a collaborative work place. And empathy is really important to achieving that goal of achieving a collaborative work place and I think that that's a huge part, like empathy and caring about other people, that's like a huge part of professionalism that I used to think was – I used to not associate that with professionalism.

Lauren. Lauren worked as an intern in another country prior to joining the doctoral program, where she experienced cultural differences which she perceived was related to professionalism. Lauren described a situation where the culture in her workplace and her values collided. In working as an intern, Lauren had made a mistake and was told of this mistake through a co-worker, who had been notified by two of her managers. Lauren explained how she

was highly offended by this situation as additional people had found out about the mistake she had made. Although this situation was difficult for her to understand, she later learned that the two managers were using the most appropriate way to tell her about the mistake by having her co-worker deliver the message. Through this experience, she explained she was able to develop mindfulness of the differences and values that can derive from working with different cultures.

In Lauren's graduate school experience as a doctoral student, she became a graduate teaching assistant for a course in her department. As a student working with other students while withholding responsibilities of an instructor, Lauren recognized the need to professionally represent herself by adhering roles to fulfill the expectations as appropriate and develop the flexibility to successfully act on the role. The experiences and examples of interview quotes discussing how the experience promoted understanding of professionalism are listed in Table 3.7.

Table 3.7

Overall Experiences that Promoted Understanding of Professionalism (Lauren)

Experiences	Interview Quotes
Cultural differences	..it did help me learn to understand that there are different dynamics and that I was assuming that they were being rude or mean or – by handing it that way, but in actuality, their intention was to be as thoughtful as they could be. So, I guess it helped me develop mindfulness of different values and approaches and then how to and not to respond, I guess.
Having various roles across different contexts	I'm like in this in between stage, like I'm a student myself but I'm also their TA – that's kind of unique and I have to make decisions, when they have questions I have to find a way to answer their question, sometimes I have to decide to be lenient or not if they followed the instructions or not. So that kind of gives me a little bit of authority and I've had to figure out the – how to use it properly in a way that helps them learn from the experience and also achieves

	learning objectives and just is I guess thoughtful but without disregarding their responsibilities as students.
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Will. Will's understanding of passion as a component of professionalism had developed over time through his undergraduate experiences, as he interacted with various people. In sharing his past experiences related to professionalism, Will shared a story of when he began thinking about his future career. During that time, Will had an opportunity to interact with some senior peers who were very passionate and were actively seeking out opportunities to expand on their research interests. By interacting with student colleagues, Will was able to expand his horizons and see the possibilities of how he can deepen his knowledge.

Moreover, Will's overall life experiences influenced his understanding of professionalism, as when he was asked about experiences that had influenced professionalism, he responded "everything is related, I cannot think of a specific experience." This suggests the understanding of professionalism being naturally embedded in one's perception through personal experiences and/or the environment. The experiences and examples of interview quotes discussing how the experience promoted understanding of professionalism are listed in Table 3.8.

Table 3.8

Overall Experiences that Promoted Understanding of Professionalism (Will)

Experiences	Interview Quotes
Peer-mentoring experiences	Several seniors at the time (second year of college), graduate students, all one or two years older than us, they were really creative, eager to learn, and very passionate in their areas. Yeah, in being a professional you need to have passion. I learned a lot from them, not only academics but also the way, or how you need to or could absorb more knowledge.

Overall life experiences	Everything is related, I cannot think of a specific experience.
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David. David had drastically changed majors prior to enrolling in the graduate program, which naturally enabled him to have prior experiences in engaging with people from different disciplines. Through these past engagements, David acknowledged interdisciplinary collaboration as an experience that shaped his understanding of professionalism and further noted that it can also support the development of becoming an effective leader with broad perspectives.

Whereas the other participants had shared positive experiences that promoted their understanding of professionalism, David discussed a negative experience he had that influenced his understanding of professionalism. David was caught in the middle of a mishap related to paperwork, which caused an unfortunate situation for him. In sharing this process, David shared the level of frustration it caused him as the related officials were not being clear in communicating the process and avoiding the fault of the situation. This experience changed his understanding of professionalism to not being too concerned of the others' feelings and being honest and open about the situation, although "honesty may temporarily offend or hurt feelings." The experiences and examples of interview quotes discussing how the experience promoted understanding of professionalism are listed in Table 3.9.

Table 3.9

Overall Experiences that Promoted Understanding of Professionalism (David)

Experiences	Interview Quotes
Interdisciplinary engagement and collaboration	I enjoy bouncing different ideas and different opinions around and I feel that the more kind of entrenched you become in your specific field, the more likely it is that your ideas are just going to be kind of echoing back on to

	you rather than being challenged and questioned and everything. And I feel like an effective leader needs to have a lot of people from a lot of different backgrounds with a lot of different life experiences to kind of not necessarily actively challenge his or her worldview, but to just see – experience those worldviews.
Conflict resolution experience	• I've always been a little bit more diplomatic in the way I kind of handle disagreements, but I feel I have grown a little bit more assertive and willing to stand up for my opinion if I think it needs it. I'm less worried of stepping on the toes of the person or the people I'm in disagreement with. But it's that willingness to kind of step on toes is, I don't think it's necessarily treating them with less respect but that I need to be as honest with them as I am with myself. And I feel like if both people are professionals ... if we both respect each other as colleagues and as equals, then we can handle more heated disagreements and we don't have to skirt around the edges just to avoid possible offense, if that makes sense.

Discussion and Conclusion

Unpacking graduate students' experiences and instructional strategies that promote the development of professionalism contributes to understanding the complexity in setting the foundation to implement professionalism development in graduate education. In the past, various disciplines have highlighted the importance of engaging with societies as a form of professionalism (Flexner, 1915; Hancock & Walsh, 2016; Kunitz, 1974; Larson, 1977), and disciplines have individually examined professionalism particularly by the demands of the field, with learning objectives focused on the professional's personal development (Dalli, 2007; Harwood & Tukonic, 2016; Mohan, Merle, Jackson, Lannin, & Nair, 2010; Stern, 2006). Through this study, the underlying meaning of professionalism and learning experiences perceived by graduate students were examined to offer insights in generalizing professionalism and in designing learning that promotes the development of professionalism.

Changes in Students' Professionalism After the Cross-disciplinary Professional Skills Training Program

Students' perceived changes of professionalism that occurred through participating in the cross-disciplinary professional skills training program included perceiving professionalism as engaging in community-related activities, developing the competence needed as professionals, and ways they build relationships.

Students perceived community-engaged activities as a form of professionalism. Community-engaged activities are oftentimes referred to scholarly activities related to publicly engaged academic work, public engagement, community partnerships, etc., (Doberneck, Glass, & Schweitzer, 2010). As students worked directly with community partners to solve problems in the training program, they became more motivated towards making meaning of their work and developing a sense of identity related to their professional roles. Their roles were also intertwined with positioning themselves as researchers that can provide impact to societies. The aims of the training program, to allow students learning opportunities to engage in community issues, were effective as it supported their understanding of their roles in societies. This is consistent with the purpose of community-engaged learning activities, as it promotes students' active involvement in working with the public (Bringle & Steinberg, 2010).

In students positioning themselves as professionals, competence was another component of professionalism. Competence was initially understood as an interest for a topic, which shifted towards being a strategic form that includes the knowledge and skills to efficiently and successfully perform the work at hand. As competence from a higher education perspective is defined as a 'functionally linked complex of knowledge, skills, and attitudes that enable

successful task performance and problem solving' (Wiek et al., 2016), the training program was successful in influencing students' competence in higher education.

Building authentic relationships was found to be key in the development of long-term relationships allowing students to effectively work in collaboration, and to embrace the value of collaboration and communication skills to efficiently work together to solve problems. After the training program, there were changes in terms of how students viewed research and relationships which reflected a sense of empathy. In working with others, the importance of empathy has been discussed as it influences the premises of the individual's thinking and reasoning during interactions with others (Steinberg, 2014). Empathy not only describes the capacity of an individual experiencing another person's feelings and ideas (Eisenberg & Strayer, 1990) but in being objective to the situation (Crandall & Mario, 2009). As students understand the values of research and in interacting and building meaningful relationships with others, they will become capable of not just reflecting on themselves but on the larger contexts that could influence ways they build relationships. Table 3.10 presents the overarching changes that were found before and after the training program.

Table 3.10

Overall Changes of Professionalism Before and After the Training Program

Components of Professionalism	Beginning of the program	After the program
Developing competence	Interest in topic	Efficient and successful performance
Building relationships	Communication and collaboration	Real-world effectiveness of communication, develop empathy

Participating in community-engaged activities	Importance of conducting research	Developing a sense of identity as researchers, finding purpose of research through creating real-world impact
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As denoted in Table 3.10, learning experiences in the training program shifted students' perceptions of professionalism. Students went from having a generalized understanding of the different qualities of professionalism towards having a more tangible understanding of their professions through enriched outlooks of their research and potential level of impact, as well as in specifying their roles as professionals in the communities. In consensus with the responsibilities of universities to transfer and apply knowledge to improve the public (Fitzgerald et al., 2016), the underlying ideas of professionalism should reflect the engagement in communities and work towards social impact. Table 3.11 provides the overarching change of each student's perceptions of professionalism before and after the training program, which represents a shift of their perceived understanding of professionalism.

Learning Experiences Within the Cross-disciplinary Professional Skills Training Program

The changes in students' professionalism before and after the training program were influenced by the nature of the training program promoting socially responsible and scholarly activities through real-world, authentic learning experiences. Allowing students to identify authentic problems and provide sustainable solutions influenced their development to see the possibilities of broader impact, and directly apply their knowledge into the communities. This learning experience is particularly meaningful since the students' ultimate career goals are to stay in academia. Having formed value in reaching out to communities could empower them to continue producing significant research that benefits the society and maintaining scholarly agendas throughout their careers by responding to the goals of higher education (Fitzgerald et al.,

Table 3.11

Changes of Students' Understanding of Professionalism Before and After the Training Program

Categories	Mia		Lauren		Will		David	
	Pre-theme	Post-theme	Pre-theme	Post-theme	Pre-theme	Post-theme	Pre-theme	Post-theme
Motivation for research	What is research?	Why am I doing research?						
Relationship building			Interaction with others	Being present in the moment of interaction			Process-oriented	Collegiality
Development of identity	How others see me	How I position myself	Belonging in the field	Situated in the field				
Competence					Passion in learning	Developing thinking and reasoning skills		
Interdisciplinary collaboration					Importance of collaboration	Real-world effectiveness of collaboration		
Communication skills							Communicating in meaningful ways	Effectiveness of communication

2016). Likewise, students became more mindful towards their feelings as well as the society as they began seeing the larger scope of what can be done through real-world application, and by listening to experiences of community representatives as well as faculty who firsthand worked with communities. The acquired ability to be able to look into and engage directly with communities aligns with the conception that professionals should be able to reflect on themselves to develop abilities to apply knowledge into practice to support the needs of social contexts (Chickering, 2010). Reflective opportunities that were provided throughout the program also enabled students to conceptualize their thoughts and ideas, to develop their self-identities as professionals (Neve, Lloyd, & Collett, 2017).

Learning experiences that promoted students' understanding of professionalism aligns with the learning pedagogy that focuses on service-learning. Service-learning connects the curriculum to community needs so students engage in direct problem-solving of social issues (Altman, 1996). Service-learning enables students to participate in activities that meet community needs as well as reflect on those activities to gain further understanding of the course content and an enhanced sense of personal values and civic responsibility (Bringle & Hatcher, 1995). Furthermore, service-learning provides learning experiences that contribute to the students' acquisition and development of socially responsive knowledge; they are able to firsthand see and experience social problems and are able to gain an understanding of community issues (Altman, 1996). These described experiences learners can have through service-learning activities align well with the experiences of the training program that students shared which promoted their understanding of professionalism. Since service-learning implies the teaching and learning of cognitive processes, student-centered instruction, and collaborative learning (Bringle

& Steinberg, 2010), the use of these learning pedagogies may be beneficial in designing instruction to develop graduate students' professionalism.

Experiences that Promote the Understanding of Professionalism

Experiences that influenced the students' personal characteristics promoted their understanding of professionalism. For instance, engaging with different people broadened students' perceptions of what personal characteristics could entail, including the types of professionals they can become, and how professional characteristics can be reflected in working as a professional. Interacting with mentor figures (Chauvin, 2002), and with people who shared prior experiences with the students (i.e. community-engaged project experiences, interdisciplinary collaboration and engagement) helped them form distinct ideas about what professionalism is. As professionalism is not just simple acquisition of knowledge and skills but is considered a transformational process (Wilson, Åkerlind, Walsh, Stevens, Turner, & Shield, 2013), having opportunities to listen to others' examples of this process may enable students to gain a better understanding of what professionalism could entail.

Additional experiences that naturally supported the students' understanding of professionalism and supported their self-reflection were found in situations involving cultural differences and different roles to take depending on the context. These naturally occurring contexts, as well as the complex situations and environments, can positively influence the development of professionalism, as the nature of these situations can enable the students to become more ethical and reflective of their positions and practice to apply the appropriate knowledge and skills (Trede, Macklin, & Bridges, 2012). As well, negative experiences of seeing unprofessional behaviors performed by professionals influenced students to reflect on ways they should develop professionalism. Though it was a single case, the negative experience, and the

problem it caused enabled the student to self-reflect on the situation. It allowed for a more deliberate process of reflecting on one's thoughts, feelings, and behaviors of the situation (Knapp, Gottlieb, & Handelsman, 2017), which in turn shifted the students' stance on what professionalism characteristics would be needed to objectively solve the situation in the future.

Implications for Research and Practice

The findings of the participants' perceptions of professionalism and its related learning experiences can be set as the foundation to design instruction by aligning and embedding the areas needed for the development of professionalism. Engaging in community-engaged activities, learning through interdisciplinary collaboration, and professionals demonstrating their professional behaviors and sharing their levels of engagement, all aligned with the students' perceptions and development of professionalism. The results of this study can be used as a starting point in generalizing professionalism and developing instructional strategies that can be widely adapted to use in graduate education.

In generalizing professionalism through learning, the context of the cross-disciplinary professional skills training program that offered early interventions for incoming graduate students to enhance their problem-solving, leadership, effective communication, teamwork and community engagement skills can be highlighted as a means to support learners' development as well-rounded professionals. As the design of the program supported interdisciplinary collaboration and communication, various opportunities to engage with different professionals and role models, and understand the interconnections of their competence to solve social needs, graduate education should focus on students' knowledge development as well as their real-world application skills, which will support new scholarship that allows students to make the most of developing their own values and goals in education (Strouse, 2015). Moreover, designing

instruction that supports students' development of professionalism will enhance their reflective abilities in applying their knowledge into practice. Specifically, as professionals develop abilities to solve problems in practice (e.g., real-world problems), they become capable of transferring their content knowledge. Transfer of content knowledge enables them to reflect on themselves and eventually towards thinking about the meaning and practice of their knowledge in real-world contexts (Schön, 1983). As there have been needs for the field of instructional technology to work towards designing instruction that meets the public expectations (Yusop & Correia, 2012), making further attempts to design instruction grounded in pedagogies including community engagement, interdisciplinary collaboration and engagement, service, mentorship, etc., will enable learning experiences that help students' reflective practice and to make meaning of their professions.

Limitations and Suggestions for Future Research

Although the research participants in the study had different majors, three of the four participants were in departments in the same college. Since the nature of research varies depending on the fields of studies, these variations may have affected the findings. The participants' shared perceptions of professionalism could have been influenced by their background knowledge, prior experiences, and the nature of their research. Due to this variation, conducting interviews with a wider selection of participants may be needed to inform a more generalized finding in understanding the development of professionalism of graduate students and in setting the groundwork for designing learning environments.

The duration of the pre- and post-interviews were within a period of six months. Though the changes of professionalism, as well as learning experiences of the training program, were part of the investigations of this study, the time period may not have been long enough to

investigate and document the changes of students' perceptions of professionalism. Moreover, the nature of the program focused on developing students' professional skillsets may have limited the findings of instructional strategies that can be used to promote professionalism. Further investigations to examine the types of instructional strategies that are currently being used across different fields may add value to identify cross-cutting strategies that are mutually beneficial across all fields and applicable in generalizing professionalism development in graduate education.

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Appendix 3.A

Pre-interview Protocol for a Study in Understanding Ways Professionalism is Promoted in Higher Education

- Interviewee's background
 - What is your:
 - Academic background, major, work experiences
 - Purpose of pursuing a higher degree
 - What is your purpose for enrolling in graduate school?
- Interviewee's current perceptions towards the training program
 - What experiences do you hope to gain?
 - What are your expectations in terms of personal growth?
- What is your current understanding of professionalism in terms of the following?
 - Definition of professionalism
 - What personal indicators of yourself currently reflects professionalism?
 - What professional skills do you have?
- Personal experiences
 - Please share any personal experiences that have led to changes in how you perceive professionalism.
 - What professional skills did you develop?
- How do you hope to develop as a professional through the training program?
- In relations to the development of your professionalism, what experiences do you hope to have in the training program?

Post-interview Protocol for a Study in Understanding Ways Professionalism is Promoted in Higher Education

- What is your purpose for enrolling in graduate school?
- What is your current understanding of professionalism in terms of the following?
 - Definition of professionalism
 - What personal indicators of yourself reflects professionalism?
 - What professional skills do you have?
- Share professional experiences of the training program
 - As a result of the program, how have you developed as a professional to date?
 - As a result of the program, how have your perceptions of professionalism changed, if at all?
 - If there were changes to the development of your professionalism, what experiences did you have in the training program that promoted this change?
 - What professional skills did you develop?
- Personal experiences
 - Please share any personal experiences that have led to changes in how you perceive professionalism.
 - What professional skills did you develop?
- In what ways do you see the development of professionalism in the training program influencing your:
 - Purpose of pursuing a higher degree
 - Research

Appendix 3.B

Data Analysis Process

This section discusses the process of data analysis for Chapter 3, *Exploring Meaningful Experiences Promoting the Development of Graduate Students' Professionalism*. The following procedures were taken to analyze the interviews. In analyzing both pre- and post-interviews for each participant as a case study, both interviews were audio-recorded and transcribed. In the word document which contained both interview transcripts, the first author (the interviewer and researcher) reviewed and highlighted the quotations that aligned with the research questions for both pre- and post-interviews. Different colors were used to highlight the research questions. The highlighted quotations were initially coded to generate the initial meaning of the data. See below for an example.

Pre-interview

	Interview Transcript	Concept codes
Interviewer	I'd like to ask you about your perceptions of the cross-disciplinary training program. What experiences related to professionalism do you hope to gain through the program?	
Participant	I think the training program is great because it's really, I have to think about that problem every day because that's a big issue that the facilitators talk about all the time and so I guess they want to try to inspire us to be people who can take our research and actually learn how to make the connections we need to make so that it can be pulled into the actual community and I really love that and I want to learn how to do that. So I guess another goal is like being inspired to do that and also learning how to do that. And by that, I mean, get my research for the rest of my life, get it in the right hands so that it can be used.	• Instructional strategy • Professional skills • Personal development

Interviewer	So, what are your expectations of the program in terms of personal growth?	
Participant	I'll feel like I'll know a little bit more about how to take an issue that I care about and actually do something with it, network and meet the people I need to meet who can help me take my idea and do something with it because I'm someone who I spin all sorts of ideas, oh, I hate that this happens and that happens and oh, if only this would – but I don't do anything about it, so my expectation also is that I'll feel like I've had an experience where I was actually able to jump from the idea stage and actually get to the doing something about it stage.	• Professional skills • Collaboration • Personal development

Post-interview

	Interview Transcript	Concept codes
Interviewer	Yeah, definitely. So, I actually wanted to ask you like what professionalism skills you think are important and if you feel like you have those skills in the work place.	
Participant	Let me think. Because yeah, I went on a tangent there. Skills that I have. I work very, very – I will work as hard as you want me to, I think that's always been something that I've been able to use to my benefit in terms of making myself of value to the people around me who I am working with. I will work – I will go over time, I'll get the job done, I'll do what I have to get it done and I'm really curious, so if – this might bring on another spiel, but I've had kind of a situation where I have a project that I'm working on and I don't think that it's totally relevant, like I'm kind of the type of person who like questions why are we doing this research, like why is it important, why would somebody want to publish this paper, why would somebody want to fund this.	• Professional skills • Personal reflection
Interviewer	I see.	
Participant	I think that I'm of value in that way in that I'm curious and I want to find these things out and be able to argue the relevance of what we're doing. I	• Professional skills • Personal reflection

	noticed that some people around me don't really have – I guess I would call it – I need to narrow this down to like a skill that I have I guess, but I guess I would call it like I'm very curious, yeah, I like to ask questions and answer them kind of, defend the validity of what I'm doing, have a reason behind everything that I'm doing, not just blindly follow orders. So, like if somebody tells me, hey, I want you to do this project, I'm not just going to, okay, I'll do it, I'll do it but I'm also going to investigate why am I doing this, why does it matter, like that type of thing.	
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Concept coding was used to represent the meaning of the data. These findings were reviewed and shared with the second author to enhance the trustworthiness of the findings. After, the transcript was transferred over to ATLAS.ti for the first author to find themes of the identified codes.

ATLAS.ti Raw Data

● Having meaning in research

Quotations:

- ☞ 1:7 get my research – for the rest of my life, get it in the right hands so that it can be used
- ☞ 1:10 my expectation also is that I'll feel like I've had an experience where I was actually able to jump...
- ☞ 2:20 it seems like I see people who don't really ask those questions of like, yeah, is what I'm looking a...
- ☞ 2:22 I'm kind of the type of person who like questions why are we doing this research, like why is it imp...
- ☞ 2:23 I think that I'm of value in that way in that I'm curious and I want to find these things out and be...
- ☞ 2:41 I feel like I would need other people to help me figure out how to like kind of merge my skills and...

The themes were shared with the second author, and both authors discussed the meaning of the data and themes in detail. After an in-depth review and discussion of the concept codes and themes that emerged through this process, overarching themes were identified.

Pre-interview

	Interview Transcript	Concept Codes	Themes	Overarching Themes
Interviewer	I'd like to ask you about your perceptions of the cross-disciplinary training program. What experiences related to professionalism do you hope to gain through the program?			
Participant	I think the training program is great because it's really, I have to think about that problem every day because that's a big issue that the facilitators talk about all the time and so I guess they want to try to inspire us to be people who can take our research and actually learn how to make the connections we need to make so that it can be pulled into the actual community and I really love that and I want to learn how to do that. So I guess another goal is like being inspired to do that and also learning how to do that. And by that, I mean, get my research for the rest of my life, get it in the right hands so that it can be used.	• Instructional strategy • Professional skills • Personal development	• Having meaning in research	• Understanding the abilities of research

Interviewer	So, what are your expectations for the program in terms of personal growth?			
Participant	I'll feel like I'll know a little bit more about how to take an issue that I care about and actually do something with it, network and meet the people I need to meet who can help me take my idea and do something with it because I'm someone who I spin all sorts of ideas, oh, I hate that this happens and that happens and oh, if only this would – but I don't do anything about it, so my expectation also is that I'll feel like I've had an experience where I was actually able to jump from the idea stage and actually get to the doing something about it stage.	• Professional skills • Collaboration • Personal development	• Having meaning in research	• Understanding the abilities of research

Post-interview

	Interview Transcript	Concept Codes	Themes	Overarching Themes
Interviewer	Yeah, definitely. So, I actually wanted to ask you like what professionalism skills you think are important and if you feel like you have those skills in the work place.			
Participant	Let me think. Because yeah, I went on a tangent there. Skills that I have. I'm kind of the type of person who like questions why are we doing this research, like why is it important, why would somebody want to publish this paper, why would somebody want to fund this.	• Professional skills • Personal reflection	• Having meaning in research	• Understanding the meaning of research

Interviewer	I see.			
Participant	I think that I'm of value in that way in that I'm curious and I want to find these things out and be able to argue the relevance of what we're doing. I noticed that some people around me don't really have – I guess I would call it – I need to narrow this down to like a skill that I have I guess, but I guess I would call it like I'm very curious, yeah, I like to ask questions and answer them kind of, defend the validity of what I'm doing, have a reason behind everything that I'm doing, not just blindly follow orders. So, like if somebody tells me, hey, I want you to do this project, I'm not just going to, okay, I'll do it, I'll do it but I'm also going to investigate why am I doing this, why does it matter, like that type of thing.	• Professional skills • Personal reflection	• Having meaning in research	• Understanding the meaning of research

Finally, the overarching themes found in pre- and post-interviews were grouped into a category that represented the changes across pre- and post-interviews. As a result, the findings section of Chapter 3 presents the categories and the overarching themes of pre- and post-interviews along with relevant quotes.

Pre-interview

	Interview Transcript	Concept Codes	Themes	Overarching Themes	Category
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Interviewer	I'd like to ask you about your perceptions of the cross-disciplinary training program. What experiences related to professionalism do you hope to gain through the program?				
Participant	I think the training program is great because it's really, I have to think about that problem every day because that's a big issue that the facilitators talk about all the time and so I guess they want to try to inspire us to be people who can take our research and actually learn how to make the connections we need to make so that it can be pulled into the actual community and I really love that and I want to learn how to do that. So I guess another goal is like being inspired to do that and also learning how to do that. And by that, I mean, get my research for the rest of my life, get it in the right hands so that it can be used.	• Instructional strategy • Professional skills • Personal development	• Having meaning in research	• Understanding the abilities of research	• Perception of research
Interviewer	So, what are your expectations for the program in terms of personal growth?				
Participant	I'll feel like I'll know a little bit more about how to take an issue that I care about and actually do something with it, network and	• Professional skills • Collaboration • Personal development	• Having meaning in research	• Understanding the abilities of research	• Perception of research

	meet the people I need to meet who can help me take my idea and do something with it because I'm someone who I spin all sorts of ideas, oh, I hate that this happens and that happens and oh, if only this would – but I don't do anything about it, so my expectation also is that I'll feel like I've had an experience where I was actually able to jump from the idea stage and actually get to the doing something about it stage.				
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Post-interview

	Interview Transcript	Concept Codes	Themes	Overarching Themes	Category
Interviewer	Yeah, definitely. So, I actually wanted to ask you like what professionalism skills you think are important and if you feel like you have those skills in the work place.				
Participant	Let me think. Because yeah, I went on a tangent there. Skills that I have. I'm kind of the type of person who like questions why are we doing this research, like why is it important, why would somebody want to publish this	• Professional skills • Personal reflection • Research purpose	• Having meaning in research	• Understanding the meaning of research	• Perception of research

	paper, why would somebody want to fund this.				
Interviewer	I see.				
Participant	I think that I'm of value in that way in that I'm curious and I want to find these things out and be able to argue the relevance of what we're doing. I noticed that some people around me don't really have – I guess I would call it – I need to narrow this down to like a skill that I have I guess, but I guess I would call it like I'm very curious, yeah, I like to ask questions and answer them kind of, defend the validity of what I'm doing, have a reason behind everything that I'm doing, not just blindly follow orders. So, like if somebody tells me, hey, I want you to do this project, I'm not just going to, okay, I'll do it, I'll do it but I'm also going to investigate why am I doing this, why does it matter, like that type of thing.	• Professional skills • Research purpose • Personal reflection • Reflection of context	• Having meaning in research	• Understanding the meaning of research	• Perception of research

CHAPTER 4

EXPLORING THE PROFESSORS' PERCEIVED UNDERSTANDING OF
PROFESSIONALISM AND WAYS TO PROMOTE THE
DEVELOPMENT IN HIGHER EDUCATION ³

³ Choi, J. and Choi, I. To be submitted to *Journal of Computing in Higher Education*.

Abstract

Professionalism is oftentimes defined as a special knowledge that is connected to social responsibility and refers to a professional that does work for the public good. To gain an understanding of the ideas of professionalism that can be embedded in higher education, this study examines how professors that engage in community-engaged research activities perceive professionalism. Professors with a scholarly research agenda that includes research and service activities related to community engagement are recruited for interviews to gain an understanding of their professionalism. The findings discuss the professors' perceived definitions and components of professionalism, and personal experiences that promoted their understanding of professionalism. The study suggests that the professors' professionalism lies in their practice of connecting their research agenda with the needs of the public. This study may help enhance professionalism development education in higher education.

Keywords: experts, professor, professionalism, higher education, research contribution

Introduction

There is a growing need for professors to demonstrate accountability to apply their professional knowledge to solve real-world problems and serve society (Doberneck, Glass, & Schweitzer, 2010; Gibson, 2012). Professors should respond to the need as universities are expected to be socially involved and work towards doing good for the public (Austin, 2002). Although the importance of professors working alongside communities continues to be addressed, there are a few studies that examine the components which drive their engagement with communities and work to solve societal problems (Lindholm, 2004). To respond to this limitation, this study examines professionalism of professors who hold scholarly research agenda around community engagement and working for the benefits of the public, to understand the components of professionalism that increases their participation.

Professionalism Defined

Professionalism describes the professors' role in higher education, particularly in how they form their professional identities (Chreim, Williams, & Hinings, 2007). How professors represent themselves in society are also known to depend on the level of professionalism they adhere to (Mieg, 2009), which provides consensus for the reason why professors' professionalism is interrelated with their actions in the social context. As professionalism accounts for how professors present themselves in the social context, understanding the components of professionalism of professors can provide features that drive their efforts in engaging in community-related activities and promoting the well-being of the society.

In literature, some of the personal constructs used to describe professionalism of professionals include being competent, ethical, and humanistic of their knowledge and skills, and connecting their special knowledge with the demanding social responsibilities (Coulehan, 2005).

In describing how professionalism is perceived within universities, the meanings vary depending on the act of the professional. For example, in regard to teaching, professionalism is interchangeably used with the scholarship of teaching and learning, which describes a process of knowledge construction in which the knowledge is validated through reflecting on teaching experiences and its related educational theories (Kreber, 2006). In regard to research, experts that are research-oriented in academia are those who understand the importance of contributing their research to other contexts (Croce, 2019). Moreover, experts hold the higher epistemic understanding to exploit their knowledge and understanding to address new questions and work towards the problem to propose solution across disciplines (Croce, 2019). Further, they are described to withhold the following personal qualities: thoroughness, intellectual perseverance, intellectual courage, self-scrutiny, intellectual creativity, open-mindedness, intellectual curiosity, and autonomy (Croce, 2019).

The current descriptions of professors' professionalism reflect the importance of applying the knowledge and skills in larger contexts. However, understanding how professors that engage with communities and respond to solve societal problems perceive professionalism, and which personal experiences promoted their understanding of professionalism remains in question. Therefore, the findings of the study will imply the components of professionalism that should be promoted in higher education in order to meet the expectations of universities working toward the benefits of the public.

Importance of Understanding Professors' Professionalism in Higher Education

Understanding the driving factor of professors' professionalism in working to solve problems is also critical in order to improve student learning experiences in higher education. As higher education is identified as the platform for students to train and develop into professional

beings (Feldon, Maher, Roksa, & Peugh, 2016), understanding the process in which it is structured is a meaningful step to begin examining how professionalism can be structured and developed over time through learning. Research notes that students are able to transform as professionals through graduate education as their advisors and professors serve as role models; therefore, professors can become students' professional models prior to competency development (Hall & Burns, 2009; Harris, 2004). As the students' formulation of professionalism can be influenced by the advisors they work with (Barnes & Austin, 2009), understanding how professors perceive professionalism is also an essential factor that can influence the student's development of professionalism as well. Moreover, understanding the ways professionalism is developed by professors can be used to develop design guidelines of learning environments that may support students' development of professionalism in higher education.

Purpose of Research

Examining the constructs of professionalism of professors that engage with communities and work to solve societal problems will add to the type of scholarship that is needed for all scholars to engage in research, teaching, and service activities to respond to the purpose of universities (Gibson, 2012). This study examined how professors with community-engaged scholarships perceive professionalism by understanding their definitions and components of professionalism, as well as personal experiences that enabled their understanding.

Understanding the professors' professionalism will also add to a new type of scholarship for students to meet the 21st century needs in acquiring specialized knowledge to prepare them with the qualities to solve complex real-world problems and increase their societal involvement (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012).

Research Statement

This study will explore how professors in a research institution developed their professionalism, by understanding their definitions and constructs of professionalism, and key events in their careers that promoted the development of professionalism. Through qualitative research, the purpose of the study will be twofold: (a) to define and identify essential factors that promote the construction (or development) of professors' professionalism, and (b) to explore the professor's lived experiences throughout their careers that promoted their understanding of professionalism.

By analyzing the qualitative data in response to the professor's construction of professionalism, the study aims to answer the following research questions:

- 1) How do professors define professionalism?
 - a. What are the components of professionalism?
- 2) What is the professor's perceived experiences that promoted his or her development of professionalism in academia?

Methods

Research Design

A qualitative research design was employed to understand the participant's development of professionalism overtime. This study was framed around a constructivist paradigm, as its analysis and interpretation of data were derived from the data being collected (Creswell, 2014). Open-ended questions were used to collect data so the participants can openly discuss, share, and construct the meaning of their perspectives and experience (Creswell, 2014). Through open-ended questions, patterns of meaning associated with the study were found (Creswell, 2014). The

Institutional Review Board (IRB) in the University where the research took place approved the study.

Data Collection

Participants. Three professors at a Southeastern University in the United States were recruited as participants for the study. Purposeful sampling was used to seek close examinations of the participants (Teddlie & Yu, 2007), particularly to understand how professionalism evolved overtime throughout the professor's careers. The following criteria were used to recruit the participants. First, potential candidates that were tenured in a research institution with evidence of scholarly agenda that adheres to the grounded review of professionalism of this study (e.g., having active research agenda with work towards the public good, community engagement related research and/or service activities) were identified based on the researcher's awareness. Within the candidates who met the first criteria, four professors with 20+ years of research experience since their doctoral degree was obtained were selected and contacted for recruitment. Four professors were successfully recruited, but due to schedule conflicts, three professors finally participated in the study. Other personal factors, such as the field of study, gender, or ethnic groups were not considered in recruiting the participants. Basic profiles summarizing the three participants with pseudonyms, area of study, and the years since their Ph.D. degrees were obtained at the time of data collection are summarized in Table 4.1.

Table 4.1

Participant Profiles

Participant	Area of Study	Years Since Obtaining PhD Degree
Dr. K	Natural Sciences	27 years
Dr. W	Natural Sciences	25 years
Dr. B	Social Sciences	39 years

Instrument. The recruited participants participated in 1-hour face-to-face interviews. Semi-structured face-to-face interviews were used for this study (Roulston, 2010). Since the same interview sequence was applied for all interviews, the variations in the questions asked were minimized to best inform the experiences related to the development of professionalism. The participants responded to questions such as:

- What are your current perceptions of professionalism?
- What are the components of professionalism? (qualities, characteristics, etc.)
- Reflecting on your professional career as a faculty in academia, please describe one specific incident or experience you had that influenced your development of professionalism, and as a result, changed your perception of being a professional.

The interview questions were sent to the interviewees prior to the interview, and the interviewer also provided a copy of the interview questions during the interview. The interview was audio-recorded, and the audio was transcribed for data analysis. Refer to Appendix 4.B for the interview protocol.

After each data collection, the researcher used a coding system and used random research numbers to link the codes with the participants for anonymity. Any direct identifiers related to the codes were saved in password-protected files.

Data Analysis

Analysis. Although the participants were asked questions related to their understanding and past experiences of professionalism, as the interview topic itself was related to investigating participant's professionalism, the interviews were analyzed through concept coding to extract the initial meaning of the data. Concept coding was used to guide the initial analysis (Saldaña, 2016), which were initially identified by using an excel spreadsheet. The overall codes were

identified, and those codes guided the analysis to categorize emerging themes across the three interviews in ATLAS.ti. Upon receiving feedback on the analysis and interpretations in checking the validity of the initial themes, themes specifically relating to the development of professionalism in professors emerged. Along with the definitions of professionalism, three themes emerged as the components of professionalism, and three themes related to professionalism development experiences were also identified across all three interviews. Themeing the data across the interviews allowed for a coherent narrative of the findings (Saldaña, 2016). Data-driven analysis informed the findings of this study.

Trustworthiness. To increase the credibility of the findings, two authors collaborated on the analysis process. After the first author analyzed the data and initially identified the concept codes, the second author reviewed the codes. Then, after the concept codes were further categorized into the themes by the first author, the second author reviewed the themes that emerged as well. The authors examined the data and checked the plausibility of the emerging codes as well as themes (Merriam, 1995). An audit trail was also used as the second author reviewed the transcription of the interviews and the preliminary assertions that were made by the first author throughout the ongoing analysis (Roulston, 2010). As asking others for feedback on the analysis can respond to issues associated with bias and assumptions of the researcher, a review of data occurred simultaneously with the second author participating all throughout data analysis (Maxwell, 2012). Upon receiving continuous feedback on the analysis and interpretations of the initial codes and themes, final themes relating to the development of professionalism across participants were identified. The researcher also wrote analytic memos all throughout data collection and analysis to reflect on the process of data collection and in

reporting the discussion of the findings (Saldaña, 2016). The analysis memos were helpful in tracking the thought process of the researcher and in identifying emerging ideas (Saldaña, 2016).

Findings

Definitions of Professionalism

When asked to provide definitions of professionalism, participants described positioning themselves within the realm of their careers, particularly in being aware of and being responsible for their professional roles in any context. For instance, one participant said:

I think I just consider it a basic code of conduct, it's not just my profession but it's also the way I try to live my life (...) it's a code of conduct, the principles that I try to live by both in the workplace and even outside of the workplace.

There were no distinctions of roles made in and out of the workplace but were sought as personal conceptions that were instilled in the professional understanding.

Another participant had a similar description, with professionalism being a form of “bringing your very best to your chosen career and conducting yourself in a manner that shows pride in your profession,” and bringing “a sense of wanting to do your best in your interactions with the outside world.”

Professionalism was also portrayed as the professional adhering to the roles that were required by the workplace (in this case, the University), and expanding on that role and influence the outside communities as well:

For me, professionalism is really about doing the right thing (...) I think professionalism is doing the right thing for the right reasons, being moral, making good decisions to advance both the profession and individual lives.

These definitions of professionalism reflect the ideas and responsibilities of the professionals adhering to their professionals' roles within their job contexts as well as in the real world.

Components of Professionalism

Interviews sharing the participant's current understanding of professionalism and experiences related to the discussion around professionalism were analyzed to categorize emerging themes and identify the components of professionalism. There were three shared components that emerged across interviews, including personal factors, a developed purpose of career, and finding the meaning of research through community-engaged scholarship.

Personal factors. Personal factors, including personal characteristics and beliefs, were perceived as components as professionalism. For example, the way participants built relationships and communicated with others, having integrity and moral values, and being honest were some of the personal traits that were shared. The participants' awareness of their personal traits was directly related to how they perceived professionalism:

I try not to argue with people, debating and arguing, very different...I don't harbor hate. I don't harbor grudges. I'm competitive, but not to the point that it's going to hurt, embarrass or in any way diminish somebody else. All of those I think are part of professionalism. It doesn't mean that I'm easy going. It just means that I think there are ways that you can present the best of yourself to the world without making that world a lesser place because of it.

The participant's performance in the field of study was also interconnected with the participant's personal characteristics. For example, research in Dr. K's laboratory worked with chemicals that were regulated and had to undergo multiple layers of security, which made it

critical to reflect her integrity as a professional: “I have to reflect my integrity so that they believe that I’m not going to do something bad with my toxin.” The importance of reflecting integrity to establish herself as a professional in her field was further described:

I think my training helped me to understand the importance of my conduct in science, and that you know, science is very much based on integrity. If you want people to take you seriously, people have to feel that they can trust you. And you publish something in a scientific journal, that has to be taken with a lot of integrity in order to advance in the field. So you have to make sure that your science is based in fact and that it’s reproducible, and that you don’t try to draw conclusions that aren’t really there and so, that’s very important in science.

Developed purpose of career. As the participants were tenured professors in a research institution, the ways they established their careers were centered around research activities. The participants described the importance of their research by seeing the value and meaning of those activities. Key components of professionalism were related to participants asking questions around why they are engaging in research, and by finding the meaning and significance of their research activities:

I felt that excitement for me was in trying to figure out the reasons why things happened in certain diseases and to be better at finding ways to diagnose disease. And my clinical training was great, but I always wanted you know like if a dog came in vomiting, the response mostly for a veterinarian is to first stop the vomiting. And in my mind, I wanted to find out why it was vomiting. So you know, I wanted to do X-rays and I wanted to send samples off and I wanted to get to the bottom of the problem.

Making research sustainable, by going beyond conducting research activity simply for the purpose of job security was discussed. One participant described engaging in research as: “I really try to do research in such a way that it does have some sort of social impact, some kind of value beyond my own CV,” which reflected research being seen as an activity that could have lasting impact on society, and not being done as a requirement of employment. Dr. B, who worked with teachers shared how he reviewed the research studies in his early career stage and realized that the reported studies had no significant differences. He then began questioning the purpose of conducting research:

I've been reviewing the literature for various projects and so forth and I kept finding no significant differences again and again and again... that alerted me to the fact that so much of our research has very short treatment times and not many results that teachers could apply to their practice and so forth... I was starting to write thing that were focused on how can we make research more meaningful to teachers.

Finding meaning of research through community-engaged scholarship. All throughout the interview, the participants frequently discussed the values of conducting community-engaged studies and the importance of embedding those ideas early in the students' careers. How community-engaged research activities can empower students to extend their research out to societies, and providing the opportunities so they become engaged with communities were described:

Graduate education in the Sciences very much is about, “You come in the lab. You do the research I’m interested in for the reasons I want you to do it,” and I think that needs to change. I think students need to have more agency in their research. They need to find labs that do work and research that they feel will have some sort of ultimate benefit to

society. And students in general, are much more interested in doing that kind of work now. They want to be able to give back to society.

The underlying goal of research focused on creating meaning of research through community engagement were also emphasized as an important component of professionalism. Being aware of positive effects research can have on communities early in the professional's career was also suggested as an important factor:

I remember when I first got hired, a professor had me into his office and he said, "Young man, here's what you need to do. You need to get your hands on a set of data and you need to publish that data everywhere. That's the secret to success. You need to get these publications out there." And, I think he meant well but you know, I wish he had said to me, "Young man, our state is 49th in educational indicators in the United States. Our children can't read. Our kids can't do Math. Our teachers aren't supported. I want you to do research and development in these schools that really make a difference."

Experiences that Promoted the Development of Professionalism

In sharing experiences that promoted the understanding and development of professionalism of the participants, the following themes emerged: (a) interdisciplinary experiences; (b) reflection of real-world experiences; and (c) mentoring experiences.

Interdisciplinary experiences. All participants reported that they had opportunities to work across disciplines and to meet other professionals to get various experiences, which helped them expand their interests. Engaging with people outside of the professional's field of discipline allowed them to broaden their perceptions about research and areas they can conduct research. As participants took part in administrative roles within the University, the different environment

and culture allowed them to expand their research and come up with ways to apply their newfound understanding:

Probably the addition of my interest in education research [after moving to an administrative position] I saw the opportunity to do research in a different way and to do research that was more education based and less bench-top based. So yeah, I think that's an additional piece now because I seem to be drawn into that more and more right now. When I went into an administrative position, I realized very quickly that our mentoring program, because we have one for faculty to mentor our students, that our mentoring program only worked really well, if the faculty member and the student mentor understood where the other one was coming from...I found out that, if a student got the emotional support that they needed, they tended to do better on the academic side. The two of them were really intertwined. So on a large scale, I tried to make that same connection with the faculty and the students.

Reflection of real-world experiences. The awareness and the experience which led the participants to connect theory with practice enabled them to directly understand the impact their work could have when applied in the real world. These experiences enabled the participants to be more actively engaged in applying their work in the real world, specifically in identifying problems and putting in effort to provide solutions:

I've been alarmed at the fact that every new technology that has come out starting with things like laserdisc and interactive television, CD-ROMS and now the web and e-learning and so forth. They say, "Oh, it's going to revolutionize education and change education." We throw these technologies over the walls at the classrooms and still to this day, it's not having much of an impact. There was a survey just recently that about

seventy-five percent of teachers, seventy-eight percent of teachers said that they don't feel prepared to use technology in schools today. That's enormous and why are we -- at this you know, at 2018, why are we still not preparing teachers to integrate technology? I think part of it is because we're overemphasizing technology and don't emphasize the pedagogy enough, the teaching and learning and assessment and so forth. So those things should come first and so, I guess that's kind of what some of the things involved there.

These beliefs were further reflected in participants conducting research toward instilling those ideas in students:

Students sometimes come into the lab and they're very focused, they're very silent. And they also don't necessarily understand the real-life application of the work that they do. So I wanted to think about...how we could change that for some students in particular, and that's how we came up with the leadership training program. We wanted graduate students to learn how to work better in teams and then to think more broadly about how their research or the kind of research they could do that could have more of an impact on the public. So they need to learn how to deal with the public and to understand what the needs were in the public.

Mentoring experiences. In response to how the participants' understanding of professionalism developed over time, being able to see and experience firsthand the type of professionals they can become through interacting with another professional influenced their understanding. The participants found value directly working with the more experienced professionals who set examples and demonstrated ideal roles they could emulate:

So I think I learned how to be a professional through role modeling. I don't know that it's something that can be taught in a workshop or read in a book and I think it's more than

that. Something that, it's part of the culture that you absorb it from seeing people being professional, and you say, "well, I want to be like that, too." So I've been fortunate.

Mentors who guided the participants' values, attitudes, and behaviors influenced their development as well. In the case below, the participant explained how working with the mentors inspired her development as a professional:

There were two men who were known to be really good teachers. They were really good in the classroom. And they without me even realizing it you know, I was assigned an official mentor. But they in their own way very different ways made sure that I went from being uncomfortable in front of a bunch of people to feeling very comfortable and confident in my ability to take information that I knew at and I would say expert level and distill it down to a method that someone who had never heard or seen or knew anything about it could understand.

Discussion and Conclusion

Experiences of tenured professors from research institutions that had a line of research around interacting and engaging with communities were analyzed to understand how they perceived professionalism, and how they developed professionalism throughout their careers. In defining professionalism, the most prevalent meaning was in the professors positioning themselves as professionals across any context. For instance, the professors' work ethics, morals, and personal characteristics accompanied their personal lives and vice versa. Professors naturally enabled themselves to adhere to the professional roles as an individual in and out of their workplace. This aligns with the idea that professionalism is the professional's real identity and what they set out to do as professionals, and that professionalism is 'enacted' by what they actually do from both outside and within their professional groups (Evans, 2015).

The professional's competence, including the knowledge and skills, have extended out towards making meaning of their work, with their competence being structured to respond to social needs (Coulehan, 2005). The professors indicated an understanding of how their competence can complement the social needs through being aware of their responsibilities by working with communities and in solving real-world problems. It has been known that in the process of professionals applying what they know, it is important they are aware of the influences their practices can have on the context (Freidson, 2001). As the professors expressed their desires in developing the meaning of the work they do by reflecting on self and of the larger context, they reflected an awareness of their capabilities to conduct research and to connect their work towards engaging with communities and the real world. In particular, questions revolving around "why" triggered the professors to seek to solve real-world problems and provide sustainable solutions by instilling those ideas into learning and research. This shows evidence of embracing knowledge and socially constructing the meaning of their experiences through considering their epistemological beliefs and situational factors (Baxter Magolda, 2004). As professionals focus on their personal epistemology, it enables them to reflect on themselves to interpret what their experiences to them, in the interactions they have in engaging with others and the social context (Baxter Magolda, 2004), and in addressing new problems (Coulehan, 2005), thus influencing their ways of communication and actions in society.

Various experiences the professors shared which shaped their understanding of professionalism helped form their professional identities (Schein & Schein, 1978). Some of the experiences that shape their identities included the personal experiences in stepping out of one's field of study and having the opportunities for interdisciplinary collaboration (Hancock & Walsh, 2016), understanding the impact of theory on real-world applications (Bastian & Yake, 2005),

and becoming a scholar by working with professionals as mentors that set examples to positively influence one's development (Hamilton & Brabbit, 2007), which were found to model best practices that promote professionalism. These experiences enabled the professors to not only transfer their experiences to their research but also shaped their perceptions in making meaning of their work. Their personal conceptualizations of themselves, including the attitudes, values, knowledge, beliefs, and skills they held, reflected a professional identity that represented their roles (Adams, Hean, Sturgis, & Clark, 2006). Moreover, because professional identity helps the epistemic development for professionals to construct meaning for the skills they use, these understandings supported the development of their social identity as well (Adams et al., 2006).

The findings have demonstrated professors as responsible scholars who set out to provide sustainable and positive impact through their work. The driving factors of reflecting on themselves and of their experiences, and the abilities to make connections with the outside contexts have enabled them to make meaning of their work across research, teaching, and service activities. Being aware of their professional identities and values, and towards putting in effort to apply their knowledge as demanded by their positions and society aligns with various professionalism attributes that are discussed throughout the literature (Doberneck, 2010; Fitzgerald et al., 2012; Sheppard, Colby, Macatangay, & Sullivan). The initial attempts of this study to understand the professionalism of professors that are actively involved in community-engaged research activities was successful as it addressed the components needed for all scholars to engage in socially relevant activities. The findings can also add value by guiding the development of learning environments that inform students' professionalism, by setting up the groundwork in designing instruction in higher education.

Implications for Research and Practice

The professors' perceptions of professionalism evolved over time, and their experiences informed the ways these components shaped their interest and participation in socially relevant research studies. As graduate students learn knowledge, skills, and values from professors as well as by participating in academic activities (Guo, Kang, & Shi, 2018), these findings can be used to inform the design of learning environments in higher education pertinent to students' growth as professionals as socially responsible citizens and researchers on a global level. This growth may positively influence the well-being of not only the individual student but the larger communities.

The results of this study can further be applied towards designing an ecosystem of professionalism in higher education by creating an innovative approach to cultivate a sustaining professional community. This community can support professionals as they develop the dispositions, responsibilities and roles to engage with the social context. To sustain community engagement in higher education, more examination in understanding professionalism development of professors will be significant to figure out ways to support long-term community engagement research and increase the values found in research and higher education as a whole.

Limitations and Suggestions for Future Research

This study was the researcher's initial attempt in conducting a research study aimed at understanding the origin of professionalism by examining how it was perceived by professors. As the findings from this study can shed light on what professionalism is and how it can be promoted for the improvement and benefit of society, the number of participants is critical. As this study had a small number of participants, recruiting more participants may be needed in the future to enhance the feasibility of the findings. For example, recruiting a diverse population of

participants by considering the participants' cultural, educational, and work backgrounds, and their fields of study may inform a more generalized understanding of professionalism in academia by examining the effects the participants' background can have on their development.

This study examined the perceptions of professionalism of professors who had research agendas related to community engagement, and the findings implied ideas around their societal involvement. Although the selection of participants was based on the overarching purpose of the study to understand the components of professionalism related to community-engaged research and service activities, broadening the pool of participants may inform new findings and directions for research. For example, recruiting and conducting interviews with professors in higher education across different realms of research may inform new dimensions of professionalism as well as propose new directions for higher education.

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Appendix 4.A

Interview Protocol: Understanding the Professionalism of Professors

- What is your background?
 - Academic background, field, work experiences
 - Current position at the university
 - What was the reason for you to select your area of study?
- What are your current perceptions of professionalism?
 - Current definition of professionalism
 - Did this perception evolve overtime as you developed your career?
- What are the components of professionalism? (qualities, characteristics, etc.)
 - Please share experiences of how these perceptions of professionalism developed
 - As an expert, under what circumstances are these skills reflected?
- Reflecting on your professional career as a faculty in academia, please describe one specific incident or experience you had that influenced your development of professionalism, and as a result, changed your perception of being a professional.
 - Describe the journey of professionalism development as a faculty member
 - The specific incident
 - Who or what was involved?
 - Through this experience, how did professionalism change in terms of:
 - Definition of professionalism
 - Perception
 - Indicators of how you portray professionalism as an expert professional

- Changes in perceptions of your job
 - Reflecting on your experiences, has there been a change in terms of how you first perceived your job versus how you currently perceive your job as a professional?

Appendix 4.B

Data Analysis Process

This section discusses the process of data analysis for Chapter 4, *Exploring the Professors' Perceived Understanding of Professionalism and Ways to Promote the Development in Higher Education*. The following procedures were taken to find emerging themes across the three interviews. All interviews were audio-recorded and transcribed. The interview transcripts in the word document were used by the first author (the interviewer) to review and highlight the quotations that align with the research questions. Different colors were used to highlight the research questions. The highlighted quotations were initially coded to generate the initial meaning of the data. See below for an example.

	Interview Transcript	Concept Codes
Interviewer	So I wanted to ask you to share your perceptions of professionalism. Can you define professionalism?	
Participant	Yes. For me, professionalism is really about doing the right thing. If you are an educator, if you're a teacher, I think your professionalism is all wrapped up in really trying to help people learn and helping them with their personal development and well-being. So I think of teaching as a profession. I think being a professor, you should be professional. And so the traditional roles of professors are teaching, research, and service and a research university. Sometimes research gets overemphasized above, say, putting a lot into your teaching and doing the service and so forth. I think a real professional would strike a balance across those. And in my case, I really try to do research in such a way that it does have some sort of social impact, some kind of value beyond my own CV sort of like. But yes. I think professionalism is doing the right thing for the right reasons,	• Professionalism definition • Purpose of job position

	being moral, making good decisions to advance both the profession and individual lives.	
Interviewer	How you just described professionalism - do you think the perception has evolved over time as you were developing your career?	
Participant	Yes. I think I learned professionalism by role modeling. I had some really good teachers and some really good role models. I think learning to be a professional-- through role modeling. I don't know that it's something that can be taught in a workshop or read it in a book and I think it's more something that-- it's part of the culture that you absorb it from seeing people being professional, and you say, "Well, I want to be like that, too." So I've been fortunate.	• Professionalism • Role modeling/mentor • Instructional strategy

Concept coding was used to represent the meaning of the data. These findings were reviewed and shared with the second author to enhance the trustworthiness of the findings. After, the transcript was transferred over to ATLAS.ti for the first author to find themes of the identified codes.

ATLAS.ti Raw Data

● Mentoring

Quotations:

- ☞ 2:4 I don't want to bring in a student until I feel like I can support them for the time that they need...
- ☞ 2:29 So I would certainly try to incorporate more of that into my training of graduate students than I di...
- ☞ 3:5 I think I learned professionalism by role modeling.
- ☞ 3:7 So I think learning to be a professional-- through role modeling. I don't know that it's something t...
- ☞ 3:12 So he encouraged me to get involved in international work and so now, I've been able to speak all ov...

● Professionalism definition

Quotations:

- ☞ 1:6 I think professionalism is bringing your very best self to your chosen career, I guess. That's a hor...
- ☞ 1:7 you bring a sense of wanting to do your best in your interactions with the outside world.
- ☞ 1:8 not just in your chosen profession. It's how you interact with people that meet you in a business se...
- ☞ 2:10 I think I just consider it a basic code of conduct that kind of it's not just my profession but it's...
- ☞ **3:4 For me, professionalism is really about doing the right thing. If you are an educator, if you're a t...**

● Meaning of career

Quotations:

- ☞ 1:1 I felt that excitement for me was in trying to figure out the reasons why things happened in certain...
- ☞ 1:2 So, we think that one of the really great things about working in academia is that, I get to teach,...
- ☞ 1:22 It starts off, go placidly amidst the noise and haze and remember what peace lies within. It ends up...
- ☞ 2:1 The lab that I worked in was in the National Institute of Dental Research and it was actually a pain...
- ☞ **3:6 And in my case, I really try to do research in such a way that it does have some sort of social impa...**

The first author shared the themes with the second author again, and both authors discussed the in-depth meaning of the data and themes. After an in-depth review and discussion of the concept codes and themes that emerged through this process, overarching themes were identified.

	Interview Transcript	Concept Codes	Themes	Overarching Themes
Interviewer	So I wanted to ask you to share your perceptions of professionalism. Can you define professionalism?			
Participant	Yes. For me, professionalism is really about doing the right thing. If you are an educator, if you're a teacher, I think your professionalism is all wrapped up in really trying to help people learn and helping them with their personal development and well-	• Professionalism definition • Purpose of job position	• Professionalism definition • Meaning of career	• Developed purpose of career • Definition of professionalism

	being. So I think of teaching as a profession. I think being a professor, you should be professional. And so the traditional roles of professors are teaching, research, and service and a research university. Sometimes research gets overemphasized above, say, putting a lot into your teaching and doing the service and so forth. I think a real professional would strike a balance across those. And in my case, I really try to do research in such a way that it does have some sort of social impact, some kind of value beyond my own CV sort of like. But yes. I think professionalism is doing the right thing for the right reasons, being moral, making good decisions to advance both the profession and individual lives.			
Interviewer	How you just described professionalism - do you think the perception has evolved over time as you were developing your career?			
Participant	Yes. I think I learned professionalism by role modeling. I had some really good teachers and some really good role models. I think learning to be a professional-- through role modeling. I don't know that it's something that can be taught in a workshop or read it in a book and I think it's more something that-- it's part of the culture that you absorb it from seeing people being professional, and you say, "Well, I want to be like that, too." So I've been fortunate.	• Professionalism • Role modeling/mentor • Instructional strategy	• Mentoring	• Mentoring experiences

As a result, the findings section of Chapter 4 presented the overarching themes that emerged across the three interviews along with relevant quotes that best represent the meaning.

CHAPTER 5

CONCLUSION

The responsibilities of professionals to apply knowledge toward the public good describes the post-modern ideas of professionalism (Sullivan, 2005). As individuals are typically trained in their professional skillsets to become professionals of a certain field through universities (Burns, 2014), higher education should value and embrace the development and application of knowledge and skillsets to be used towards public service (Bryne, 1998; Gibson, 2012). Based on the interconnected relationships between the professional's knowledge and its application towards society, this dissertation study addressed the theoretical and practical perspectives of professionalism in higher education. As a result, a conceptualized framework of professionalism was proposed, and the current perceptions of graduate students' and professors' professionalism in higher education were examined through empirical studies.

To conceptualize professionalism in higher education, Chapter 2 of the dissertation discussed the importance of professionalism and the role it takes in societies. Current challenges of professionalism development in higher education were reviewed, along with a historical review of the concept of professionalism to set up the foundation for where professionalism stands in education. Based on these reviews, a three-dimensional framework of professionalism was proposed to leverage the goals of professionalism development in education with needs in social contexts. Ideas from the various domains and disciplines of professionalism were interwoven into the framework, which resulted in three domains: domain-specific knowledge and skills, communication with epistemology, and responsibility with reflection. The chapter also

explored current instructional strategies of professionalism development in higher education. Finally, instructional implications of the three-dimensional framework of professionalism in higher education were proposed, including external supports, training of self-development, learner-centered pedagogies, integrating real-world contexts, etc., to be used in designing guidelines for learning.

Next, the following empirical studies were conducted to understand how professionalism was being perceived by graduate students and professors at a research institution. The results of the two studies also informed possible directions to design learning environments to promote professionalism in higher education.

Perceptions and experiences of incoming graduate students' professionalism were examined in Chapter 3. A qualitative multiple case-study was employed by interviewing four incoming graduate students to understand their perceived changes of professionalism through the challenge-based professional skills training program, as well as personal experiences that influenced their understanding of professionalism. Further, the study also identified learning environments that promoted the students' understanding of professionalism to suggest potential directions for designing learning. Findings revealed that through experiences in the training program, students perceived the following components as professionalism: engaging in community-related activities, being aware of the degree of influence their competence and research can have, and building authentic and meaningful relationships with others. Other experiences that promoted the understanding of professionalism were related to their interaction with others (e.g., mentors, interdisciplinary collaborative opportunities). These interactions influenced their personal perceptions of professionalism and experiences that broadened their understanding, such as the learning of cultural differences and experiencing how unprofessional

acts of others can influence a situation. Some instructional strategies that promoted understanding of professionalism included community-engaged projects, real-world applications, interdisciplinary panel discussions, and reflective opportunities. The findings were suggested to be used in forming the foundation in designing learning to promote the development of professionalism in higher education.

Chapter 4 explored how professors in a research institution with an established scholarly agenda around engaging with communities and solving social problems perceived professionalism. The professors' definitions and components of professionalism, and the experiences that promoted their understanding were reviewed. The overarching goal of this study was to unpack the forms of professionalism that should be reflected of all professionals, so they work towards solving real-world issues and impacting society. Findings indicated that the professors understood and positioned themselves as professionals in both the workplace and outside of the workplace, and reflected their professionalism by being a professional across all contexts. Moreover, professors described their personal characteristics and beliefs, and the understanding that their purpose of career lies in working with communities and finding meaning through those activities as components of professionalism. Some of the experiences that formed professors' understanding of professionalism were based on their interdisciplinary experiences, real-world experiences, and mentoring experiences. The findings of this study also implied future directions for learning that can be included in designing environments to promote the development of professionalism in higher education.

Implications of the Dissertation Research

The overall ideas proposed through the conceptual framework of professionalism in Chapter 2 aligned with the findings of the empirical studies in Chapters 3 and Chapter 4. The

conceptualization of professionalism through literature in Chapter 2 described professionalism as the professional being competent, aware of the social contexts and needs, and committed towards accountability of their work. Similar ideas were also found in the empirical studies examining graduate students' and professors' perceived understanding of professionalism. In Chapter 3, graduate students saw the importance of developing competence and working with the communities to effectively engage with the real world. In Chapter 4, professors were aware of the effect their competence can have on the real world and had been engaging in research and service activities that addressed social problems and needs. Table 5.1 illustrates the alignment of ideas of the conceptual framework and the empirical studies.

Table 5.1

Key Dimensions of Professionalism Defined and Discovered

Theoretical Perspective (Chapter 2)	Empirical Findings of Graduate Students (Chapter 3)	Empirical Findings of Professors (Chapter 4)
Professional competence	Importance of competence development	Competence applied toward various contexts
Awareness of social contexts and needs	Importance of real-world experience and engagement	Transfer of professional knowledge and skills through research
Commitment towards accountability	Understanding professional roles of working with communities, finding purpose of research, being reflective	Applying knowledge and solving real-world problems

The overall discussions of the three chapters have informed the following ideas regarding professionalism in higher education. Professionalism is perceived as the integration of professional competence, the awareness of social contexts and needs, and the professional commitment towards the accountability of society (Evans, 2008; Flexner, 1915; van Mook et al., 2009). Thus, the core of professionalism lies in the professionals transferring their professional

competence to social contexts (Sullivan, 2005). The professionals should be reflecting on themselves and the larger communities and recognizing ways they can position themselves to be responsive to society (Sullivan, 2005). In higher education, training towards reflection, supporting learners' development with appropriate scaffolds to transfer their competence to different contexts, and providing opportunities to make meaning of their actions can offer valuable learning experiences for upcoming professionals to develop professionalism that reflects responsibility toward the public good.

Limitations and Recommendations for Future Research

The overall findings and implications of the dissertation research informed that professionalism is embedded within the scope of professionals based on the academic and social contexts, which guided the development of the three-dimensional framework of professionalism. Follow-up studies that examined professionalism of graduate students and professors also examined the understanding professionals should have in applying their competence towards the real world.

As various findings were reported through this dissertation study, there are implications that could be addressed through future research. First, there is a need to continue to examine professionalism across students and professors as well as different disciplines, to understand experiences and identify learning environments. As the conceptualization of the framework was initially guided by reviewing different components and disciplines that discussed professionalism, continuing the examination will add to the overarching ideas of the framework and also strengthen the underlying meaning of professionalism. Furthermore, continuing to collect perceptions and experiences of professionalism of both students and professors across different disciplines will help set the groundwork of what professionalism is, how it is defined,

and ways it can be conceptualized in higher education. Studies examining the differences in professionalism between graduate students (novices) and professors (experts) may help in designing learning to effectively promote the development of students. As the emerging themes and ideas of professionalism continue to be identified through research, the meaning and definition of professionalism in higher education will become well-grounded.

Although this study has made efforts to find the underlying meaning of professionalism to add value to the existing literature that highlights the importance of professionalism, further empirical studies that can validate the meaning and components of professionalism may be designed. For example, by increasing the number of participants to develop a validated survey that quantitatively assesses and measures components of professionalism may be meaningful to better represent the criteria, and can also be used as a tool to assess the professionalism of professionals in higher education. Moreover, Delphi methods can be used with professors to extract the experiences that influenced the professionalism of professionals to identify its nature. Mentoring guidelines based on the essential factors and philosophies that are imperative in a mentor-mentee relationship can also be developed to guide the students' development of professionalism in higher education.

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