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**EXPLORING THE EXPERIENCE AND IDENTITY OF ASSOCIATED  
FACULTY TEACHING IN A DOCTOR OF PHYSICAL THERAPY  
PROGRAM**

Catherine A Bilyeu

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**EXPLORING THE EXPERIENCE AND IDENTITY OF ASSOCIATED FACULTY  
TEACHING IN A DOCTOR OF PHYSICAL THERAPY PROGRAM**

By

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A Dissertation Submitted in Partial Fulfillment of  
the Requirements for the Degree of Doctor of Philosophy

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Department of Public Health & Health Sciences

Health Sciences Program  
In the Graduate School  
The University of South Dakota  
August, 2024

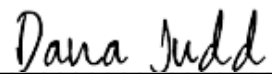
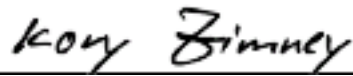
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The members of the Committee appointed to examine  
the dissertation of Catherine Bilyeu find it  
satisfactory and recommend that it be accepted.



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Chairperson John Korkow, PhD, LAC



## Abstract

Doctor of Physical Therapy (DPT) program faculty often enter academia as expert clinicians or researchers, but rarely as expert educators. Recommendations for faculty development exist, yet many physical therapy faculty still enter academia with little or no formal preparation for teaching and limited understanding of academe. This lack of preparation can impact faculty performance and identity, which ultimately can influence student outcomes. This is particularly true for associated faculty, who have very limited access to development opportunities due to the nature of their academic positions. Framed in social constructivism and transition theory, this study explored the experience and identity of associated faculty teaching in a DPT program. As very little was known about this group of educators, a grounded theory approach was used to allow for a rich exploration of their experience. Data collection occurred primarily through semi-structured interviews, with questions designed to explore the educators' experience and identity transitions within a workplace community, consisting of classroom/laboratory teaching and exposure to a faculty development series. Use of participant-produced drawings of identity and field observations allowed for triangulation of data. Data was analyzed using the constant comparative method. Six categories emerged inductively from the data – professional identity salience, emotional well-being, connection and belonging, centrality of roles, development of the educator and needs – organized around the central theme of interleaving, analogous to blank pages within a book. Interleaving indicated associated faculty experience and identity were punctuated by numerous gaps, the result of which is an incomplete experience and low self-concept as an educator. Through this grounded theory exploration, the shared perspectives of associated faculty teaching in a DPT resulted in the emergence of key elements central to understanding factors influencing their experience and identity in an academic role.

Dissertation Advisor \_\_\_\_\_



Dr. John Korkow

## Acknowledgements

Genuine gratitude goes to my dissertation chair, Dr. John Korkow, for setting high expectations from day one and providing structured guidance throughout the entire journey. A well-timed phone call made more difference than you can imagine. I also express deep thanks to my committee members Drs. Dana Judd and Kory Zimney. Dr. Zimney facilitated a wonderful climate of learning in this PhD program and encouraged me to simply keep plugging along. To my friend and colleague Dana – I would not have pursued a dedicated path to further my knowledge, skill, and confidence in the world of education research without your mentorship and role-modeling. Additionally, a special thank you is owed to my trusted work companion and friend, Dr. Joe Palmer, who graciously provided data analysis support, endless words of encouragement, and a collegial shoulder to cry on. I am also grateful to my home institution Program Chair, Dr. Michael Harris-Love, for providing the resources and environment conducive to these scholarly pursuits.

My parents instilled a deep love of learning in all their children, so while extremely challenging, this journey still felt natural to me, even at a later stage in my career. Sitting in my childhood home, I thumbed through my dad's 1964 dissertation examining positron-electron annihilation and found the focus to begin writing my final chapters. Thanks to my mom for her unwavering support and encouragement, and for providing a haven for writing (even if it was just one page). I am especially thankful for my wonderful husband David who has provided unending support for my passion of lifelong learning, and to my two children who have shown true interest in my work and provided support through many conversations at our "cozy" kitchen table - may we all continue with a focus on lifelong learning. A special thank you to my daughter Taryn, who kept the creativity flowing as I worked to envision the grounded theory graphically.

Her talents produced Figure 7 in extraordinarily little time. Finally, thank you to my research participants, for sharing your stories with me; know that you are valued and together we can further the education of our future physical therapy colleagues.

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## **Chapter 1: Introduction**

Doctor of Physical Therapy (DPT) program faculty often enter academia as expert clinicians or researchers, but rarely as expert educators (Wainwright & Brueilly, 2019). Recommendations for faculty development exist, yet many physical therapy faculty still enter academia with little or no formal preparation for teaching and limited understanding of academe, which can impact faculty satisfaction and performance, as well as student outcomes (Condon et al., 2015; Jensen et al., 2019). This is particularly true for associated faculty, who additionally have very limited access to development opportunities due to the nature of their academic positions (Bilyeu, Niski, et al., 2023). This phenomenon translates across analogous “adjunct” or “clinical” faculty from numerous professions (Dewald, 2010; Gardner et al., 2017; Gonzalo et al., 2018; Lyons, 2007; Mann & De Gagne, 2017; Rice, 2016).

Physical therapy is a profession that relies heavily on psychomotor skills to examine and apply therapeutic interventions with patients. The nature of teaching and learning discreet hands-on skills, along with the related clinical reasoning and affective behaviors that drive patient-centered care, requires adequate faculty to student ratios (Snider et al., 2012). Associated faculty are key in supporting this learning model and have direct impact on student learning (Bilyeu, Niski, et al., 2023). A paucity of literature exists related to associated faculty and no studies have explored their experience and identity related to teaching.

This dissertation reports on a grounded theory study exploring the experience and identity of associated faculty teaching in a DPT program who have been exposed to varying levels of a faculty development program. The remainder of this chapter provides necessary background information, presents conceptual definitions of key terms, specifies the problem studied,

elucidates the professional significance, and provides an overview of methodology used. The chapter concludes with a discussion on study limitations and delimitations.

## **Background**

Education leaders in the physical therapy profession recently built on the Carnegie Foundation's Preparation for the Professions Program, establishing a conceptual model representing the dimensions and elements of excellence in physical therapist education (Jensen, Nordstrom, et al., 2017). One key tenet of this Model of Excellence in Physical Therapist Education is the need to develop DPT graduates who enter the work force as adaptive learners and can thereby meet the diverse needs of patients. This requires the presence of a cadre of faculty with the necessary knowledge, skills, and attitudes to support such learning. Relatedly, an additional tenet is the need to cultivate these faculty attributes with intentional development opportunities focused on teaching and learning.

In addition to knowledge and skill, professional identity is also an important educator construct related to success, confidence, and retention in a particular professional role (Jarvis-Selinger et al., 2012). Health professions faculty, however, often identify primarily as clinicians or researchers, rather than educators (Browne et al., 2018). This has the potential to negatively impact student learning as professional identity also exerts a force on career choice, academic roles, and choices made around professional development opportunities (Steinert et al., 2019).

Professional identity often evolves through complex interactions between self and others, as well as social interactions between these in a professional context or community of practice. Identity can also be shaped through embedding identity-focused activities within faculty development programs, yet there is little empirical evidence discussing how to accomplish this (Chandran et al., 2019; O'Sullivan & Irby, 2021; Steinert et al., 2019). Within physical therapy

education literature, only one perspective paper was found that superficially explored teacher identity within physical therapists (Snook et al., 2022). No literature exists related to the impact of faculty development on identity formation within the physical therapy profession. This dissertation focused specifically on associated faculty due to the near absence of literature on their experience, development, and identity. This population thus lends itself well to a grounded theory exploration.

### **Conceptual Definitions**

Before proceeding, it is important to understand several key terms used throughout this dissertation.

1. *Associated faculty*: In the profession of physical therapy, associated faculty are defined as Individuals who have classroom and/or laboratory teaching responsibilities in a DPT curriculum and who are not core faculty or clinical education faculty. Associated faculty may include individuals with full-time appointments in the unit in which the professional program resides but who have primary responsibilities in programs other than the professional program.” (Commission on Accreditation in Physical Therapy Education [CAPTE], 2023).

The vast majority of associated faculty are physical therapist clinicians from the community who are hired to either a) assist in lab-based teaching to improve faculty to student ratios or b) teach select portions of a course due to knowledge/skill in a specialty practice area. This majority is the subset of associated faculty on which this study is focused.

2. *Professional Identity*: Professional identity is defined as “a representation of self, achieved in stages over time during which the characteristics, values, and norms of [a] profession are internalized” (Crues et al., 2014).
3. *Faculty Development*: Faculty development “consists of a blend of mentorship, workplace learning, and planned programs that develop knowledge, attitudes, and skills relevant to the roles and responsibilities of health professions faculty” (Steinert, 2014).

### **Problem Statement**

The recognized lack of training, development, and support for associated faculty perpetuates a three-part gap in readiness to teach in DPT programs – that of teaching knowledge and skill, knowledge of the academy, and professional identity formation as an educator. Further, no substantive literature exists which explores the experience, identity, and development of associated faculty as educators. There is also a dearth of literature on physical therapy faculty development in general, and none related to supporting professional identity formation in associated faculty, leaving no guide on how to fill these gaps. In medical and nursing education, literature suggests a strong connection between faculty development programs and enhanced teaching behaviors (Behar-Horenstein et al., 2019; Drummond-Young et al., 2010; Steinert et al., 2016). Based in part on this literature and supported within their own frameworks, the American Council of Academic Physical Therapy’s (ACAPT) Excellence Framework (American Council of Academic Physical Therapy [ACAPT], 2022) and Jensen et al.’s (2019) Model of Excellence reinforce the necessity of faculty development programs, but do not outline any specific strategies for the building or implementing such opportunities. This ongoing gap in faculty preparedness to teach is therefore recognized within the physical therapy profession, creating a distinct challenge in achieving the profession’s goal of excellence. No clear or accessible



developmental paths appear to exist. Before we can embark on creating strategies for faculty development, it is important to first understand the experience of associated faculty and where their professional identity formation lies. The development of a grounded theory on the experience of physical therapist clinicians who transition to include a faculty role as part of their professional duties is the necessary first step. Once we understand their story, we can build support structures and enhance identity formation which in turn allows us to thoughtfully recruit and retain talented individuals within these vital student-facing positions.

### **Statement of Purpose**

The overarching purpose of this study was to better understand, through theory development, the experience, perspectives and identity of associated faculty teaching within a Doctor of Physical Therapy Program. Additionally, this grounded theory study sought to describe the impact of an evidence-based longitudinal faculty development program on the experience and professional identity formation of this unique group educators and examine factors that shape the transition into that teaching role.

### **Research Questions**

The following research questions aligned with the problem and purpose identified above and were designed to guide the investigation of how associated faculty perceive their academic experience and professional identity:

1. What factors contribute to associated faculty experience and identity formation within their academic roles?
  - a. How do associated faculty perceive the impact of an evidence-based faculty development program on their experience as educators?

- b. How do associated faculty perceive the impact of an evidence-based faculty development program on their professional identity?
- c. What other factors shape the transition process when adding an academic teaching role to traditional clinical practice?

### **Professional Significance**

The Physical Therapy profession is at a turning point within the highly complex world of healthcare. Leaders in the field describe the need to remain relevant in a rapidly evolving environment and the imperative to transform both educators and learners to meet expectations of excellence proposed by the profession and expected by society (Jensen, Hack, et al., 2017; Sullivan, 2005). To meet this lofty goal there is a need to develop lifelong learners with strong professional formation and adaptive expertise. In a profession deeply rooted in the integration of knowledge, psychomotor skill, reflective practice, and moral agency, this is a challenging undertaking requiring that educators have a clear vision of their role, robust understanding of learning science, and the necessary skill to guide learning adequately (Jensen et al., 2019). There is very little literature examining roles, identity, and development of physical therapist educators, and the paucity of evidence is even greater when considering associated faculty.

Entry-level physical therapist education programs rely on over 2800 associated faculty across 273 DPT programs nationally (CAPTE, 2023). Given the sheer number of these educators and the necessary reliance on their support, particularly for teaching psychomotor skills, a lack of preparedness to teach and assimilate into academic culture has great potential to adversely impact student learning, and ultimately the patients they will serve as new graduates. Further, having a combined sense of identity of both clinician and educator is known to be critical in supporting quality teaching, yet nothing is known about the professional identity make up of

associated faculty. A thorough understanding of the experience and identity of these clinician-educators is critical to ensure the profession can move forward with a robust faction of educators who can in turn support the development of contemporary physical therapist students.

The scarcity of research into physical therapy faculty development support structures, professional identity formation, and associated faculty in general indicated that this study had great potential to add important new knowledge to the conceptual Model of Excellence in DPT education.

### **Theoretical and Conceptual Frameworks**

Three foundational theories guided this study: social constructivism, social identity theory, and transition theory. Social constructivism grew out of the work of psychologist Lev Vygotsky (1978) and emphasizes both the individual learner and related social participation in a learning environment as the basis of learning. It is an active process, whereby the learners are co-constructors of knowledge (Bruning et al., 2011; Dennick, 2016). The social context of learning has obvious connections to the group nature of teaching enacted by associated faculty as well as the faculty development opportunities which bring educators together in a classroom or virtual setting. Both draw from individual experience and allow shared development of knowledge and skill in a social environment.

Grounded in social constructivism, social identity theory provides a valuable research guide for exploring professional identity. This theory posits professional identity consists of an individual's knowledge of belonging to a particular social group and the value placed on this sense of belonging (Hogg et al., 2004). Belonging then contributes to an individual's sense of self-concept. This theory provides an attractive framework for examining associated faculty, as health professions educators are known to construct their identity through continuous

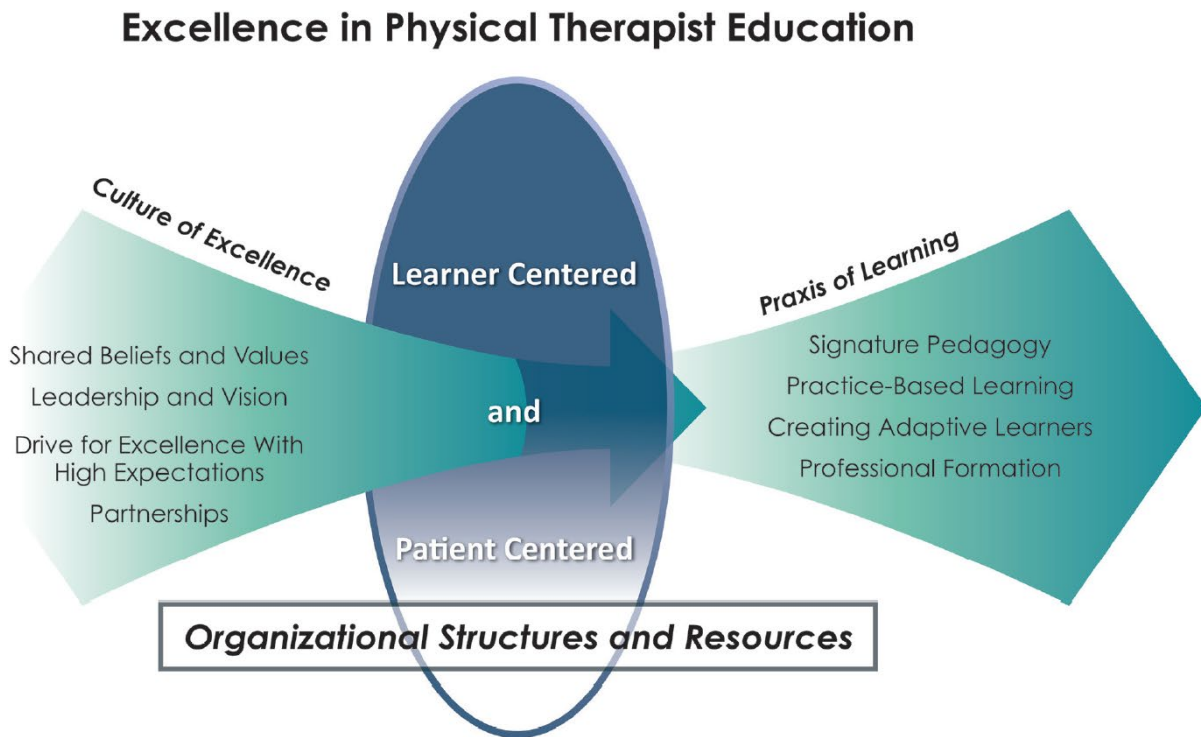
metacognition and interaction with others within a community of practice (Steinert et al., 2019; van Lankveld et al., 2021)

Transition theory (Schlossberg, 1981) is also important in the context of health professions education as most faculty begin as clinicians and shift into teaching roles in various ways over time. Transition can be defined as any event that “results in changed relationships, routines, assumptions, and roles” (Anderson et al., 2012). Given that identity is malleable, especially when one faces change (such as a new professional role), transition theory offers a framework for examining factors related to navigating change and the influence of change on identity in the context of a given event (Anderson et al., 2012).

The entirety of this study lies within the conceptual Model of Excellence in Physical Therapist Education (Jensen et al., 2019). Figure 1 depicts this model, which outlines numerous factors impacting DPT education with both learners and patients at the center.

**Figure 1**

*Model of Excellence in Physical Therapist Education*



Note: From Jensen GM, Mostrom E, Hack LM, Nordstrom T, Gwyer J. *Educating physical therapists*. Thorofare, NJ: Slack Incorporated; 2019.

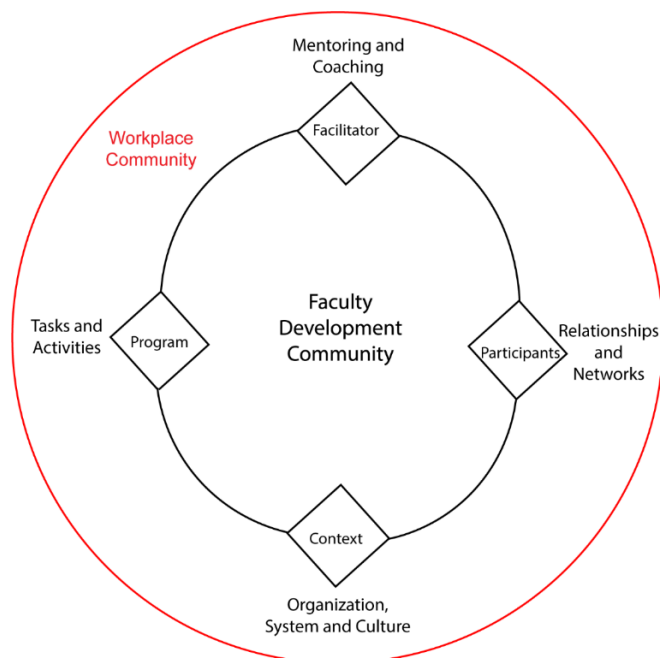
Well-prepared educators who directly interact with students can impact this model through contributions to the Culture of Excellence (shared beliefs and values, drive for excellence with high expectations) and the Praxis of Learning (creating adaptive learners). The central portion of this model, known as the Nexus, is described as a “metaphoric lens, where the paired and highly valued aims of the learner- and patient-centering in the education enterprise come together in both academic and clinical realms” (Jensen et al., 2019, p. 59). The Nexus functions as a bridge between clinical and academic worlds, which is exactly where associated faculty live. These

faculty are, therefore, critical in supporting the nexus of student education and the future patient-care providers.

The conceptual framework by O’Sullivan and Irby (2011) additionally provides a guide for research on faculty development. This framework (see Figure 2) allows for the examination of how components of faculty development including facilitator, relationships formed by participants, learning environment, and specific faculty development activities come together to impact learning and identity within a community of practice. Etienne Wenger described the concept of community of practice as not necessarily a group of people, but rather a “social process of negotiating competence in a domain over time” (Farnsworth et al., 2016, p. 143). A community of practice is also central to the development of identity. That is, the development of faculty occurs through a socially constructed network of learning and transition. The theories described here become nested within this conceptual framework.

**Figure 2**

*Framework for Faculty Development Research*



Note: Adapted from O’Sullivan and Irby (2011)

## **Overview of Methodology**

### ***Study Design***

A qualitative approach guided this study, as a rich exploration of associated faculty experience was desired to begin building a collective knowledge base about this group. As very little is known about the development and experience of this unique set of educators, a grounded theory approach was chosen. Grounded theory was particularly applicable, as the study sought to learn about a marginalized group and explore how something (experience, identity) changes over time. This approach allowed a substantive theory to emerge out of the qualitative data.

### ***Participants and Setting***

The participants in this study were associated faculty employed in the University of Colorado Doctor of Physical Therapy Program. All participants were licensed Doctors of Physical Therapy with varying levels of experience as associated faculty. Using maximum variation sampling and recommendations for sample size in grounded theory research, 20 participants were targeted (Thomson, 2011). This approach to sampling allowed for broad representation of participants, which is important in creating a substantive theory (Merriam & Tisdell, 2016).

This population was specifically targeted because there is a dearth of literature examining their experience, performance, and needs, as compared to a limited body of literature focused on core DPT faculty. Additionally, associated faculty typically have little to no access to traditional development opportunities within a university system (Bilyeu, Niski, et al., 2023). This marginalizes the group and creates potential barriers to teaching and identity development.

## ***Methods***

Data collection occurred primarily through semi-structured interviews, with questions designed to explore the educators' experience and identity transitions within a workplace community, consisting of classroom/laboratory teaching and a faculty development series. To allow for triangulation of data, participant-produced drawings of identity and field observations were also utilized. Data was then analyzed using the constant comparative method, whereby data was sorted into patterns or themes. These themes were then examined for relationships and organized around a centrally identified category in the building of the grounded theory.

## **Limitations and Delimitations**

There were several potential limitations related to this study. As with many qualitative studies, time management can be challenging. When considering reproducibility, it should be considered that interviews are time consuming to organize and administer for the researcher. Time was an even greater consideration for the participants in this study. As clinicians, they typically practiced in very busy environments with inflexible schedules. Thus, finding time to participate in teaching, attend faculty development sessions, and participate in interviews was challenging. Data analysis in grounded theory can also be very time consuming. For reasons similar to those described above, access to participants could be a limitation, as for all associated faculty, clinical practice accounts for greater than 50% of their work time (CAPTE, 2023). When personal and family time is also taken into consideration, ease of access to participants could be challenging. Not all associated faculty have teaching responsibilities every semester, which could also create potential gaps in participation in a study. Finally, participants were all from one university program which limits generalizability.



The primary goal of this study was to develop a theory around the experience and identity of associated faculty exposed to a faculty development series. This study sought only to develop a substantive grounded theory. No objective assessments of change in knowledge or teaching skill occurred, nor was any quantitative data analysis undertaken. This study focused only on associated faculty who were licensed, practicing physical therapists. No associated faculty from other disciplines or departments were included. To maintain focus, only one intrinsically bounded system was studied.

### **Organization of the Dissertation**

The remainder of this dissertation is organized in four additional chapters. Chapter 2 provides a review of the literature associated with the need to develop faculty as educators, recommendations for faculty development in health professions, foundational concepts of professional identity, and professional identity in health professions educators. Chapter 3 presents a detailed description of the methodology, including study design, participants, setting, data collection and analysis procedures, and validity and reliability considerations. Chapter 4 reports the results of the study through the lens of iterative qualitative analysis and introduces the grounded theory. Finally, Chapter 5 provides a summary of the results and discussion of the findings, including rationale for the resultant grounded theory.

## Chapter 2: Literature Review

Institutes of higher learning, and the education systems within, are responsible for the development of professionals, shouldering the obligation for reliable formation of professional integrity, identity, and purpose (Sullivan, 2005). As such, it is imperative that educators within a given profession have appropriate knowledge, skills, attitudes, and sense of purpose. Within health professions education, however, many individuals enter academia as expert clinicians, but novice educators, resulting in dual roles and identities that may not be equally or adequately supported. Many health professions have been slow to adopt a clear path for developing teaching skill and identity in the faculty responsible for guiding the formation of their next generation of professionals. This has the potential to adversely affect formation of competent graduates from professional programs, and ultimately their patients (Condon et al., 2015; Jensen et al., 2019).

The physical therapy profession faces this same concern, with many educators entering academia with a background only in clinical practice. While leaders espouse a commitment to the professional development of educators, faculty continue to enter academia underprepared for teaching (Jensen et al., 2019; Sullivan, 2005; Wainwright & Brueilly, 2019). Evidence grounded in education research suggests this lack of preparedness exists due to a gap in professional development focused on knowledge, skills, and attitudes related to learning science and understanding of the academy (Jensen et al., 2019; Steinert et al., 2016). Professional identity is another construct believed to contribute to teaching efficacy, but it does not receive adequate support or development (Steinert et al., 2016; van Lankveld et al., 2021).

Doctor of Physical Therapy programs rely heavily on non-core faculty, using clinicians from the community to support cognitive, affective, and psychomotor domains of teaching. Large numbers of these associated faculty are used to enhance faculty to student ratios and bring

clinical perspectives to classroom teaching, which is particularly important in supporting the development of psychomotor skills. This group of faculty, as compared to core faculty, typically have low access to development resources and therefore the risk of under preparedness to teach is even higher (Bilyeu, Niski, et al., 2023; Lyons, 2007). Due to a paucity of research related to faculty development and professional identity specific to physical therapy educators, the review of the literature included perspectives of other health disciplines, such as medicine and nursing.

The purpose of this chapter is to explore literature related to the development of health professions educators' knowledge, skill, and attitudes, and formation of professional identity. This will be accomplished through review of the following topics: an overview of the necessity for faculty development programs, content of and approaches to evidence-based faculty development, theories on professional identity development, professional identity development in health professions educators, and challenges of developing and maintaining educator identity in health professions faculty.

## **Establishing the Need for Faculty Development Programs**

### ***Carnegie Foundation Studies***

The Carnegie Foundation for the Advancement of Teaching promotes the premise that a professional's knowledge, behavior, and formation are grounded in the higher education systems specific to that profession (Irby et al., 2010). This dissertation will focus on the development of associated faculty as educators; implicit in this study is the importance of the relationship between the development of adaptive expertise in new faculty and the education they receive. Two relevant Carnegie Preparations for the Professions studies (medicine and nursing) and a Carnegie-like study in physical therapy illuminate this relationship within three similar fields (Benner et al., 2009; Cooke et al., 2010; Jensen et al., 2019). These seminal studies were all

structured similarly as comprehensive explorations of the professions, and authors summarized themes of excellence in the education process for the respective professional fields. According to a lead Carnegie researcher, William Sullivan, all health professions must address three common areas, or “apprenticeships,” of the learner’s development through education - academic and theoretical knowledge base, clinical reasoning and clinical practice, and professional formation (Sullivan, 2005). In the Carnegie Foundation study on nursing, Benner et al. (2015) described that while the content and nature of practice taught may be different for each health profession, the need for the clinician educator to be skillfully involved in guiding the development of these three apprenticeships remains constant across disciplines. Educators must, therefore, be well equipped to solve the andragogical challenges involved in teaching such complex facets of a profession; to excel as such requires an understanding of learning science and embracing the role of educator.

Recommendations to develop faculty were consistent across all health professions in these studies. In the Carnegie Foundation study on medicine, seven recommendations were made to enhance U.S. medical education, one of which specifically suggests that faculty development is necessary to support each institution’s teaching mission (Irby et al., 2010). Similarly, in the comprehensive work on excellence within physical therapist education, Jensen et al. (2017) overtly state that faculty development needs to focus on evidence supported teaching and learning strategies that are intimately linked to the physical therapy profession.

### ***Professional Organizations***

Several national organizations with a focus on physical therapist education have clear statements on the import of faculty development in supporting student learning. The ACAPT (2022) recently developed its Excellence Framework for Physical Therapist Education. This

framework consists of 12 “critical categories” for guiding educational excellence. Faculty development is highlighted as a necessity in Category 3, “Sustains a culture of continual growth and development” and Category 9, “Promotes adaptive, lifelong learning & professional formation.” Key considerations within these categories focus on continual faculty development and allocation of resources to enable faculty growth, respectively.

The Education Leadership Partnership similarly put forth recommendations for focus on faculty development in their Vision for Excellence in Physical Therapy Education ("Vision for excellence," 2021). The structure for achieving the Vision for Excellence consists of six pillars. The sixth pillar is designed to ensure that educational institutions have adequate resources to deliver high-quality education. This includes faculty access to ongoing opportunities to advance abilities of contemporary evidence-based education, leadership, and mentorship.

The Commission on Accreditation in Physical Therapy Education (CAPTE) is an accrediting agency, recognized by the United States Department of Education and the Council for Higher Education Accreditation. The CAPTE grants specialized accreditation status to qualified Doctor of Physical Therapy programs, guided by the Standards and Required Elements for Accreditation of Physical Therapist Education Programs (CAPTE, 2023). Standards 2 and 4 speak directly to faculty preparedness to teach. Standard 2 declares faculty must be capable of meeting curricular needs. Standard 4 states that all faculty must be qualified in their roles and effective in carrying out responsibilities; this includes contemporary expertise in teaching along with demonstration of effectiveness in teaching and student assessment.

## **Faculty Development in the Health Professions**

The professional formation of and learning outcomes for students in health professions programs is impacted by the efficacy of faculty (Condon et al., 2015; Jensen et al., 2019; Stein et al., 2012). Most health professions faculty, however, are not substantively trained in teaching, nor well-versed in academe. This is particularly true for associated faculty in the physical therapy profession (analogous to clinical or adjunct faculty in other higher education programs) who historically have very limited access to faculty resources due to the nature of their position within the university (Bilyeu, Niski, et al., 2023; Lyons, 2007; Rice, 2016).

Doctor of Physical Therapy programs rely on over 2800 associated faculty nationally, the majority of whom are responsible for supporting classroom and lab teaching in low-hour or part-time positions, as previously defined. They are utilized to enhance faculty to student ratios for teaching psychomotor skills; they also bring select expertise and unique clinical perspectives to support the cognitive and affective domains of learning. This high number of associated faculty is understandable when one considers recommendations for optimal faculty to student ratios for the teaching of psychomotor skills, which is a substantial component of DPT education.

Laboratory teaching of hands-on skills is best supported with ratios of one faculty member to 4-8 students, with need for these instructors to have clear understanding of things such as motor learning principles and evidence-based feedback frameworks (Dubrowski & MacRae, 2006; Snider et al., 2012). Faculty development initiatives are, therefore, critical for enhancing teaching skills across this breadth of educators who have numerous touchpoints with students.

In a 2019 systematic review of faculty development initiatives across numerous health professions, Behar-Hornstein et al. (2019) described overwhelmingly positive outcomes, including advanced teaching skill and knowledge, as well as enhanced vitality and retention.

They also commented on the need for more robust methodologies in faculty development research as well as the need to assess long-term effects of such programs. The authors also highlighted the potential for publication bias in this line of research, given the absence of negative findings.

Medical and nursing education literature clearly outlines successful approaches to faculty development. While there are fundamental differences across these professions and physical therapy, there are sufficient similarities to consider this literature applicable (Benner et al., 2009). Yvonne Steinert, a leading expert in medical education and faculty development, suggested that faculty development in the health professions needs to address learning theory, curricular understanding, student assessment principles, and knowledge of the academy (Steinert, 2012; Steinert, 2014; Steinert et al., 2016; Thomas et al., 2019). More specifically, in the 2016 systematic review on faculty development in medical education, Steinert suggested key features of faculty development programs are: evidence-informed educational design, relevant content that is applicable to the attendees' educational responsibilities, opportunities for practice, opportunities for feedback and reflection, ongoing or longitudinal program design, and intentional community building (Steinert et al., 2016). Outcomes from well-designed faculty development initiatives in medicine and nursing include improved knowledge, skills, and attitudes around teaching, enhanced confidence, a better understanding of the academy, enhanced role satisfaction, and clearer sense of faculty identity, academic excellence, and innovation (Mann & De Gagne, 2017; Phillips et al., 2019; Rice, 2016; Santisteban & Egues, 2014; Steinert et al., 2016).

In contrast to medicine and nursing, literature specific to faculty development in physical therapy is very limited. Behar-Horenstein et al.(2012) found that a six-week professional

development series focused on teaching development for core physical therapy faculty resulted in short term improvements in teaching expertise and flexibility in approaches to teaching. A community of practice emerged from this seminar series, whereby participants began to collaborate and share ideas. Such interactions are also known to contribute to professional identity. The only journal article found to focus on physical therapist associated faculty was a method/model paper outlining a faculty development program (Bilyeu, Reilly, et al., 2023). Although conclusions cannot be drawn from this methodology, participant comments and preliminary outcomes suggest similar improvements in teaching knowledge, confidence, and sense of community.

More recently, authors have begun to discuss a gap in the literature on faculty development related to the importance of educator identity. Authors have begun to incorporate discussions around the importance of fostering the formation of professional identity as an educator via faculty development initiatives (Snook et al., 2022; Steinert et al., 2019; van Lankveld et al., 2021). This emerging body of literature suggests that faculty who have an identity aligned with that of educator are more committed to and engaged in improving teaching and learning. A recent example of a faculty development workshop designed to focus on identity is described by O’Sullivan et al. (2021) through a submission to the MedEdPortal, a related arm of Medical Teacher journal designed for open sharing of well-designed and peer-reviewed teaching strategies for medical educators. This gap in current faculty development literature warrants further investigation.

### **Professional Identity**

Professional identity can be defined as “a representation of self, achieved in stages over time during which the characteristics, values, and norms of the [a] profession are internalized”



(Cruess et al., 2014). Because most health professions educators come to academe with extensive clinical background, they are believed to primarily align with the identity of clinician, rather than educator (Browne et al., 2018; van Lankveld et al., 2017). This can be problematic as professional identity is linked to competence and satisfaction in a role (Jarvis-Selinger et al., 2012). That is, if a faculty member does not identify as an educator, competence and skill in that role could be negatively impacted. Professional identity can also evolve over time, particularly when considered in a social context. If one extrapolates this information, it becomes apparent that professional identity, and its evolution, is an important consideration in the success of health professions educators in their role. By considering identity along with skill in the role of educator, Jarvis-Selinger (2012) suggests that we can better focus on *being* rather than only *doing*. Professional identity is, therefore, an important construct to consider in the framework of faculty development.

### ***Foundational Theories of Professional Identity***

Social identity theory forms the foundation for professional identity, grounding an individual's identity within the membership of various social groups (Hogg et al., 2004). This so-called 'social identity' refers to the individual's knowledge of and feelings about belonging to a particular social group. For health professionals, this could mean membership within a physical therapy department and/or within a group of university educators for those who have academic roles. Social identity theory conceives that social identity groups facilitate a sense of belonging, purpose, and self-worth. These groups thereby create a scaffold from which individuals can build identity, defined by the group attributes and values. This theory aligns well with examining the identity of physical therapist educators as they belong to two distinct professional groups – the

physical therapy clinicians with whom they participate in patient care and faculty within a DPT program.

Professional identity development is complex and influenced by numerous factors. Work by Robert Kegan (1982) focused on the development of self and personal identity. He suggested that individuals move through a series of five stages of identity formation, each of which allows for a deeper understanding of self, the world, behaviors, and moral actions. The five stages are considered mutually exclusive. The individual moves to subsequent stages once they have made meaning within their current stage and are capable of deeper understandings of reality, ultimately transforming their identity. Stage 1 (impulsion) is applicable only in children, characterized by a phase where everything is viewed as an extension of self. The individual in stage 2 (imperial) focuses largely on their own needs and interests and has limited ability to see others' perspectives. Stage 3 (interpersonal) moves the individual towards recognition of other perspectives and the ability to see how they are perceived by others. Individuals in this phase are beginning to reflect on actions and think more abstractly. Once in stage 4 (institutional), the individual can clearly define self, as well as participate within a group and assess relationships according to self-directed standards. Stage 5 (inter-individual) is typically thought to be reserved for a small percentage of adults who can reconcile numerous ways of being and recognize the interdependence of different ways of thinking across self, groups, and systems (Kegan, 1982). This theory aligns well with health professions' identity formation as it is grounded in reflective processes, and requires the individual to make meaning out of their life situations, not dissimilar to the reasoning and reflections necessary in a health professional's clinical work.

Kegan's work has been adapted to provide a framework for professional identity formation in medical education literature, as described by Cruess et al. (2015) and Jarvis Selinger

et al.(2012). Stages 2-4 are particularly applicable when considering professional identity formation; individuals can move through the phases similarly, developing a sense of being and belonging within a profession (Cruess et al., 2015). Aligning Kegan's stages two to four with a professional identity, Cruess describes the individual's sense of professional identity as follows: in stage 2 the individual assumes a professional role, but is rule-driven and simply follows learned steps of professional performance; in stage 3 the individual becomes reflective and seeks mentorship or emulates the behavior of those within the professional group; in stage 4 external values of the profession become internalized and the individual deeply understands important values and relationships within the profession. This is believed to be a highly social process. Because this literature base is looking at professional development in medical students and residents, stage 5 is felt to be not applicable in the professional formation of these typically young new professionals. As the topic of identity is considered within physical therapy, stage 5 could potentially be considered in associated faculty, as these individuals have variable years of experience, with some being highly experienced clinicians.

### ***Professional Identity Formation***

Professional identity formation is considered important as it sets the stage for moral and skill-based competence in a role (Jarvis-Selinger et al., 2012). As noted earlier, there is a paucity of literature specific to educator formation, including identity development, within the profession of physical therapy. Professional identity formation is, however, well described in other health professions literature (mostly in the clinical context) and within teacher education. This section will briefly review these two similar literature bases in relevant professions, followed by a segment on transition theory that brings the concept of clinical practice and education together.

Jarvis-Selinger et al. (2012) describe the progression of professional identity formation in medical education which first involves a trainee's psychological development, followed by socialization in professional roles. The authors stress that to fully develop in a role, education systems cannot just focus on knowledge, skills, and assessment. Rather, individuals must explore meaning and the interconnectedness of all that "forms" a physician. This developmental path allows for participation in a community of practice and a deep moral connection to the work of a physician.

Similarly, Cruess et al. (2015) suggest that the acquisition of professional identity is essential if one is to "think, act, and feel like a physician" (p. 718). This highly complex developmental process occurs via several mechanisms, including exposure, experience, practice, education, professional socialization, role modeling, mentorship, and reflection. These authors also stress that identity formation is a highly social process that is impacted strongly by educational systems.

Within teacher education, Thomas & Beauchamp (2007) discuss the multifactorial process of teachers developing a professional identity, which, over time, results in altered self-image, increased confidence, and enhanced perspective about the realities of their jobs. The authors suggest that teachers with a strong educator identity also have higher job satisfaction, higher intent to remain in teaching fields, and are more likely to partake in continuing education related to their teaching role. Conversely, novice teachers who did not have well-formed identities would have less belief in their role and abilities.

Building on the work of Cruess et al. (2015) and Jarvis-Selinger (2012) et al., Chandran et al. (2019) outline an evidence-based approach to enhance professional identity development in medical students, residents, and clinicians. The authors created activities that were applicable to

the anticipated developmental phase of professional formation of the learner (based on the year in medical school, residency, or fellowship). Reflection was the focus of most intentional learning activities and included mentor-facilitated small group discussions, Objective Structured Clinical Examination cases in professionalism, reflection rounds, and a half day professional identity formation retreat. Additional identity formation strategies focused on well-being, relationships, and the community of practice, which are important facilitators of identity development. These activities included well-being groups, writing communities (poetry, vignettes), an evening at an arts event, a White Coat Ceremony, professional identity work group, and invited speakers.

### ***Professional Identity in Health Professions Educators***

Health professions educators are in a unique position, whereby most enter academia from clinical roles. Some suggest this can create challenges in educators' abilities to adapt to academia, partly because they may not identify as teachers (Aguayo-González & Weise, 2022; Smith & Boyd, 2012; van Lankveld et al., 2021). Smith & Boyd (2012) studied the experiences of recently appointed lecturers in various health professions. They found that such academicians tend to hold firmly to their identity as clinician, rather than embracing a new identity as educator. They suggest intentional strategies to assist the transition into academic roles are necessary.

Working from the same premise, that nurses struggle to transition to academic positions, Aguayo-Gonzalez and Weise (2022) sought to analyze the construction of nurses' identities. Using a qualitative multiple case study, the main themes suggested challenges with transitioning into the role of educator, with participants suggesting low confidence in their role impacted teaching and student assessment. These authors also summarize that specific faculty

development approaches are necessary to foster professional identity and ease the transition into academic roles.

Van Lankveld et al. (2021) described four types of identities in medical educators: 1) hierarchical: one identity dominates, 2) compartmentalized: completely adopting one identity dependent on the context, 3) intersecting: adoption of the unique aspects of each identity, and 4) merged: each role is important in all contexts. In examining these various identity representations, the authors conclude teachers within the latter two groups experience less tension. These teachers are able to embrace the duality of their roles and envision positive connections between clinician and teacher identities. The authors also outline suggested mechanisms for developing and enhancing teaching identity in medical educators to support success in this role.

In a qualitative exploration of experienced physicians who navigated successful change from clinical practice to academic teaching, Browne et al. (2018) described very similar findings to previously discussed literature. The authors suggested that individuals must make conscious decisions around shifting their identity to that of educator in order to be successful in the role. This transition can be hard, and often deters more junior faculty from fully embracing a career change into one with an academic focus. Browne and Collett (2023) also used this same qualitative data set to dive deeper into the temporal and emotional aspects of an identity transition, finding that particular paths and configurations of identity transition can impact success in a role. A key component of these studies was the application of an existing framework to examine how and when these successful career transitions and shifts in identity occurred; this was accomplished using Schlossberg's (1981) theory of transition.

Schlossberg's transition theory (1981) considers a transition as anything in one's life (including career change) that results in changes to roles, assumptions, routines, or relationships and the making of meaning of that event. Four factors impact an individual's ability to manage the transition they are facing: situation (the actual change, and how much control the individual has over it), self (personal characteristics and psychological resources), social support (relationships, support networks, community), and strategies (coping responses and activities which modify/control/aid the situation). This theory provides a lens for examining factors related to managing the substantial change in roles that physical therapists face as they integrate academic teaching into their professional lives. Additionally, by aligning an impending or occurring transition within Schlossberg's 4S framework, faculty developers could attempt to have adequate support factors and strategies in place for a successful transition.

### ***Professional Identity in Physical Therapy***

Very little contemporary empirical research exists on identity within the physical therapy profession, and one article was found to explore physical therapist educators specifically. In the singular, small-scale study found to explore identity in physical therapy educators, Hurst et al. (2010) suggest the transition from clinical practice to academic teaching is challenging, leaving study participants feeling under confident, uncertain, and inadequate in the role of educator. Success in the role transition was enhanced by increased andragogical knowledge and immersion in a community of practice of educators. An additional discussion article by Snook et al.(2022) discussed the importance of physical therapist educator identity. The premise of this commentary was to *start* the conversation related to physical therapist educator identity. The authors drew recommendations from across health professions education literature, including much of what

has already been described, including the need for intentional faculty development opportunities focused on identity.

Mak et al. (2022) completed a scoping review to determine the extent, range, and nature of the professional identity literature in rehabilitation professionals. Only 10 of the 53 papers reviewed came from physical therapy literature, and all were focused on clinician identity or identity formation in students. None of the studies reviewed were performed on a United States-based sample. Having a local sample is important as cultural values, norms, perceptions, and degree paths differ such that research conclusions may not be generalized to this study population. Regardless of sample, the main conclusion confirmed there is very little quality evidence exploring physical therapist identity. The authors recommend first operationalizing an expanded definition of professional identity and professional identity formation. This would create a stronger foundation for empirical research that seeks to investigate professional identity in physical therapists.

### **Summary**

Faculty who identify as educators and those who are well educated in learning science and ways of the academy can enhance student outcomes. Current literature, mostly within fields of medicine and nursing, supports success in developing these constructs and identity formation through faculty development initiatives. This review confirms a gap within the physical therapy literature, with very little, low-quality evidence available to guide faculty development initiatives specific to the profession. Further study is necessary to clearly apply these concepts within physical therapy education. Given the importance of faculty development described herein, it is critical that targeted and context-specific opportunities are developed, described, and



implemented, particularly for associated faculty who currently have little to no access to development resources.

### Chapter 3: Methods

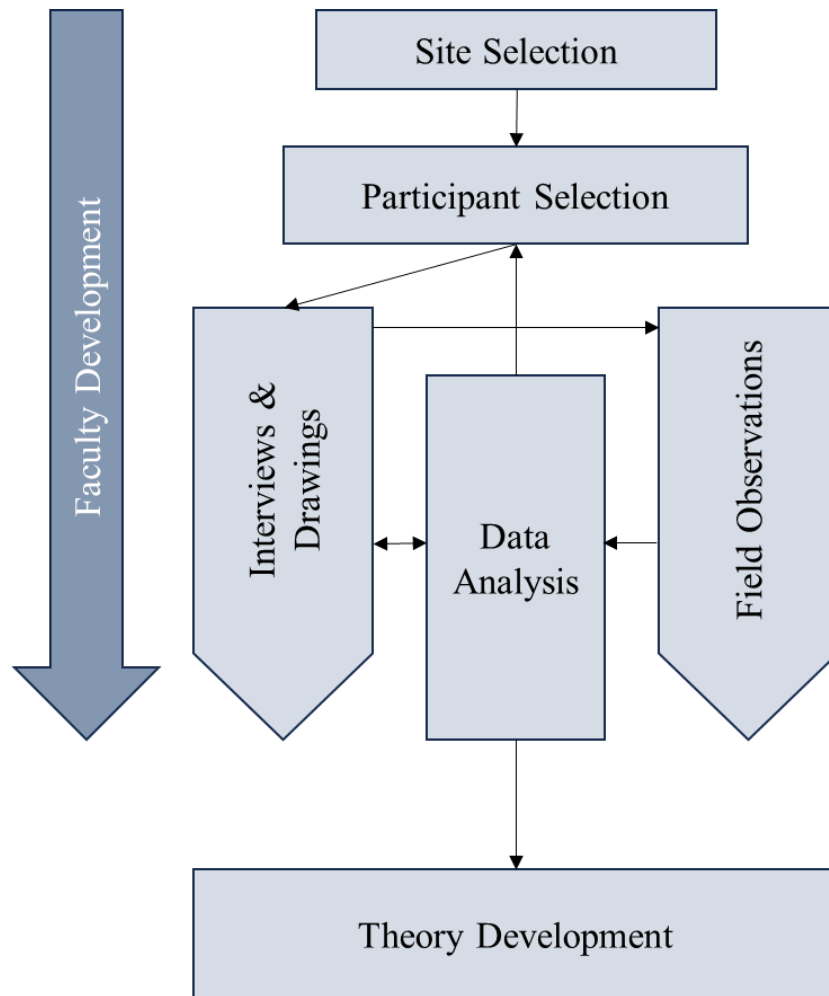
As outlined in the previous chapters, this qualitative study sought to develop a theory around the experience, development, and identity of physical therapist associated faculty. Through prior research examining resources available to associated faculty nationally, it was clear that many associated faculty receive little to no structured or targeted development or orientation opportunities (Bilyeu, Niski et al., 2023). This led to the development of the current study, which sought to better understand associated faculty experience and identity formation in those who were exposed to varying levels of evidence-based development opportunities. The specific research questions are:

1. What factors contribute to associated faculty experience and identity formation within their academic roles?
  - a. How do associated faculty perceive the impact of an evidence-based faculty development program on their experience as educators?
  - b. How do associated faculty perceive the impact of an evidence-based faculty development program on their professional identity?
  - c. What other factors shape the transition process when adding an academic teaching role to traditional clinical practice?

This chapter describes the qualitative methods employed to address these research questions, including justification for this methodologic approach. Additional sections in this chapter will describe the setting, participants, and detailed data collection procedures. Data analysis will be described, including techniques used to address bias and validity. Finally, the theory that evolves from the data analysis will be described. Figure 3 provides a general overview of the method.

**Figure 3**

*Overview of Method*



**Paradigm**

Paradigm refers to the fundamental philosophical assumptions and beliefs that guide the research process and shape both the researcher’s worldview and approach to knowledge generation (Merriam & Tisdell, 2016). This grounded theory research study drew upon a constructivist paradigm. Constructivists believe there is no single reality or truth. More specifically, social constructivists explore how meaning is constructed within a particular social context and molded by specific experiences or actions (Adams, 2006). Faculty development and

the teaching engaged in by associated faculty are highly social processes, thus constructivism aligns well with both the researcher's ontological views and the phenomenon studied.

Additionally, constructivism supports the generation of theory as patterns of meaning can be developed through exploration of broad and complex participant views (Creswell & Poth, 2018).

By embracing a constructivist paradigm, this research study acknowledges the dynamic and subjective nature of reality, while emphasizing the iterative and emergent process of theory development through data analysis.

### **Study Design**

When grounded in constructivism, qualitative research methodologies are appropriate for exploring the experience of individuals or groups, with a focus on meaning, understanding, and the process of change or development (Merriam & Tisdell, 2016). Since very little was known about the experience, needs, or professional identity of associated faculty, a qualitative approach to this study allowed for the development of a rich and holistic understanding of their lived experience and perceptions of professional identity. A qualitative approach also provides a voice for those who are historically marginalized (Creswell & Poth, 2018), which is valid concern for associated faculty (Bilyeu, Niski, et al., 2023).

From established qualitative approaches, grounded theory was the inductive research approach chosen for this study. Grounded theory is a form of inquiry from the field of sociology, used to build a theory of a process or action grounded deeply in the varied and complex views of the participants. The theory is, therefore, developed from the data (the ground) itself. Grounded theory is particularly useful when little is known about a group and is well suited to exploring social processes, such as teaching and faculty development (Merriam & Tisdell, 2016). The previous chapter illuminated the need for faculty development to facilitate skill and educator

identity, which further supports the use of grounded theory to explore the process of change in this group.

### **Role of the Researcher**

Merriam and Tisdell (2016, p. 16) describe the researcher as “the primary instrument of data collection and analysis” in qualitative research. Due to this centrality in the research process, it is important to describe the researcher’s beliefs, background, and role. Philosophical assumptions are beliefs about ontology, epistemology, axiology, and methodology which provide direction for a study (Creswell & Poth, 2018). Each of the researcher’s assumptions will be explored to demonstrate the lens through which this research was conducted.

My epistemological perspective lies in constructivism and the related ontological view that reality is seen through many views. More specifically, my world lens is through social constructivism, whereby an individual’s reality is socially constructed. I would also add a postmodern twist here, as I believe we should embrace and foster the diversity of opinions, ideas, and perspectives that individuals bring to all they do. There is no singular truth or “right” way to interpret life experiences. We can only work to better our institutions and society if we work to uncover the multiplicities of existence.

I place great value on lifelong learning and the power of education, as evidenced through my own educational journey. I was fortunate to enjoy all stages of my schooling, grounded in the excitement and support that my parents fostered regarding education. I commenced my post-secondary education with a Bachelor of Medical Rehabilitation, beginning my professional identity journey as a physical therapist. My job was to help individuals rediscover their function and health in a holistic way. Through that role, I was exposed to teaching students in the clinic and quickly fell in love with being on the other side of the education process. I wanted to

enhance all of my roles and completed a Doctor of Physical Therapy degree after 15 years of clinical practice. My knowledge, skills, and attitudes towards both clinical practice and clinical teaching grew exponentially through this program, dedicated mentorship, and plentiful opportunities to grow. I began to share those newfound attributes with other individuals with whom I worked. I enjoyed the mentoring process and helping others become who they wanted to be within the clinical education realm. I continue to believe we need to help others access opportunities to grow, thus my focus on creating development opportunities for an underrepresented group of educators. My shift in identity from purely clinician to an intersected identity of clinician and educator occurred rapidly. The educator piece became a part of my being, as my professional identities merged. I believe this has allowed me to move fluidly between clinical practice and teaching to this day. My journey started not unlike many of the participants in this study as I progressed through stages as a clinician, associated faculty, and now core faculty.

This study lent itself to a qualitative approach. I have experience in qualitative research through extensive reading, graduate coursework, and prior experience leading three qualitative research studies. This background, together with my philosophical assumptions, and identification of potential biases contributed to my ability to conduct this research project with methodologic rigor. Intentional efforts to mitigate biases are discussed under the Validity and Reliability section.

### **Site and Participant Selection**

An important step in the research process is identifying an appropriate location and a pool of participants from which to draw a sample (Creswell & Poth, 2018). In qualitative research, which relies on in-person field observations or interviews, convenience and accessibility of the

location are important considerations as the researcher often needs to spend significant time with participants, often over repeated visits. For choosing an appropriate sample or participants, qualitative research relies on non-probability sampling, and more specifically purposive sampling. Statistical generalization from a probability sample is not the goal in qualitative research, rather the researcher needs to choose participants intentionally from a group who can best provide information related to the research problem. To gather rich insights about a problem, the participants need to be knowledgeable about a particular issue, and therefore must be chosen purposefully (Creswell & Poth, 2018). It was anticipated that a minimum of 20 participants would be required to reach data saturation in interviews (Thomson, 2011).

### ***Setting***

The setting for this study was the University of Colorado Anschutz Medical Campus Doctor of Physical Therapy program (CU DPT). This University of Colorado campus is a public, urban, R1 institution, and the Doctor of Physical Therapy program is housed within the School of Medicine. This graduate-level medical campus fully embraces Boyer's philosophy of scholarship (Glassick, 2000) and was therefore very supportive of a qualitative research project focused on the development of educators.

This setting was chosen for two main reasons. First, this institution had an established series of faculty development educational sessions geared specifically towards the unique needs of associated faculty. For this study, the contextualized phenomenon of associated faculty development was central to the research question, thus it was critical that the site have an existing program. This site not only had a program, but a recent study showed preliminary positive outcomes for educator skill development (Bilyeu, Reilly, et al., 2023). Second, the

primary investigator held a faculty position at this institution, which allowed for easy and unrestricted access to associated faculty.

### *Participants*

The CU DPT program employs approximately 80 associated faculty in various teaching support roles. From this pool of instructors, a sample of 20 associated faculty was chosen, and 14 agreed to participate. All individuals were licensed physical therapists, and had variable levels of clinical experience, teaching experience, and exposure to a recently established associated faculty development program. This program consisted of five sessions and covered topics related to teaching and learning, such as teaching strategies, understanding the early learner, student assessment, creating inclusive learning environments, and feedback structures. Each session was offered on a rotating basis throughout the year. Participants were eligible for the study regardless of how many sessions they had attended over time. Some had not yet entered into the faculty development program. The associated faculty participants also had variable levels of teaching responsibility in the CU DPT program, ranging from a teaching support role guiding the development of psychomotor skills in labs, to leading portions of individual courses. The only selection criterion was that the individuals were employed as associated faculty in the CU DPT program. The intent of this broad eligibility was to allow for exploration of the experience of associated faculty regardless of their years of experience or training. This approach of purposive sampling is called maximum variation sampling, which is well aligned with grounded theory (Merriam & Tisdell, 2016). The reasoning for this type of sample was that it allowed for broad representation and variability in participant insights, including those who have no training, which is important in creating a useful theory (Bilyeu, 2022).



Additionally, this study employed theoretical sampling, whereby the interdependent process of data collection and analysis guided subsequent rounds of data collection, including the need for identifying new participants (Merriam & Tisdell, 2016). That is, once data from the first group of participants was analyzed, emerging theory guided decisions around who to interview next. Following the initial 14 interviews, this sampling approach was utilized to identify six additional participants who met the same inclusion criteria outlined above and would contribute to the balance of perspectives from both experienced and inexperienced associated faculty. Five of these additional six individuals completed the interview process, for a total of 19 participants.

### **Data Collection**

Qualitative data often consists of people's words collected through stories, drawings, interviews, observations, and excerpts from documents (Merriam & Tisdell, 2016). These words or images may convey ideas, feelings, perceptions, opinions, and knowledge. Data collection involves considerations around collection protocols, recording, and storing the information. Often, more than one data collection mechanism is used to enhance internal validity of results through a process known as triangulation. Triangulation is a process whereby data from multiple sources and timepoints is analyzed and then compared for convergence. Having well-defined collection and recording protocols provides additional support to study validity (Merriam & Tisdell, 2016).

Prior to data collection, institutional review board (IRB) approval was sought at two institutions (University of Colorado Anschutz Medical Campus and University of South Dakota). The study was deemed as exempt by both boards. See Appendix 1 for IRB exemption letters. The primary source of data collection was interviews. Field observations were also utilized to examine associated faculty behaviors in their teaching environment (Bilyeu, 2022). Observations

are recommended to allow the researcher the opportunity to observe things that may seem “routine” to participants but add context and additional detail to interview data (Merriam & Tisdell, 2016).

### ***Interviews***

A research interview is characterized by its structure and focus on the study’s purpose (Merriam & Tisdell, 2016). Interviews are commonly the primary data collection mechanism used in grounded theory, allowing the researcher to better understand the experience and perspectives of the participants when little is previously known.

Semi-structured interviews were utilized. Structured questions allowed for collection of specific information related to consent, demographics, and the research question. Less-structured questions promoted the researcher’s flexibility to responsively follow the interview in any direction the participants took the conversation, allowing views and ideas to emerge around experiences and identity of associated faculty (Creswell & Poth, 2018). An interview guide was developed, outlining both the structured questions, along with open-ended, flexible questions to guide the remainder of the interview. The questions were organized following Patton’s (2015) categories as outlined in Table 1. The interviewer was also free to ask follow-up questions based on participant responses. The interviewer memoed during the interviews, to add thoughts and perspective to the answers in real-time.

**Table 1**

*Interview Categories and Questions*

Category (Patton, 2015)	Questions
1. Background and Demographics	<ul style="list-style-type: none"><li>• Please introduce yourself, and tell me a little about yourself and your background.</li><li>• What is the highest degree and/or certification you attained?</li><li>• What is your area of clinical practice?</li></ul>
2. Experience and Behavior	<ul style="list-style-type: none"><li>• How many years of experience do you have in clinical practice?</li><li>• How many years of experience do you have teaching in CU labs?</li><li>• Have you prepared for your role as an educator? If so, please describe how.</li></ul>
3. Opinion and Value	<ul style="list-style-type: none"><li>• What does it mean to be an educator, and how is this different (or not) from being a clinician?</li><li>• Do you feel like you are a part of the greater CU faculty? Please describe why or why not.</li><li>• Describe your experience with the faculty development session(s) you have attended and how they align or do not align with your approaches to teaching.</li><li>• What needs do you have as an educator that are not being met?</li></ul>
4. Feeling	<ul style="list-style-type: none"><li>• How would you describe your professional identity?</li><li>• Describe how you feel about your role in our DPT program.</li><li>• Describe your confidence in working directly with students.</li><li>• What else would you like to share that we have not yet discussed?</li></ul>
5. Knowledge	<ul style="list-style-type: none"><li>• Tell me what you know about best-practice for teaching in labs.</li><li>• Tell me what you know about benefits and resources available to you as associated faculty.</li></ul>

Note. CU=University of Colorado; DPT=Doctor of Physical Therapy

A few consistent changes to the interview questions were made following the first few interviews in an attempt to elicit more in-depth responses from participants. As the interviews progressed, the need to modify and alter questions was recognized, which is common in qualitative research projects. First, the opening question was modified to “please introduce yourself to someone you have never met before, and share a bit about your professional (and personal, if you would like) background.” Second, the definition of professional identity was

provided to participants prior to asking them to describe their own, and third, the interview was concluded with the question “Do you view yourself as an educator? Why or why not?”

Following a review of consent procedures, interviews were performed in-person at the CU Anschutz Medical Campus in a private room. Interview length ranged from 38 to 55 minutes, with an average length of 45 minutes. Panopto™ (<https://panopto.com>) was used for both audio-recording and auto-transcription. Recordings were securely stored on a secure CU network drive. Transcriptions were reviewed in detail by the primary researcher, comparing the audio recording to the written transcription, and extraneous words (e.g., “um”) were cleaned out of the transcript. Participants were assigned a number and deidentified transcripts were stored on the same secure CU drive (Bilyeu, 2022).

### ***Professional Identity Diagrams***

Following the third interview, one participant asked if he could draw his vision of professional identity and then share it with the interviewer. This was a generative activity for both participant and researcher. The researcher added this as an optional activity for the remainder of the participants. No specific guidance was given, other than asking them to “draw their professional identity.” A total of 14 participants submitted these supplemental drawings, which were analyzed following guidelines for suggested by Merriam and Tisdell (2016) and Brailas (2020). People make meaning of their experiences in different ways, and can make new or deeper meaning through art. Participant-produced drawings augment the verbal responses in interviews, and aid participants in representing ideas that may be hard to articulate (Brailas, 2020; Merriam & Tisdell, 2016).

### ***Field Observations***

As a tertiary data collection method, field observations were utilized. Field observations allow for observation of participants in their natural environment, adding contextual detail to their experience and assists in triangulation of data. In the teaching environment, the researcher performed field observations on six participants, intentionally sampled from within the set of interviewed participants, who had variable levels of teaching and training experience. The researcher had full access to and familiarity with the teaching environment at CU, so no orientation or additional permissions were necessary to facilitate these observations. Participants were verbally re-consented prior to the observations. As described by Creswell and Poth (2018), the researcher was positioned as a participant observer, actively participating in lab activities alongside participants. An observational protocol was established, with a recording form designed to capture descriptive and reflective notes in a standardized manner. See Table 2 for the recording form. The participants were aware they would be observed during the semester of teaching. When necessary, the researcher was positioned close enough to listen to participant-student interactions, but distant enough to not be drawn into the interaction. Each participant was observed in their role as educator including active teaching and interactions with students, other associated faculty, and core faculty. After each observation session was complete, the researcher added thick descriptions to the notes collected. The researcher reflected carefully on bracketing biases around faculty development when performing these field observations, so as to collect clear and objective views on the natural performance of associated faculty in the lab setting.

**Table 2**

*Recording Form for Field Observations*

Name:	Date:
Construct	Observations/Notes
Role: Comment on the participant’s skill in teaching (eg. language, approach to teaching, feedback, learner assessment).	
Engagement: Comment on the participant’s engagement in the classroom (e.g. actively moving about lab space, approaches students proactively).	
Interaction: Comment on the participant’s interactions with others (e.g. students, other associated faculty, course coordinator).	
General Comments:	

**Data Analysis**

Qualitative data analysis is not a linear process, particularly in grounded theory. Conversely, it is an iterative process of data collection and analysis, ongoing simultaneously until data saturation has been reached. Using an inductive approach, grounded theory seeks meaning in the data collected in order to build a substantive theory and a plan for action (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Data analysis followed the constant comparative structures outlined in Creswell and Poth (2018), including data organization, open coding, axial coding, selective coding, and theory development, followed by data representation.

The data set consisted of interview transcriptions, field notes from observations, participant drawings of identity, and extensive researcher memoing. The data was organized in clearly labeled folders within the secure CU server. Data in the form of interview transcripts and drawings were transferred into NVivo™ (Lumivero, 2023), which is a qualitative methodology

software system used to enhance organization and data analysis. Data collection and analysis flowed iteratively following the first round of interviews and field observations, with each round of analysis driving further data collection. Interview questions and focus of the field observations were flexible and modified as needed based on each round of data analysis to allow for theory development.

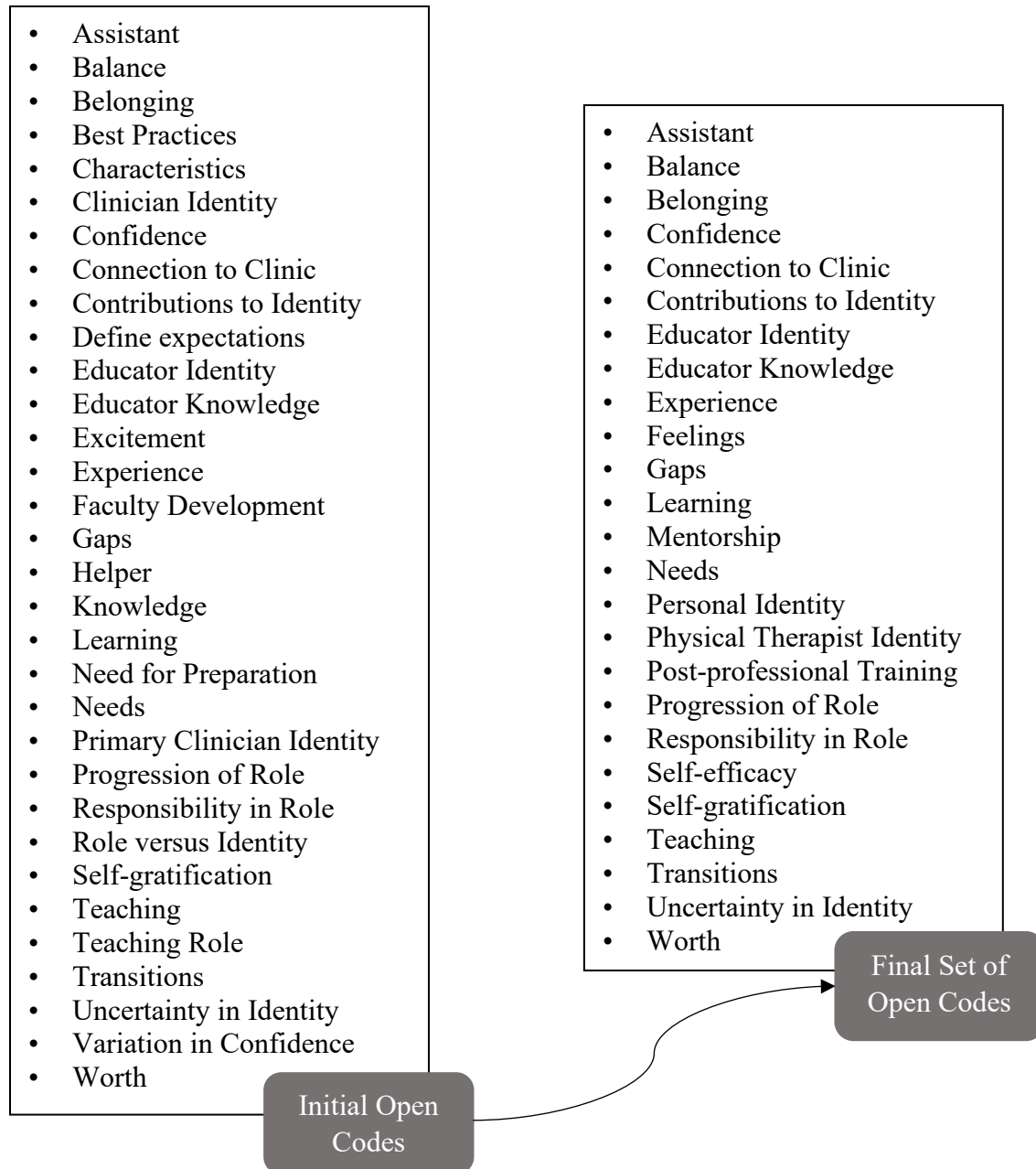
To gain familiarity with the data, transcripts were initially read through with memoing to allow the researcher to gain familiarity with the data. Data analysis began by deconstructing the interviews through line-by-line or microanalysis to identify initial codes (Strauss & Corbin, 1998). This detailed theoretical coding is necessary for theory building, as properties and dimensions of codes and categories emerge more readily from the data, allowing the researcher to move beyond description and into conceptualization.

Another researcher (JP) acted as a second coder during the open coding process to enhance trustworthiness. To create a reliable codebook, both coders began with the same four transcripts. The transcripts were read at least twice with the use of ongoing memoing and open coding. After completing the analysis of the four transcripts, the researchers (CB and JP) met and discussed the repeating concepts (codes) identified and came to consensus on naming and definitions. These codes and their definitions were compiled into a pilot codebook. The initial four transcripts were re-coded using the new codebook. The researchers continued with this process, looking for codes, until no new insights emerged. See Figure 4 for how codes were narrowed through the collaborative open coding process. Every time a new code was identified, the researchers would pause and add it to their respective codebooks and then proceed with coding, so that both were working with the same concepts across all interviews. Once open coding was complete, four randomly chosen participants were asked to participate in member

checking, a process whereby participants provide feedback on the researcher's interpretation of the emerging findings. It was determined that adequate alignment of transcription and coding with participant expectations existed.

**Figure 4**

*Development of Codes*





Established codes were compared, contrasted, and reduced into categories, with a central phenomenon identified. This central phenomenon became the focus of the emergent theory. Through this axial coding process the categories were examined, searching for relationships that may explain the central phenomenon. Using selective coding, data was analyzed, searching for ways to interconnect the categories in order to build a theoretical model of associated faculty experience and identity, and how training may impact these constructs.

The primary researcher analyzed the identity diagrams using the established codebook and was also conscious to allow for the possibility of new codes arising. Participants' diagrams were compared and contrasted with their individual interview transcripts to allow for a richer view of identity and to assess for alignment or discordance between the two data sources.

A layer of deductive coding was also applied to the interview data. Transcripts and participant images were screened for keywords and codes to be used to categorize each participant's identity formation stage and category. Keyword creation to guide this deductive coding and subsequent groupings for stages was based on work adapted from Kegan (1982) by Jarvis-Selinger et al. (2012). Participants were then categorized into one of phases 2 (imperial), 3 (interpersonal), 4 (institutional), and 5 (inter-individual), as described earlier in Chapter 2. Similarly, van Lankveld et al's (2021) work guided the deductive coding to classify participant identity into one of four categories, hierarchical, compartmentalized, intersecting, or merged. Lastly, transcripts were deductively reviewed to more deeply examine the code "transition" and align participant comments with Schlossberg's (1981) 4S framework, looking for factors associated with self, situation, support, and strategy. Finally, data was represented through a blend of narrative discussion, tables, and figures.

## **Ethical Considerations**

As described above, appropriate IRB approvals were sought prior to initiation of any research processes, and the study was deemed exempt. Participant anonymity was protected via the use of a numbering identification system and storing the reference list of participants and assigned numbers separately from interview transcripts and field notes. If individuals could be potentially identified from specific interview or observation data used in the dissemination document, composite profiles were created. All documents were stored on a secure CU server. Participants were consented three times (following recruitment, prior to interview, and prior to field observations), with clear information regarding withdrawal at any time for any reason without penalty of any kind. See Appendix 2 for the consent form. Choosing or declining to participate in the study did not influence any associated faculty participation or advancement in a faculty role. The researcher recognized the potential hierarchy or power dynamic that could exist between core and associated faculty, and carefully considered this in recruitment, consent, and withdrawal procedures to ensure no participants felt coerced or obligated to participate.

## **Validity and Reliability**

Validity and reliability in qualitative research, often known as trustworthiness, are important constructs for ensuring rigorous studies (Merriam & Tisdell, 2016). This section outlines strategies employed to ensure the authenticity and trustworthiness of this study.

### ***Internal Validity (Credibility)***

Internal validity was established through triangulation, member checking, adequate engagement in the data, and open descriptions of reflexivity (Merriam & Tisdell, 2016). Triangulation was addressed through the use of three methods of data collection (interviews, identity diagrams, and field observations) and data analysis by two individuals, including data

comparison at numerous time-points. Participants were asked to read emerging data analyses and to provide feedback on the researcher's interpretations of the interviews. To ensure depth of data collection, interviews and field observations were continued until no new data emerged, indicating the point of data saturation.

Reflexivity is defined by Jootun (2009) as the researcher's ability to acknowledge how past experience, knowledge, values, and perspectives influence (intentionally or unintentionally) the research findings. Reflecting carefully on such constructs and then intentionally checking biases frequently is a crucial component for adding credibility to qualitative research outcomes. I acknowledged the concept of reflexivity and identified several validity threats related to reactivity and bias. Reactivity is the concept of potential researcher influence on the participants (Merriam & Tisdell, 2016). Participants know me as a core faculty member and as such, may view me as an evaluator during the research. Additionally, my lead role in creating the associated faculty development program could make some participants hesitant to share negative opinions. These threats have been carefully considered and will be addressed in two ways. First, in both interview confirmation emails and again at the onset of the interview, I reminded participants that very little is known about their needs and what may enhance their experience. I was, therefore, interviewing them specifically to hear their unique opinions on the faculty development program and their perspectives on their involvement as associated faculty so we can begin to understand their experience. I also expressed to participants that I hoped to create a safe and confidential space in the interview for them to share their true opinions. We verbally reviewed the consent form again, with an additional reminder that they may choose not to answer certain questions if they do not feel comfortable doing so and/or they may ask to end the interview at any point with no penalty or consequence.

The following biases were brought to this research project. I approached this study with a strong background in faculty development, and involvement in prior studies that demonstrated the effectiveness of such programs in the development of knowledge and skills related to teaching. I also acknowledged the evidence-supported stance that educators must understand learning science to best meet learner needs and the impact of professional identity on success in a particular role is significant. After completing the first two interviews and memoing extensively, I identified an additional bias. I contemplated why the participants were so caught off guard when asked to describe their own professional identity and struggled to answer the question without additional cues. I realized I had an assumption that professional identity would be clear in the minds of the participants. I journaled following this recognition to be sure I fully understood my own bias and committed to bracketing this assumption during further data collection and analysis.

Working from a constructivist framework further facilitated the my ability to intentionally check biases and attempt to collect and analyze data in a neutral fashion, allowing the construction of a theory grounded largely in participant reflections. The constructivist grounded theory approach, however, suggests the role of the researcher should not be fully minimized. Rather, a cautious and thoughtful role allows the researcher to apply relevant experience and knowledge, which may be used to guide data collection and analysis (Creswell & Poth, 2018).

### ***Reliability (Consistency)***

Strategies to enhance reliability included triangulation and reflexivity as described above, and the use of audit trails (Merriam & Tisdell, 2016). An audit trial was used, consisting of a

research journal, memoing, development of a code book, and detailed descriptions of data analysis decisions.

### ***External Validity (Transferability)***

External validity was supported through the process of creating rich descriptions based on participants' own language and depth of memoing (Merriam & Tisdell, 2016). As described in the sampling procedures, this study also employed the use of maximum variation sampling. Purposefully selecting associated faculty with a wide variety of backgrounds, experience, and training potentially enhanced the possibility of the results applying across DPT programs nationally.

### ***Theoretical Validity***

In grounded theory research, the researcher must be cognizant that the theory should be rooted in the themes emerging from the qualitative data analysis. While aligning new findings with existing research is an important process, when developing theory, the researcher must take care that the prior literature does not dominate the analysis or ultimate theory generation. That is, the evolving theory should fit the data, making it credible and defensible (Creswell & Poth, 2018; Hayashi et al., 2019). The concept of theoretical validity was addressed through both researcher reflexivity and by the researcher's awareness to monitor for discrepant data in the analysis process.

## Chapter 4: Results

This dissertation explored the experiences, perspectives, and identity of associated faculty teaching in a DPT program. The findings provided a preliminary understanding of the complex interactions of experience and identity formation, along with perspectives on the transition from clinical practice to teaching. Further findings suggested that both experience and identity are impacted by numerous gaps.

This chapter begins first with a brief overview of the participant demographics, highlighting their variable backgrounds and experience levels. Further results are presented as they pertain to the research questions that guided this study:

1. What factors contribute to associated faculty experience and identity formation within their academic roles?
  - a. How does an evidence-based faculty development program impact the experience of associated faculty teaching within a Doctor of Physical Therapy Program?
  - b. How does an evidence-based faculty development program impact the professional identity in associated faculty teaching within a Doctor of Physical Therapy Program?
  - c. What other factors shape the transition process when adding an academic teaching role to traditional clinical practice?

The final set of open codes are presented and defined, followed by the results of the axial coding. Descriptions and meanings of each category built through the axial coding process will be discussed, including its properties, dimensions, and relationships, supported by participant quotes. A core category is highlighted, and connections to other categories are explored. Parallel

descriptions of the participants' drawings of their identities are also presented, comparing and contrasting them to participant interview data. Notes from field observations were similarly explored. As discussed in the previous chapter, interview and field observation data were also examined deductively in alignment with key components of the theoretical and conceptual frameworks. The findings presented illuminate the various presentations of identity and phases of transition amongst the participants. Data across all sources was then pulled together, or triangulated, to create the foundations for the grounded theory. The foundations for this theory will be presented here through the outcome of selective coding, with details of the grounded theory presented narratively and graphically in Chapter 5.

## **Participants**

Nineteen participants completed the interview, of which 15 submitted identity diagrams. There was broad representation across years of experience for both clinical practice and associated faculty role, with a mean of 7.8 and 3.8 years respectively. Exposure to the associated faculty development program was also variable, ranging from no exposure to full completion of the program. This variability in participant demographics was desired to get a more complete picture of how associated faculty experience their academic roles with and without support or development opportunities. Outpatient orthopedic clinical practice was more heavily represented, but this was deemed acceptable, as orthopedics is the most common area of practice in the profession (American Physical Therapy Association, 2024). From this participant pool, six individuals were chosen and consented to participate in field observations. These field observation participants were also intentionally chosen to promote maximum variation in teaching experience and exposure to the faculty development program. Table 3 details participant demographics.

**Table 3***Participant Demographics*

Participant	Highest Degree Earned	CU Alumni	Years in Clinical Practice	Area of Clinical Practice	Other Credentials	Years as Associated Faculty	Number of Associated Faculty Development Sessions Attended
1*	DPT	Yes	8	Orthopedics	OCS, R, F	3	2
2	DPT	Yes	14	Acute care, ED		9	5
3	DPT	Yes	8	Orthopedics	OCS, R	5	3
4	DPT	Yes	3	Orthopedics	OCS, R	2	1
5	DPT	No	11	Orthopedics	OCS, F	8	0
6	DPT	No	8	Orthopedics	OCS, R, F	5	1
7*	DPT	No	8	Orthopedics	OCS	4	3
8*	DPT	No	10	Orthopedics, HH		6	5
9	DPT	Yes	6	Orthopedics	OCS, R	0.5	1
10	DPT	No	9	Orthopedics	OCS, R, F	1	2
11	DPT	Yes	2	Acute Care		0.5	1
12	DPT	Yes	7	Orthopedics	OCS, R, F	6	5
13*	t-DPT	No	21	Pediatrics		2	0
14	DPT	Yes	6	Acute Care		3	3
15*	DPT	Yes	5	Acute Care		3	2
16	DPT	Yes	10	Orthopedics		8	3
17	DPT	Yes	3	Neurology, Orthopedics	OCS	2	2
18*	DPT	No	3	Orthopedics	OCS, R	1	1
19	DPT	No	7	Neurology	NCS, R	3	1
Mean	--	--	7.8	--	--	3.8	2.2

Note. DPT=Doctor of Physical Therapy; ED=Emergency Department; F=Fellowship trained; HH=Home Health; NCS=Board Certification in Neurologic Physical Therapy; OCS = Board Certification in Orthopedic Physical Therapy; R=Residency trained; t = transitional; \* = field observation participants

**Open Coding of Interviews**

The open coding process, performed iteratively with axial coding and theoretical sampling, culminated in the identification of 27 codes. These codes were carefully defined as shown in Table 4.



**Table 4***Codebook*

Code	Description
Assistant	Concept that they are helping, supporting, assisting, rather than leading the education process
Balance	Expressions related to balancing life's various duties and commitments; sentiment can be positive or negative
Belonging	Sense of belonging to program and faculty groups
Confidence	Expressions of overall confidence in working with students; could be expressed as high, low, changing; sentiment can be positive or negative
Connection to Clinic	Connecting expertise between clinic and classroom, in either direction
Contributions to Identity	Constructs that individuals identify as contributors to the development, make-up, or shaping of identity
Define Expectations	Expressed desire for clear expectations in role
Educator Identity	Comments related to identity as an educator
Educator Knowledge	Language that aligns with evidence-informed teaching practices
Experience	Sentiment that suggests how experience in the teaching role has impacted the individual
Feelings	Words, phrases, sentiments that describe feelings related to role, experiences, identity
Gaps	Gaps in knowledge related to roles, responsibilities, supports, strategies, expectations
Learning	Examples of how participants have learned in or about role, learning experiences
Mentorship	Comments related to receiving or providing mentorship
Needs	Expressions indicating need or specifically identified needs in role
Personal Identity	Comments related to personal identity
Physical Therapist Identity	Comments related to identity as a physical therapist clinician
Post-Professional Training	Words or phrases that state or imply how participants were impacted by this training (residency, fellowship)
Progression of Role	Examples of growing or stagnating in role, desire for progression or more responsibility
Responsibility in Role	Things identified by participants as their responsibility when on campus
Self-efficacy	Belief, or lack thereof, that the individual has the capacity to perform specific skills in the educator role
Self-gratification	Words, language, phrases that suggest self-gratification in role
Teaching	Examples or language where participants speak of teaching or being faculty
Temporality	Expressions of how things have changed over time
Transitions	Comments related to transition, new role/responsibility, change
Uncertainty in Identity	Expressions of uncertainty, lack of clarity, instability, related to identity
Worth	Expressions of making impact, why this role matters to them, bringing value to the education process

In alignment with grounded theory, the researcher sought to identify meaning in the interviewees' words, rather than simple descriptions, as the codes were generated. As these codes emerged from the data, they were subsequently examined for occurrences across interviews.

### **Axial and Selective Coding: Categories and Their Relationships to a Central Theme**

While presented linearly here, both data analysts performed axial coding and the exploration of categorical relationships iteratively with open coding until saturation occurred. Saturation of categories is an essential methodological element and quality indicator in qualitative research, particularly in grounded theory (Saunders et al., 2018). As a key determinant for discontinuing data collection, saturation can be defined as the point “when no new properties, dimensions, conditions, actions/interactions, or consequences are seen in the data” (Strauss & Corbin, 1998, p. 136). During the cyclic open and axial coding processes, we saw no new codes emerge following the analysis of the 12<sup>th</sup> interview and determined that saturation was met. Because the data collection and analysis were iterative, interviews had already been scheduled following this time point in data collection and analysis. Data collection, open coding, and axial coding continued through 19 interviews to confirm saturation was present and ensure we had the desired diversity of demographics represented across all participants. It was deemed valuable in this grounded theory study to continue data collection and analysis until we achieved a highly varied sample in order to be as certain as possible that no new phenomena or insights would emerge.

Through the axial coding process performed by the primary researcher, six categories or themes emerged. These categories and the related codes are shown in Table 5. Some codes were felt to overlap with more than one category. Each category will be analyzed individually,

followed by a discussion on selective coding and categorical relationships around the central theme.

**Table 5**

*Axial Coding: Consolidation of Codes into Categories*

Category	Codes
1. Professional Identity Saliency	Assistant Contributions to Identity Educator Identity Personal Identity Physical Therapist/Clinician Identity Uncertainty in Identity
2. Emotional Well-being	Balance Belonging Confidence Feelings Self-efficacy Self-gratification Worth
3. Connection and Belonging	Belonging Community of Practice
4. Centrality of Roles	Connection to Clinic Educator Knowledge Define Expectations Responsibility in Role
5. Development as Educator	Experience Learning Mentorship Post-professional Training Progression of Role Transition
6. Needs	Balance Gaps Challenges

### *Professional Identity Salience*

Identity was explored through two interview prompts. The first question asked participants to introduce themselves in a professional setting to someone they had never met before. This question was designed to get a sense for how they would intuitively describe their identity, without explicitly being led to thinking about the formal concept of identity. Every participant opened by saying they were a physical therapist, with only nine participants including peripheral comments about being an educator, almost as an aside. Participant 5 opened with, “My name is [Participant 5], physical therapist. I’ve been one for 11 years.” She goes on to describe her clinical practice role in detail, and then stated, “So I definitely see myself as a clinician first...my role at CU, I would say, is peripheral color.” In contrast, but still with a clinician-first statement, Participant 6 introduces herself as follows:

My name is [Participant 6]. I've been a physical therapist for almost 8 years. Which is crazy to say that, and that I have worked for the last five years with the [deidentified] hospital system. I'm an outpatient orthopedic therapist, and I am also an associated faculty member with the PT Program.

Although participants introduced themselves and acknowledged identity through variable descriptors such as physical therapist, educator, and personal factors, a strong theme within this category emerged as a clinician-first identity. As described earlier, all participants opened with statements similar to “I am a physical therapist.”

Participants were next asked to explicitly describe their professional identity. Like the introductions, all participants began their description with the physical therapist lens, and then layered in other factors such as educator, mentor, athlete, or family member secondarily. In the first two interviews, participants’ descriptions of their own professional identities were very

superficial, simply describing the basics of clinical and/or educational roles or tasks. In an attempt to draw out greater depth in subsequent interviews, a definition of professional identity was provided as “a representation of self, achieved in stages over time during which the characteristics, values, and norms of the [a] profession are internalized” (Cruess et al., 2014). Even with this definition provided, most participants had long pauses as they appeared to collect their thoughts and made comments such as Participant 4, who mused, “Hmmm. That’s a hard question.” Participant 12, who has seven years of professional experience, expressed, “I didn't expect this interview to be so challenging. To be honest with you, it's hard. It's [professional identity] a hard, nebulous concept.” Professional identity was challenging for many participants to describe in terms of both the construct and personal application, even with prompts to consider values and characteristics, as well as guiding questions such as “what makes you who you are as a professional.” Professional identity tended to be described in one of three ways, or a combination of the three, through a description of roles, tasks, or values. Rarely was there a rich combination of these; instead, identity was largely described through what individuals *did*, rather than who they *are*.

Participants spent so much time discussing their clinical roles and skills that a specific question around educator identity was added after the 3rd interview – “Do you view yourself as an educator? Why, or why not?” Interestingly, many took significant pause with this question as well, and only seven participants gave a clear answer of “yes.” When asked to elaborate on this answer, many participants began by justifying the role of educator with patients, rather than students, suggesting a clinician-focused mindset pervades their thinking. For example, Participant 16 mentions, “I always view myself as an educator, just because of the role that we play with our patients and how often we have to teach our patients things.” Some participants

added in more clarity on being an educator in the context of students as well. Participants who did have a clearer picture of being an educator still seemed to struggle to blend the concepts of being both a clinician and an educator. Participant 1 reflects:

I think they [clinician and educator] fit together in that I think in professional identity you have to give up some of yourself personally, and like, be willing to give your time and invest to be a master clinician, which would be my goal. You also have to be willing to emotionally and mentally invest, I think, to be a TA and as a lab assistant, like investing in students and investing in their learning...I do think it gets to be difficult to do both...So I think that's why I say that I think my professional development, in my, like, relationship with the field is in flux, because I feel as if I'm kind of at a fork in the road where I want to decide if and when I have to commit to one path or the other.

Building on this sense of uncertainty, five additional participants answered this question with statements such as “sort of” or “yes and no” and seven participants answered “no” even though many of them had spoken of an educator role as part of their identity. Uncertainty in professional identity was a common thread, particularly when participants considered the educator component. Participant 7 sums this sentiment up, stating:

This is a really interesting question. Because I would, my gut was yes, but thinking about it more in a clinical realm than in an education realm. It's like, yeah, of course, I teach my patients. And we use educational skills in one-on-one settings. But I would say I have not fully internalized being an educator outside of that, I educate, but I do not necessarily feel like an educator.

Participant 2 described her identity as that of a “Pied Piper,” doing a lot of different things, and hoping people followed along; she couldn’t settle on describing a clear identity. When asked specifically to describe her professional identity, she said:

I don't know that I have one... I think it's just tough to have a clear professional identity when you're doing a lot of things. So just I will probably continue to explore that on my own, and it'll continue to evolve over time.

While many wove in personal values as part of their professional identity, only a few participants spoke of professional values connected directly to the physical therapy or teaching professions. Values described as contributors to identity were typically discussed in the context of patients, rather than students within the educational role. Words used included altruism, advocacy for others, compassion, lifelong learner, empathy, honesty, benevolence, and collaboration. For example, when asked what contributed to her professional identity, Participant 9 stated, “I think integrity, for sure, of really trying to do what is right, and also trying to couple that with compassion and empathy for the patient.”

When exploring educator identity further, all participants suggested their educator role was that of a helper or assistant, and not a primary educator, as stated by Participant 18:

I often will describe it as I help teach a course. I feel like I was kind of reflecting on this before we did this, and I realized that the words I use a lot in my head are like I assist, or I help. Not necessarily like the leader or facilitator, but I help teach.

Participant 3 provides an analogy for how he viewed his teaching role:

I'd probably say, if we were to do a sports analogy, like the core faculty would be the... quarterback or offensive coordinator, whatever you wanna say, and then I get to be kind of an assistant, where the responsibility I have for the oversight of the curriculum is not

there, but the responsibility that I have for the unique play or day, like, I'm responsible for that content and for supporting it as best I can, and then in congruence with the plan of the core faculty, quarterback/offensive coordinator, whatever you wanna call it.

This quote also speaks to the idea that some associated faculty appeared to have a ranked view of faculty, with their assistant role viewed as subordinate to core faculty. Comments of this nature were more common in associated faculty who also did not feel as connected to the program.

Participant 17 stated, "I help assist students with their hands on skills, developing their ability to examine and treat patients... I see the course coordinators as the main drivers of knowledge...and then the associated faculty is like the support staff."

Factors that appear to contribute to professional identity also emerged from the interviews. These included things such as mentorship, personal values, their own education journey, service or volunteer experiences, clinical practice experience, and clinical teaching. The talk about mentorship and its impact on experience and identity was much more prevalent in those who had residency and/or fellowship training. As suggested by Participant 18, understanding the importance of mentorship pushed her to actively seek similar mentorship within an education environment:

Throughout my entire life I have had really wonderful mentors. Once I got into the physical therapy profession, I think I was very lucky in being assigned some wonderful clinical instructors that began to develop me as a professional. I knew I needed the same when I started at CU. Once I was in contact with [deidentified] for neuro, she also kind of took me under her wing and started mentoring me as a more, on like the instructor side of things.



### *Emotional Well-being*

The category of emotional well-being can be viewed in two discreet ways. First, certain constructs such as confidence, self-efficacy, and belonging seemed to enhance well-being. Second, participating as associated faculty contributed to a sense of emotional well-being in participant's professional lives; for some the role was self-gratifying and for others it created a sense of worth. Participants were not directly asked why they made the leap to academic teaching, but many spoke of looking for something new professionally, the desire to support the next generation of physical therapists, and how the new role helped them avoid burnout in the clinical setting. Participant 19 shares:

So I think my role as associated faculty is one of my favorite parts of, like my entire like professional list of responsibilities. What I've loved most about being involved in teaching is I found that it's a really great way to avoid burnout. It feels a lot, I think it's almost inspiring to see how excited all the students are to be physical therapists, and I think that's really easy to lose sight of once it's not new anymore. And so it helps me remember why I wanted to be a PT, kind of seeing that in them.

A variety of other feelings related to the educator role were also identified throughout the interviews with participants using words such as worth, fun, joy, thankful, appreciative, excitement, and inspired, as well as some expressions of frustration and overwhelm, which will be discussed in the section addressing needs and challenges. Participant 16 captures how many felt in their associated faculty role:

I get a lot of gratification out of it. I think it's really rewarding, even coming in once a week, twice a week. I think to positively impact someone's learning process, I think, is great. It definitely fills me up.

Similarly Participant 17 stated, “I feel like my role is important in the program which does bring me a lot of joy and gives me purpose.”

Confidence and self-efficacy have nuanced differences, and both were important constructs impacting associated faculty performance and well-being. Confidence is the more general concept, defined as “the mental attitude of trusting in or relying on a person or thing” (Oxford English Dictionary, 2023). In the context of this study, confidence is associated faculty’s attitude towards trusting in their own teaching abilities. Self-efficacy is an individual’s belief in their ability to produce desired results (Oxford English Dictionary, 2023), here the ability to produce positive learning outcomes through teaching. Confidence appears to develop through experience, impacted by knowledge and belonging. Confidence also had an evident temporal component recognized by participants. Participant 10 captures this, stating:

I'd say I'm still building that confidence. And I'm still, you know, every day I'm trying to just do more and become more confident. But it's definitely come a long way since doing a little extra training. And I feel like now that I have been here for a few years and have the reps in, and I've done certain techniques X amount of times, yeah, I feel a lot better.

As a less experienced individual who did not attend any associated faculty development opportunities prior to her first semester teaching, Participant 18 reflects on growth over time:

I think especially now, coming back for a second year and having more familiarity with the course and understanding how it runs, I'm definitely in a much more comfortable place. But the first year I almost felt just as lost as they were.

Varying levels of perceived self-efficacy were also evident, impacted by knowledge and skill. For example, Participant 15 expressed lower self-efficacy, stating, “Sometimes I’m still not sure, like, you, know that I belong here and that I, you know, I have to remind myself I know more

than they do, and I can help them learn.” Participant 13, who has no education training expressed some fear in the role:

I think being looked to, and that you know, in the eyes of students, as someone who can help educate them, that's a little bit scary to me, and I'm still, I'm still kind of learning to take that on when I take on students. I'm confident in my clinical skills. But I still don't think I know all the answers. And maybe that's kind of the scary part to it.

Others with perceived low self-efficacy spoke of imposter syndrome in the role. Participant 9, who has less training and experience shared how she relied on her clinical experience to overcome these feelings:

I think the biggest part going in for me was feeling a lot of imposter syndrome of like, I'm not an instructor. I'm not an educator. I don't have formal training in this role. And so for me, it was more about just being really comfortable with the material and like just reminding myself of you, do know these things. Like you are competent. You do this stuff every day.

Participant 10 provided an example of how imposter syndrome can be mitigated in this role over time and with experience:

I struggled quite a bit with imposter syndrome, and it's kind of driven me quite a bit to just try to gobble up as much knowledge as I can, learn in your courses, and try to, try to squash those kind of feelings out...So I think now I've come a long way for sure.

It was very clear that associated faculty take the role very seriously. They are concerned about making mistakes and how that may impact students negatively. Some understand that there are limited opportunities to participate in a teaching role like this and are grateful and almost humbled to be involved. Participant 12 signifies this by commenting:

It's not lost on me that this is a rare opportunity. There are certainly some moments of pride, where it's like pretty cool thing to do. And I feel yeah, proud of the fact that I'm doing something that requires these new skills.

There seemed to be a fine line, at times, between expressions of self-gratification or a sense of doing this to make *me* feel better, versus recognizing the importance of the work, and gaining a sense of empowerment and gratification because they are helping *others*. Some described their motivations for participating as driven by “doing something different (Participant 6), “avoiding burnout” (P18) and because it is something “different and fun” (Participant 14). For example, Participant 19 reflected on what teaching brings to him personally:

I think my role as associated faculty is one of my favorite parts of, like my entire like professional list of responsibilities. What I've loved most about being involved in teaching is I found that it's a really great way to avoid burnout.

Others were more focused on their perception that the teaching role enhanced their well-being and professional satisfaction. Using a more external focus, Participant 3 described how he felt about his role and why he participates in the teaching:

My role, I think, is to take hopefully what I've learned from the faculty at CU, and in any number of areas since graduating and trying to facilitate learning among students, that support their didactic or academic learning... That's energy giving...And then to be able to see the growth from students, I mean, is really meaningful. So yeah, it's fun.

Similarly, Participant 14 stated:

I feel that there's genuinely a very crucial aspect to having practicing clinicians with varying perspectives and varying techniques give back, come in to shape that foundation of clinical reasoning for everybody. And it's not something that you really, it's something

that I know that students don't see at the time, but it is I think it's very rewarding to see those light bulbs go off and see those things click. I think our role is very important.

### ***Connection and Belonging***

Having a sense of belonging to the CU DPT program and/or the faculty was an important construct for associated faculty, although not all felt they experienced belonging. Feeling as though one had a place was related to comments on improved confidence, collaboration with peers, and learning in the workplace. Small recognitions seemed to make a big difference in making associated faculty feel included. Such recognitions included things such as having a formal badge/identification; having a title; being introduced to students, peers, and faculty; and receiving regular, formative feedback. Belonging contributed to satisfaction in the role and fulfillment in the work associated faculty were doing. Participant 7 suggested that belonging supports learning about teaching:

I think it opens up conversations with our peers and other associated faculty, who can be really fantastic resources and really interesting professional people, and I think that it, by us all being on the same page, and already having a conversation opened, I think it makes it easier for us to work and learn together, I guess, in a really positive way.

Participant 1 spoke to her perception of the relationship between the sense of belonging within the associated faculty group and creating more meaningful student interactions:

I do think that we've become a lot closer, even as the consistent TAs, and like the MSK Track, we've become quite close, but then we can also come over to each other and be like, hey, they asked this question. I don't know how to answer it. Can you do a drive by.... So I think that has helped us communicate....we have a closer ability to interact meaningfully with students.

Approximately half of the participants didn't quite see where they "fit" within the program and the greater faculty, and expressed mixed feelings about whether they belong or not. They described some sense of belonging to the program and/or their group of associated faculty, but not the broader group of core faculty. Their words conveyed feelings of being valued, yet remaining peripheral to the core faculty as described by Participant 1. As she spoke, she pointed off to the side, stating, "I would consider myself like an affiliate, but not like not faculty....So I would put myself in a tier over here....kind of adjacent, if you will, to the faculty." Participant 8 similarly described a mixed sense of belonging:

I do and I don't [belong]. I think that I definitely feel part of it when I'm there. And you know, I think, being there for so many years, I've really gotten to know a lot of different people. So, feeling more comfortable, I think I, you know, I get emails for like different events happening on campus. But they're just emails. And I don't really know that much about them. So maybe having another way of like sharing that information so that we feel a little bit more included, because a lot of times as an outsider, I don't really know what any of those events are aside from the information in the email. So, I think I think that could help just having a little bit more involvement just outside of the classroom, but still within the program.

The belonging she felt contributed to feeling more comfortable in the classrooms and labs; she and other participants also desired more opportunity to connect with both associated and core faculty. Participant 10 also reflected:

I would say, yeah, I think I think I would love to do more outside, maybe with faculty to kind of get to know them better, cause you know, everybody's so dang busy like it's hard

to get a hold of a lot of people when they're not in the office, or I think it'd be nice to get to know people a little bit more.

As with many aspects of their experience, there appeared to be a temporal component of belonging that directed whether the sentiments behind participants' comments were positive or negative. Participants suggested the more they were present on campus or the longer they had been in their teaching roles, the greater the ability to create these connections. This belonging helped them settle into their teaching roles, as suggested by Participant 18:

But now that I am feeling a little bit more, I don't know, accepted, I guess, is the word, I'm definitely like enjoying this semester more and like, I said, I feel just happy to be involved.

Participants who were alumni of the CU DPT program and were returning to teach in the associated faculty roles suggested that this connection and familiarity were beneficial, allowing them to feel more comfortable with the curriculum, understand the content more easily, and interact more comfortably with core faculty. Participant 11 stated that he “almost” felt like he was part of the faculty and further reflected:

We can assume some shared values there [CU DPT]. Because of what I've been guided towards within the values of education and learning there, and...being an alum of the program, I think, has been helpful. I sort of heard the messaging then, and now I get to practice the messaging...So, I do feel embraced and comfortable, and a part of the teaching culture at CU.

Regardless of their current sense of belonging or connection, participants had a clear sense that being more connected personally and professionally would be beneficial for their learning, progression, ease of communication, and well-being within the program. They made

suggestions about how to improve connection, such as attending faculty meetings, attending social events, and clearer communication from core faculty about which campus events they could or should attend.

### ***Centrality of Roles***

Roles were a central point of discussion for participants when describing their professional identity. Rather than focusing on who they *are* professionally, they used language such as “my role is to...” and concentrated on describing these roles or skills they used in clinical or educational settings. Specific to teaching, they portrayed their identity through what they *do* with students, including answering questions, facilitating reflection, providing feedback, grading, and testing. They also touched on how important it was to be given clear expectations for their role and performance, stating it was essential to have access to class materials, video lectures, power point slides, and a clear understanding of what would be covered each day in class or lab. Pre-lab briefings were also deemed helpful. They felt it was critical to show up well-prepared, appearing knowledgeable and competent. Participant 4 stated, “I float the classroom and try to help with hands on manual skills...I ask questions, provide feedback and we have a lot more of just clinical reasoning discussions to help them learn deeper.” Participant 14 reinforced the importance of preparation and clear expectations from lead faculty:

I definitely find it helpful that they always like, have us meet at the beginning of the semester to make sure we're sort of all on the same page. And then, like, you know, we meet for 30 min before lab to make sure that we're all on the same page which I think is important, because we wanna make sure that the students are all getting like a clear and you know similar message from each of us, which is important. They make the



expectations for what we are doing really clear. That makes us [associated faculty] more confident in what we are doing.

There was also a theme of ‘connection to clinic’ threaded through the interviews, with participants discussing how they drew skills and knowledge from clinical practice into the didactic setting and felt it was important for students to interact with individuals who were immersed in relevant, contemporary clinical practice in alignment with what they were learning. Interestingly this was bidirectional as associated faculty also spoke about how skills they learned in their teaching roles, such as communication skills, feedback frameworks, and the use of questions to help learning could be applied in clinical practice. Participant 17 captures a lot of this in her statement:

When I was a student, some of the most impactful conversations I had were with lab instructors that to this day make a difference in how I practice and it, I don't remember as much of within lectures of oh, they said this one thing that really changed how to practice, but it was really like in the labs where we were taking a concept and kind of digesting and figuring out what that looked like in clinic and getting to attach that to someone who really was in clinic and really was practicing and getting to hear their thoughts.

Participant 10 reflected on how teaching improved his clinical practice:

Teaching makes me a better clinician, too. So, I think it reinforces constantly absorbing new research, and I learn from students and other practitioners that are teaching as well. So, I think it helps me to continue being a lifelong learner but put to practice the new things that are coming out and help the new clinicians coming out, too. So, I think it's just another way to help more people grow, just in a different way.

### *Development as Educator*

Several concepts emerged around how associated faculty develop skills and apply their educator knowledge. In those who had taken any number of the associated faculty development program sessions, it was clear that participants integrated content into their skillset and approaches to teaching. Without prompting, participants spoke frequently of using evidence-supported teaching and learning strategies drawn from the development series, such as the importance of coming prepared to class and lab sessions, creating a safe space for learners to ask questions, using well-formed questions to promote learning, and using established feedback frameworks, as just a few examples. They expressed value in letting students do some trial and error before stepping in to make corrections. Participant 12 summarized how his approach to teaching evolved following the full series of faculty development sessions:

But the biggest impact over that timeline has been a transition from what I felt was a super content heavy approach...And what I think it's morphed into, it's more about teaching, using common language around the Bloom's taxonomy, and understanding of where students are to meter our educational attempts...so less about knowledge acquisition, more about understanding.

Participant 7 spoke broadly about how the faculty development program had impacted not only her, but also set the stage for the community of peers to work more effectively together:

Something that I thought was really positive was, there is an element of standardization for how we all should work in the labs... I felt like that was really helpful, because it was like a way to practice new strategies and understand why they work...I think it opens up conversations with our peers and other associated faculty, I also think it provides some satisfaction in the sense that there's a contribution to moving forward as a professional

community a little bit. I think that it, by us all being on the same page, and already having a conversation opened. I think it makes it easier for us to work together, I guess in a really positive way.

In contrast, Participant 13, who was a very experienced physical therapist, but had not started the development program revealed:

I wait for them [students] to ask me questions...I like to get in there and put my hands on and show, you know, more by demonstration. I answer questions, just talk about my own personal experience with whatever it is they're doing.

This is misaligned with both evidence-supported approaches to teaching psychomotor skills to the novice learner and how the CU PT program trains associated faculty to approach teaching. It is important that associated faculty align their teaching with lead instructor approaches so early learners don't become disillusioned or confused. This participant and another who had no experience within the associated faculty development program were definitively outliers in how they described their approaches to teaching and their identity. While they were very experienced clinicians, with a mean of 16 years of clinical practice, this clinical expertise did not translate to meaningful approaches to teaching nor to an educator identity. Participant 13 further indicated that while she felt strong with patient education skills, "I don't really see myself as a true educator. I think being looked to, and that you know, in the eyes of students as someone who can help educate them, that's a little bit scary to me." Participant 5 similarly stated:

Calling myself an educator is not quite right. It's much more of a facilitator role, rather than an educator role. I get my toe in the water of academics, minus all the politics which I really appreciate, I can kinda just show up and answer questions.

This quote demonstrates a lack of insight into the importance and depth of the associated faculty role, which could be due to a lack of development opportunities related to both education principles and knowledge of the academy.

Interestingly, even though participants felt that the faculty development sessions had impacted their educator skills and *aligned* with their professional identity, many did not feel that the sessions, or the series *impacted* their identity. Participant 6 reflected:

I don't know that they've changed my identity. If anything, they have provided clarity and provided confidence and tools to approach different situations. Whether that is a remediation situation, students that are difficult, attendance challenges, professionalism challenges, I think different things like that, I feel like I have tools...I don't know that any of it changed my identity per se.

Participants identified other things they felt had contributed to their development and helped them feel successful within the associated faculty role. These included experience in the role, interacting with other faculty, access to course materials, clear expectations around how to come prepared, mentorship, and a few even mentioned using some of what they had learned at the American Physical Therapy Association's Credentialed Clinical Instructor Program, a two-day course designed to enhance clinical teaching skills. Experience within the academic workplace community was a highlighted contributor to their development as educators. Many participants suggested how important overall time and experience in the classroom were, along with repetition in the same classes, which helped them feel more confident and knowledgeable in their teaching role. When asked what had contributed to her growth, Participant 6 stated:

I mean, kind of along with experience, is more depth of exposure to the content. and I think some of that, some of the way I answer questions is specific to the fact that I did not

go to CU. So I think it takes time to become familiar with the way certain concepts are taught the way things are graded, how the program as a whole handles different situations. And so I think that just kind of repetition helps, and then also part of gaining more experience.

Those participants who had internship, residency, and/or fellowship training spoke clearly about how they drew from their clinical post-professional training and applied learned skills specifically in the educator role. They talked more frequently about reflecting on their performance, seeking mentorship, and the ability to bring strong clinical skills to the lab setting. Many of them mentioned wanting more feedback so they could further grow as educators. In reflecting on how he had prepared for and grown in his educator role, Participant 19 stated:

I think one big takeaway I had both, from sort of the lived experience of being on the receiving end of that type of teaching in the residency, but then also getting a chance to practice it. I think sort of this like problem-based learning, asking questions to students and kind of prompting them to use their own clinical reasoning to kind of answer their own question. That was a new concept to me as a resident, and one that I found to be really, really useful in me, developing my own clinical reasoning. And so that's really what I try to mirror when I'm working with students, and mentoring them to reflect when they make a mistake, yeah sticking along those lines of working with students.

The code “transition” emerged from several transcripts, particularly when participants spoke of changes in identity and navigating unfamiliar roles as they moved into educator positions. This aligns with transition theory (Schlossberg, 1981) which is discussed in more detail in the deductive coding section, but is necessarily introduced here. Transition theory provides a framework for assessing an individual’s management of change and potential impact

of the change on identity. Most participants discussed how challenging and exciting the transition felt, and described development over time. Participant 19 captured how the transition into academic teaching felt for many:

So at the beginning, I feel like it felt a little shocking like I almost felt like, at that point I'd been a physical therapist for I guess maybe two or three years, and I was really wondering if I was gonna know enough to have the type of positive impact that ideally, I would wanna have as an educator. And so I was definitely excited to be in that role. But I was also pretty nervous in terms of feeling prepared.

And Participant 11 described the overall transition or development of identity as a journey:

I think maybe as a beginner in the field, working on your own professional identity, first being aware that there is a professional identity being supported and mentored in your journey towards facilitating your own growth in professional identity rather than saying, I've arrived, and here I am, and this is the way that it is.

Participants also provided their perspectives on their own growth or progression within the role of educator, mentioning increased knowledge, skill, and confidence for approaching lab teaching which occurs over time and with experience. They also mentioned progression of relationships with other associated faculty and core faculty. Development in these areas seemed to align with satisfaction in the role, and for some, created the desire for a larger role or more responsibility. Participant 16 described how her skills progressed over time:

I definitely feel like over time, like in the beginning, I definitely sort of viewed my role as just like, Okay, I'm just here to like, walk around and answer questions. Whereas now, like through my experiences with like observing some of you guys and observing [core faculty], like, I've sort of you know, developed the ability to be more involved, to ask

questions in order to get the students to like answer their own questions instead of just like giving them the answer, because I think that critical thinking is super important for these students.

Participant 12 was pleased with his progression, which occurred over time:

I had wanted more involvement and in the past three or four years my role has expanded to content creation for those same classes. And in the past two years I've been involved with a little bit more of the curriculum design, grading and things. So in the past two years of my involvement has led to a little more of a seat at the discussion table around how to integrate content into the curriculum and trying to decide what content goes into the curriculum.

### *Needs*

The final theme of needs centered on exploration of needs, perceived challenges or gaps, and the desire for more balance between clinical, teaching, and personal roles. Several participants expressed facing challenges in balancing time and commitments between clinic and classroom. Because many associated faculty were not on campus frequently, or had gaps between semesters, there was a sense of losing connection, not learning as much as they wanted to, and having to re-learn things each semester, which added to the burden of balancing clinical practice and academic teaching. Participant 9 expressed, "I want to do both of these things but it can be hard to figure it all out and be like thinking about how much time can I dedicate to all these things," and commented further that it was challenging finding time to learn more about the educator role independently, "I could make time, it's just hard when you know you are juggling clinic and those other things." As described earlier, Participant 1 also alluded to the challenge of creating balance within her identity. She found identifying how to blend the roles and

responsibilities of both clinic and teaching difficult; she described compartmentalizing these roles and identity components, and expressed she would need to choose one or the other long term, fearing the responsibilities would become too much. Most participants, however, felt they could blend the responsibilities, even though there were time and logistical constraints related to how much time they could spend in the teaching role.

During the interviews, participants identified numerous needs and desires, including more opportunities to come together as a group (professionally and socially) to enhance connection and continuity; more training, development, and mentorship opportunities; opportunities for formal feedback; better understanding of the opportunities for promotion or professional advancement; more support around managing challenging students/situations; and follow up information on what happens when student-related concerns are shared. Participant 17 suggested:

I suppose as needs go, I think, continued leadership development and teaching development would be not necessarily be a need, but a desire, along with feedback. Some formal feedback would be great.

It became quite apparent in the interview discussions that associated faculty want and need to be prepared for their teaching roles. They want to perform well and provide students with the best learning experiences. Without this preparation, the transition into the role was quite scary for some. Participant 19 specified:

So at the beginning, I feel like it felt a little shocking like I almost felt like, at that point I'd been a physical therapist for I guess maybe 2 or 3 years, and I was really wondering if I was gonna know enough to have the type of positive impact that ideally, I would wanna have as an educator. And so I was definitely excited to be in that role. But I was also pretty nervous in terms of feeling prepared.

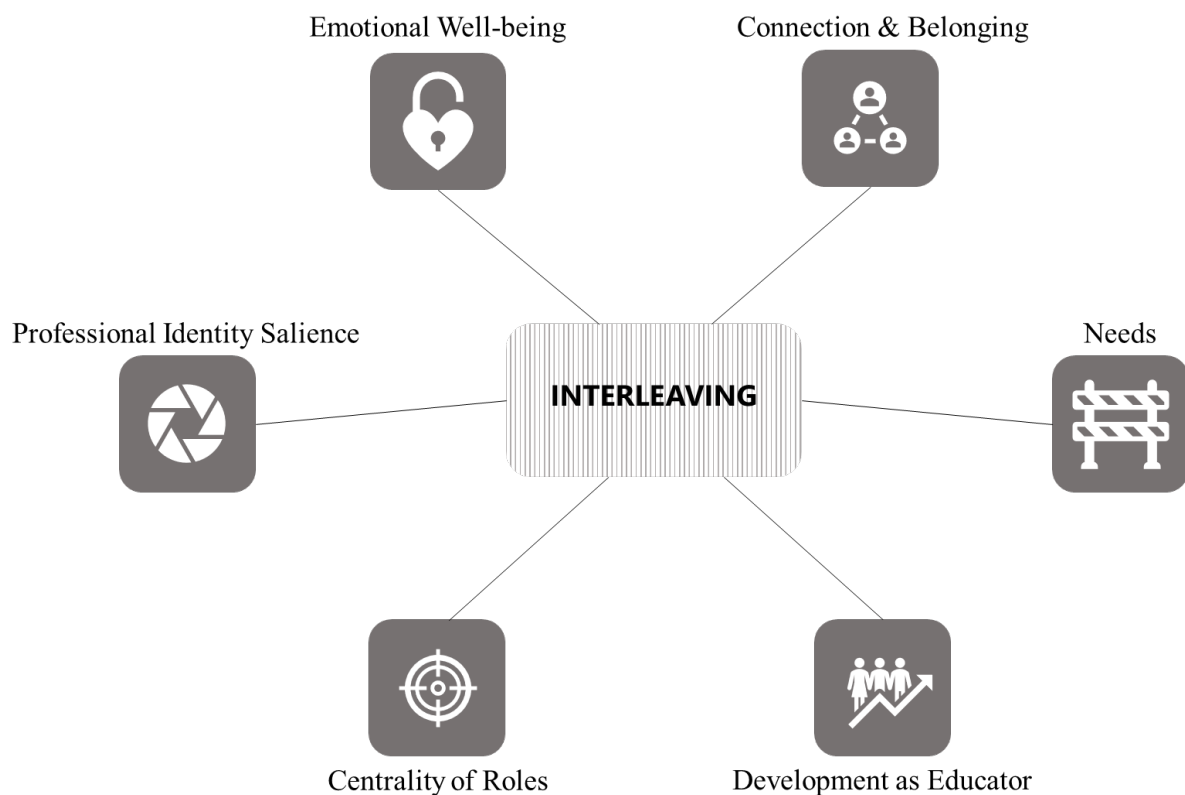


## *Selective Coding*

Through examination of axial coding and the emergent categories, a central phenomenon surfaced, to which all categories connected. Figure 5 depicts the categories and the central phenomenon.

**Figure 5**

*Categories and Central Phenomenon*



A central phenomenon identified as “interleaving” came into view through selective coding. Interleaving is defined in two ways from different time periods by the Oxford English Dictionary (2023). These original definitions state 1) “to insert leaves, usually blank, between the ordinary leaves of a book” and 2) “to introduce something at regular intervals between things or the parts of a thing.” In the context of this study, interleaving is felt to represent the notion that the associated faculty experience and identity remained riddled with “blank pages,” which can be

viewed as gaps or opportunities, both with the potential to impact uninhibited growth. All categories seemed to have some “blank pages” or opportunities that could be better addressed to support associated faculty needs; thus all categories connect clearly to the central theme of interleaving. These connections and the central idea of interleaving will be further discussed in Chapter 5 as the grounded theory is described.

### **Making Meaning Through Drawings**

Mixing techniques of data collection can enhance validity and add depth to qualitative research. Drawing can allow participants to express themselves in different or deeper ways. Given that participants seemed to struggle to entirely describe their professional identities verbally, drawings or diagrams were deemed a valuable addition to the data collection. Participant-produced drawings added an interesting layer of depth to understanding associated faculty identity. One new subtheme under the Development theme that emerged from the drawings was the importance of a growth mindset and lifelong learning as contributors to professional identity.

Participant-produced drawings are presented with narrative comments in Appendix 3. These drawings reinforced the idea that most associated faculty identities were hierarchical, compartmentalized, or intersecting, with a large clinical identity at the core for most; two clear examples of this can be seen in drawings by Participant 17 and Participant 6 respectively. Participant 11’s verbal description and drawing were the only clear examples felt to be in stage 4 of identity development and a merged professional identity of clinician and educator.

### **Field Observations**

Field observations added another layer to the data collection process, particularly around demonstration of teaching skills and community of practice. Participant behaviors aligned with

much of what was expressed in their individual interviews. Three participants had higher levels of experience in labs and completion of the faculty development program sessions (mean of 4.7 years and 3 sessions respectively) and the remaining three had lower levels of experience and development (mean of 2.3 years and 1.3 sessions respectively).

Using the field observation recording form as a guide, the researcher collected information on the demonstration of teaching skills, engagement with students, and interaction with other faculty. The more experienced group interacted with students more intentionally, asked open ended questions, and gathered with other faculty during breaks to share student observations, problem-solve, and socialize. The less experienced group tended to “hang back” more and waited for students to call them over for assistance. They often initiated the student encounter with good questions, but then quickly reverted to providing information rather than exploring students’ knowledge or skill base through further questioning. During breaks, they more frequently reverted to looking at their phones or computers, rather than engaging with others. The one participant who had received no development or training opportunities to date was an outlier in terms of less engagement with both students and faculty, and deviated from desired teaching behaviors, particularly through providing alternative approaches to content knowledge that were not supported by the lead instructor. This was not observed in any of the other participants. Her discordant approaches to teaching are exemplified through this quote:

I am just walking around asking if anyone has any questions, hoping to clarify whatever project they're working on in that moment. So, you know, if they're learning to measure ankle range of motion, I might give some feedback about like placement or positioning of the fulcrum, ankle, or positioning of the patient, you know. Try them in prone instead of supine, or whatever. Sometimes the students have questions about like, well, what do you

do in your practice? What does this really look like? Do you actually use this? How is it practiced? How is it useful? ... I think it's helpful for them to know, you know, in real life what things are useful or not useful, you know. I might say, to be honest, I don't ever do this.

The behaviors, use of common language, and skills demonstrated by associated faculty during field observations confirmed that participants actively apply the knowledge and skillset acquired in the faculty development series.

### **Deductive Coding and Analysis**

Coded transcripts were also examined to deductively align comments with the stages of identity, categorization of identity, and transition theory.

### ***Professional Identity Stages and Categories***

Transcripts were examined to make determinations on participants' stage of professional identity development, specifically in the context of the physical therapist educator. Using the work by Jarvis et al.(2012) and Cruess et al.(2015) examining stages of professional identity as modified from Kegan (1982), participants were categorized into Stages 2 through 5. Table 6 depicts the stages, number of participants classified in each stage, and keywords from transcripts used to make classification determinations in alignment with stage definitions.

**Table 6***Classification of Identity Stages*

Stage of Identity <sup>a</sup>	Definitions	Examples of Keywords or Participant Comments Used to guide Deductive Coding	Number of Participants
2: Imperial	Mostly focused on own needs, rule driven, lack deep insight into what it means to be a physical therapist educator, proud of the role, emotions may override reason	<ul style="list-style-type: none"> <li>- excited to have a badge</li> <li>- self-satisfaction</li> <li>- frustrated by lack of growth/options</li> </ul>	7
3: Interpersonal	Can see multiple perspectives, concerned how they are perceived by others, look to authority figures for validation	<ul style="list-style-type: none"> <li>- connect with peers</li> <li>- want feedback or opinions from core faculty</li> </ul>	10
4: Institutional	Internalizes values related to role, self-evaluate performance within community, in control of needs	<ul style="list-style-type: none"> <li>- describe values related to teaching</li> <li>- express desire to perform well</li> <li>- verbalize reflective strategies on own performance</li> </ul>	2
5: Interindividual	Constantly evaluating identity, hold multiple thoughts and ideologies at one time, decreased focus on self, view all experiences as interdependent	<ul style="list-style-type: none"> <li>- n/a</li> </ul>	0

Note: <sup>a</sup> Cruess et al. (2015), Jarvis-Selinger et al. (2012), Kegan (1982)

The transcripts and drawings (when present) were next reviewed to classify each participant's type of professional identity. Using established definitions established for each category in Chapter 2, participant identities were categorized as hierarchical, compartmentalized, intersecting, or merged. Only one individual was considered to truly have a merged identity as a physical therapist educator. Table 7 provides an overview of categories, the number of participants classified in each category, and keywords from transcripts used to make classification determinations in alignment with category definitions.

**Table 7***Classification of Identity Categories*

Identity Category <sup>b</sup>	Definitions	Examples of Keywords or Participant Comments Used to guide Deductive Coding	Number of Participants
Hierarchical	View teaching as secondary	- strong language about being a clinician	5
Compartmentalized	Adopt each identity separately depending on context	- describe teaching and clinician in differing contexts	6
Intersecting	Focus on the unique combination of each identity	- describe occasional identity overlap or bringing discrete pieces of clinician/educator roles to each work setting	7
Merged	Draw on both identities regardless of context	- describe integration of values, learning science knowledge, and clinical skill regardless of setting	1

Note: <sup>b</sup> van Lankveld (2021)

***Alignment with 4S Transition Framework***

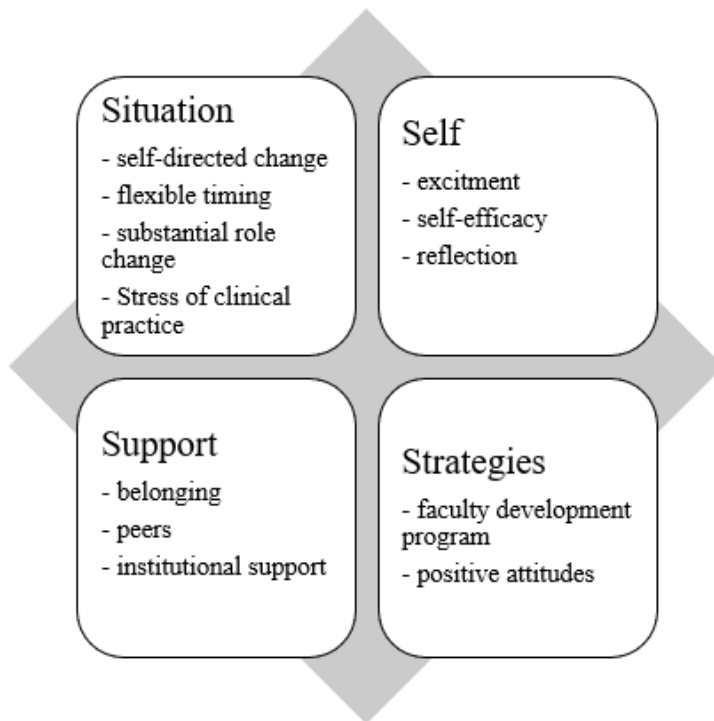
Transcripts were also deductively reviewed to examine participants' perspectives as they relate to Schlossberg's transition model (Anderson et al., 2012). This three-phase model helps create understanding around how individuals manage transitions in life which, when well-managed and supported, can result in positive outcomes related to roles, relationships, routines, and formation of identity. Transitions can be explored through this framework at any time point in the transition, whether the individual is entering, moving through, or out of the transition. First, the nature of the transition should be defined. Next, the 4S system is used to provide a structured mechanism to examine the resources the individual has or the liabilities they may face when navigating the change. The 4S system consists of Situation, Self, Support, and Strategies. Finally, individuals can be assisted in strengthening resources for further navigating the role and identity transitions (Anderson et al., 2012).

In this study, the transition was defined as the addition of or substantive change to a teaching role along with an existing clinical practice role. Transcripts were deductively coded for

items relating to situation, self, support, and strategies. The sub-themes under the 4S's are further described below and depicted in Figure 6.

**Figure 6**

*Subthemes Within the 4S Framework*



*Situation:* Situation involves examining how much control individuals have over the change they are experiencing and assessing concurrent stressors. All participants expressed the desire to be in the role and indicated they made this change autonomously, either through seeking the opportunity, or accepting an invitation to join the program. Many suggested that although the change was positive, the substantive role change was more demanding than they had anticipated. A concurrent stressor was identified as the high demand they faced within clinical practice expectations, which sometimes left little flexibility to allow for as much teaching as desired. When asked how she felt about the transition into a teaching role, Participant 7 commented:

At first I guess I would say it was kinda scary. I wasn't sure of my role and if I had enough skills and stuff to really help. Someone approached me to help in the labs and I said yes... I think it [how I feel about the role] depends on the day. So there's some days I feel very satisfied. I think there, that again, just with that that feeling of like being on the clinic treadmill sometimes that takes a lot of time, and it's hard to find time to go to any professional meetings or get over there [CU] because you're scheduled for patients during those times, or that sort of thing.

*Self:* Transcripts were examined for evidence around what the individual brings to the transition. Most expressed excitement around the change itself and addition of teaching to their professional roles. They seemed optimistic and committed to the new roles, hopeful they would break the routine or the burnout risk they were sensing with clinical practice alone. Participant 4 shared, "I really love this new role. I feel emotionally charged in a positive direction." Participant 14 commented on how the change has been positive, explaining:

I care a little too much in our world of healthcare at this point which is leading to a lot of caregiver burnout for me. And so I've recently just kind of made a small environment change by also working at [new hospital]. That, along with the time I get to spend teaching has been a great change.

*Support:* Social support is key in handling change. Transcripts were reviewed for evidence of social support in the context of the workplace including consideration of peers, other faculty, and the institution. Support factors were grounded in the community of practice, including connection and a sense of belonging with staff, peers, and core faculty. Participants expressed appreciation related to orientation and training practices. When individuals felt connected, they also felt empowered to reach out for assistance, as suggested by Participant 3:



Relationships have extended beyond the classroom. So whether it's you and I having this this conversation or conversations at the Convocation, I think there's more, more to the relationships that I have with the people I am in the classroom with...I know I can ask questions, like, I think things that I ask the most questions are related to like, hey, are we telling students this, are we practicing like this? Are we teaching it like this?

While largely positive, support factors did appear to be less robust than optimal, as described by Participant 8:

I feel grateful...to have the opportunity to continue to learn as an instructor and to be able to teach the students and see them progress along the way. So I would say, the only thing I feel like I, it seems like this is something you guys are working on, but just having ways to continue to progress and develop and be involved within the program...I don't know maybe a little bit of structure there, so that we know what's expected of us... I think I think that could help just having a little bit more involvement just outside of the classroom, but still within the program... I think, going to different events, and maybe seeing some like different sides of individuals that you don't get to see in the classroom. also think it helps you feel a little bit more, maybe integrated into the program when you have more exposure.

*Strategies:* Related to how individuals cope, strategies drive responses related to change.

Participants in this study notably reflected on confidence and self-efficacy, recognizing growth in these areas, along with teaching skill, as they participated in faculty development opportunities. Participant 11 reflected on a change in confidence in teaching after attending a faculty development session:

I think that [confidence] changed pretty dramatically from like little to none, because it just was an intimidating environment... I think now that I've done the appropriate reflection, had the appropriate guidance from the faculty members that really lead those classes I feel very confident. And I think also the feedback from student interactions where I like to sort of end each interaction with it...like that is sort of a positive feedback loop. That's led me to further and grow my confidence in that setting.

Building on the comments above and the identification of needs or gaps, Participant 8 went on to say “I'm somebody who wants to feel like I'm progressing and moving forward. I'm growing and developing, so I want more opportunity to learn [about teaching].”

### **Summary of Data Analysis**

This chapter described the inductive data analysis process from which six categories emerged via various data sources. Each category was diverse in terms of properties and dimensions. The categories are summarized here:

1. Professional Identity Salience: Predominant themes here were the clinician-first identity and a sense of uncertainty related to educator identity. Many also had difficulty grasping the construct of identity which then impacted the ability to clearly articulate their own professional identity.
2. Emotional Well-being: All participants spoke positively of how the teaching role impacted their professional well-being; they were excited to participate and gratified by the role.
3. Connection and Belonging: Whether or not participants felt connection and/or belonging to the CU PT Program, all felt this was an important construct, suggesting that belonging enhanced collaboration with peers and contributed to emotional well-being in the role.

4. Centrality of Roles: Descriptions of roles dominated the conversations related to identity. Participants were very focused on what they did in the classroom/lab versus who they were professionally.
5. Development as Educator: Participants desired and embraced opportunities to enhance knowledge, skills, and attitudes related to new roles.
6. Needs: Participants spoke about difficulty balancing clinical and teaching expectations along with other personal obligations. Needs or recognized gaps focused on the desire for more connection, increased training opportunities, and setting of clear expectations by core faculty.

From these six themes arose the central category of “interleaving,” suggesting that while the overall experience and transition into teaching is positive, there are numerous modifiable gaps that are potentially impacting satisfaction and deeper formation of identity as a physical therapist educator. Additionally, a deductive coding approach allowed a complementary examination of specific physical therapist-educator identity stages and categories across participants, as well as an examination of how individuals may be entering or navigating the transitions when faced with new educator roles. More specifically, most participants’ identities were scattered among the hierarchical, compartmentalized, and intersecting categories, with only one considered merged. In total, less than half of the participants fell into the more desirable intersecting or merged categories of identity. The core phenomenon of interleaving also surfaced when examining identity stages and categories, as well as the transition framework; evidence of gaps arose across constructs. Chapter 5 includes a presentation of the grounded theory, further interpretation of the results, recommendations for practice and future research, study limitations, and study conclusions.

## Chapter 5: Discussion

The purpose of this study was to develop a grounded theory to understand the experience and identity formation of associated faculty teaching in a Doctor of Physical Therapy Program and exposed to varying levels of a faculty development program. The review of the literature revealed that little is known about this unique group of under-supported educators, making it challenging to understand how best to support them in teaching roles and ensure they meet the learning needs of students. Given the dearth of research in this area and the intent to develop a unified understanding of their experience, it was determined that no existing theoretical or conceptual frameworks fully supported the considerations of this study. This study, therefore, utilized constructivist grounded theory to build an understanding of how physical therapist clinicians experience teaching in an associated faculty role. Grounded theory provided the necessary flexibility to freely explore what emerged from the data, and the constructivist lens provided the structure to deductively explore identity formation and transition into new roles.

This grounded theory study was designed to discover how associated faculty expressed their professional identity and what factors impacted their experience. The following questions framed the study:

1. What factors contribute to associated faculty experience and identity formation within their academic roles?
  - a. How do associated faculty perceive the impact of an evidence-based faculty development program on their experience as educators?
  - b. How do associated faculty perceive the impact of an evidence-based faculty development program on their professional identity?

- c. What other factors shape the transition process when adding an academic teaching role to traditional clinical practice?

Data collection via multiple sources and the use of both inductive and deductive analysis resulted in a comprehensive picture of associated faculty experience and identity formation. The iterative process of data collection and inductive analysis resulted in the emergence of six categories that were foundational to understanding associated faculty experience. These categories are 1) professional identity salience; 2) emotional well-being; 3) connection and belonging; 4) centrality of roles; 5) development as educator; and 6) needs. These themes were expressed at some level across all participants. The core phenomenon emerged as interleaving and was found to permeate all categories. The deductive exploration of identity stage and categorization, along with the investigation of the transition experience added specificity related to professional identity in the context of teaching. The concept of interleaving also infiltrated these constructs of identity and transition. These foundational elements provided a preliminary understanding of the factors (present and lacking) that shape associated faculty experience and identity, from which the grounded theory was constructed.

### **Grounded Theory for the Experience and Identity Formation of Associated Faculty**

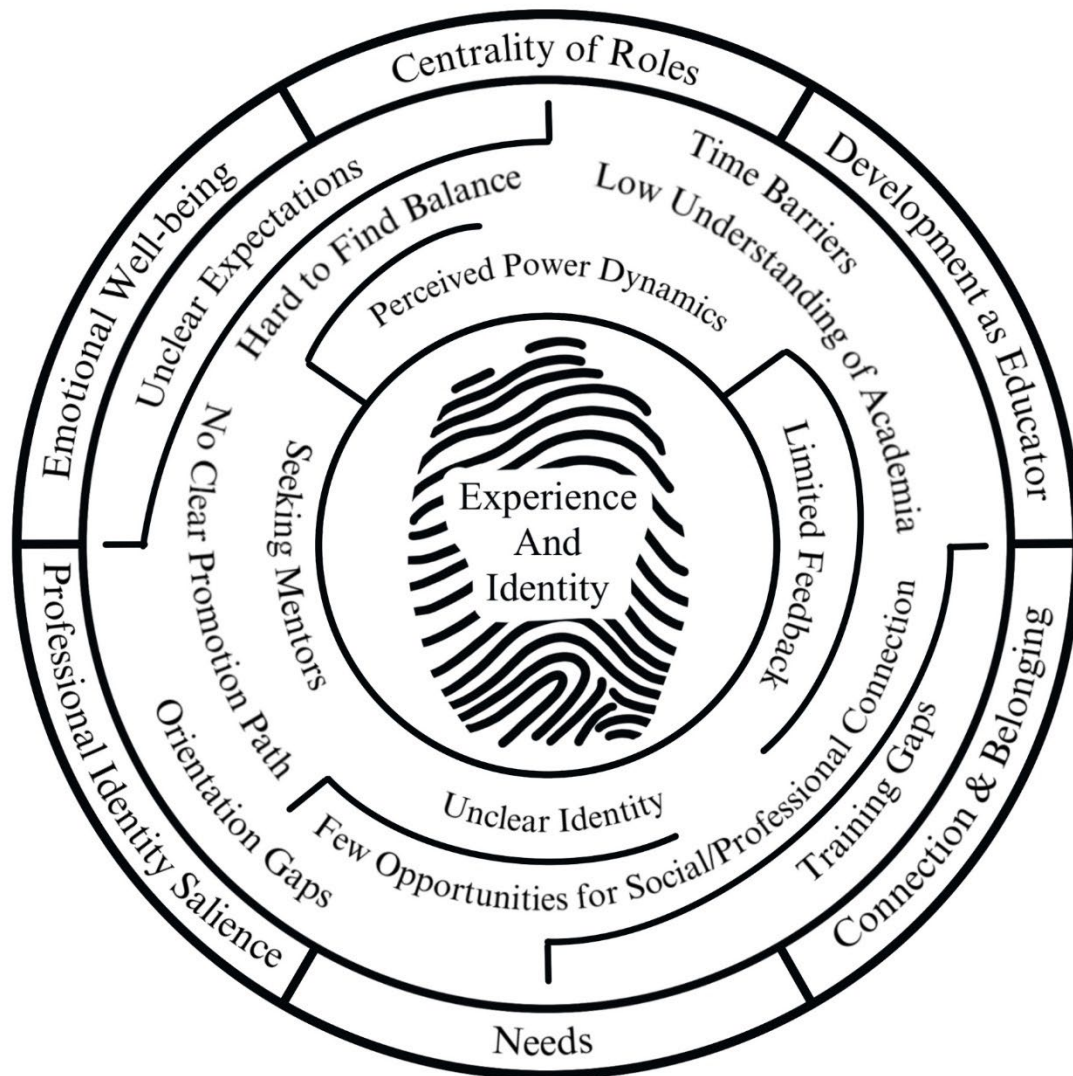
This examination of associated faculty experience and identity provided an opportunity to develop a theory as it emerged through analyses of data from several sources. This theory describes individual, group, and institutional factors that shape the associated faculty experience and identity, all influenced by the core phenomenon of interleaving. Interleaving refers to the process of inserting interleaves (additional blank pages or sheets) between the pages or sections of a book, document, or other printed material (Oxford English Dictionary, 2023). This practice was employed to provide space for notes, corrections, or additional content, or to prevent ink

from one page transferring to an adjacent page. Interleaving can also refer to the process of alternating layers or sheets of different materials, such as paper or fabric, to create a composite structure (Society of American Archivists, n.d.). Interleaving, as traditionally defined, serves as the central phenomenon in the exploration of professional identity among physical therapist educators.

The exploration of experience and professional identity among physical therapist educators within the educational context revealed a dynamic process shaped by a multifaceted interplay of experiences, roles, values, and perceptions, all impacted by the construct of interleaving. Figure 7 depicts the grounded theory with the unique associated faculty individual at the center. Significant to this phenomenon is the negotiation of a multipart identity with disparate representations of integration between clinical expertise and andragogical responsibilities across participants, all marked by interleaving. All elements examined in this study, including the categories that emerged inductively, identity constructs, and the transition process had gaps or ‘blank pages’ that impacted the individual’s experience and development. Like inserting blank pages within a book, these physical therapist educators possess spaces within their professional experience and identity that contribute to a discontinuous or incomplete experience. This process is further nuanced by contextual factors such as institutional expectations, challenges of health systems, personal barriers and aspirations, and evolving professional ambitions. Ultimately, these gaps leave associated faculty underprepared to manage the many nuanced expectations of their teaching roles.

**Figure 7**

*Grounded Theory of Associated Faculty Experience and Identity*



The gaps identified across the associated faculty experience can also represent opportunities for development and integration. These 'blank pages' create possibilities for the negotiation and interweaving of diverse roles, experiences, and values within the educational context. It is clear, however, that institutions must provide guidance and resources to address these gaps. We can work to create a “composite structure” by inserting directed development

opportunities into the identified gaps. As educators traverse these interleaved spaces, they engage in a dynamic process of identity formation and navigation of experience. As these blank pages are filled with new knowledge, skills, attitudes, and support structures, the resolution of the interleaved gaps may ultimately influence the experience of associated faculty and their expression of a cohesive professional identity as physical therapist educators.

## **Discussion of Findings**

Supporting the development of faculty has been identified as a necessary priority for achieving excellence within physical therapy education (Jensen et al., 2019). Before associated faculty can be supported in meaningful ways, faculty developers must first understand their experience and elucidate the details of their professional identity. Given that no literature existed on the associated faculty experience, this study sought to create a grounded theory. Based on the data analyzed, a number of elements emerged that portray the complex experience of associated faculty and illuminate key factors related to professional identity. To create a clear picture of these elements, this section will review each theme and explain the meaning derived from the data, plus demonstrate alignment with the core theoretical construct of interleaving.

### ***Professional Identity Salience***

The professional identity salience of associated faculty emerged as a multifaceted and complex category within this study. Participants often described themselves through task descriptors rather than embodying the values, beliefs, and norms of the profession, suggesting most participants did not possess a clearly articulated sense of professional identity as physical therapist educator (Cruess et al., 2015). Rather, the salient identity for many was that of a clinician, with limited integration of the educator component as demonstrated by the low numbers of intersected, and particularly merged, identities. This lack of reflective depth and



integration of identities create a fundamental gap in one's ability to understand and embody the role of a physical therapist educator. The finding of a clinician-first identity aligns with medical and nursing literature and can negatively impact student learning outcomes and faculty satisfaction in roles .

Four primary issues surfaced during the examination of professional identity salience:

1. Poor understanding of identity as a construct: participant responses to questions indicated a low level of understanding of the term professional identity, and participants additionally struggled substantively to convey a clear picture of their identity to the interviewer. Participant drawings were frequently richer and more descriptive, which again aligns with the idea that identity was a challenging concept for many associated faculty (Brailas, 2020).
2. Physical therapist salience: The predominant identity for most participants was that of a clinician rather than a physical therapist educator.
3. Lower categorization of professional identity: 58% of participant identities were categorized into lower ranges than those suggested to support optimal teaching (van Lankveld et al., 2021).
4. Lower stages of professional formation: Participants often described themselves through task descriptors rather than embodying the values, beliefs, and norms of the profession. These task-focused descriptions align with lower levels of identity development. Many participants demonstrated lower-than-anticipated stages of professional formation, indicating a lack of progression along the developmental continuum (Cruess et al., 2015; Jarvis-Selinger et al., 2012).

Examination of this theme highlighted the surprising potential for an elemental gap in the profession's approach to identity formation within DPT programs. While all participants strongly identified with the clinical role, many did not use language that suggest they have transitioned into *being* a physical therapist. The limited understanding and descriptions of professional identity among participants raise questions about the effectiveness of current educational practices in fostering a deep sense of professional identity in new graduates, a critical component in maintaining a relevant and vibrant profession that can meet the needs of society (Jensen et al., 2019). This is a deviation from medical and nursing professionals, where clinical identities tend to be robust (Steinert et al., 2019). If new graduates and practicing physical therapists do not have a strong sense of professional identity, new faculty can certainly not be expected to resolve a multipart identity into a thriving intersected or merged physical therapist educator identity independently.

Participants did demonstrate variation across the continuum of identity development over stages two to four, but the majority (17/19) fell only in the second and third stages of development. Similarly, while a few participants demonstrated deeper metacognition related to professional identity, the majority of participant descriptions were surprisingly simplistic, suggesting they have had insufficient opportunity to intentionally explore identity as a construct and in the context of their own being. Browne and Collett (2023) suggest there needs to be increased emphasis on educational approaches that support transformational learning and adaptive learner traits at the individual level at the onset of the career change or process. The lack of a well-evolved professional identity has the potential to negatively impact associated faculty performance and roles, along with student outcomes; it should, therefore, be addressed early in the faculty development process.

Exploration of this theme raises questions about the adequacy of current approaches to engraining the construct of professional identity in faculty, and even more fundamentally, in DPT students. The existing faculty development program does not have a dedicated session on identity. This is likely compounding the obvious gap in the development of educator identity seen in this group of associated faculty, perpetuating the struggle in transitioning from simply performing tasks to embodying their roles as physical therapist educators. Without the existence of a strong understanding of professional identity across clinicians and faculty, the physical therapy profession could be negatively impacted at numerous levels.

It is important to recognize that the descriptors associated faculty used to describe their tasks and roles indicated pride, enjoyment, and fulfilment, suggesting they are relishing largely positive teaching experiences. Participants articulated appreciation for faculty development opportunities and recognized their growth in skills and confidence. If we revisit Sullivan's (2005) work on professions, the foundational elements of two of the three apprenticeships (knowledge base and clinical reasoning/practice) are visible through participant descriptions of approaches to teaching, their own learning, and reflections. We can distinctly see developmental gaps in the third apprenticeship – professional formation. This suggests a strong foundation (knowledge and practice) for improvement does exist; addressing the gaps in understanding and integration of professional identity remains crucial for optimizing teaching practices and fostering positive educational outcomes.

### ***Belonging, Balance, and Connection: Keys to Emotional Well-being***

As the grounded theory was developed, it became clear that the concepts of belonging, connection, balance, and well-being appeared inextricably connected within the associated faculty experience. A sense of confidence empowered associated faculty to find connection and

the recognition of belonging enhanced well-being. Connection facilitated reflection on growth, and the cycle of belonging continued. As demonstrated here, this did not seem to be a one-way influence, rather each nourished the other (in positive scenarios), or when interleaving prevailed, the gaps contributed to frustrations, lack of clarity, and decreased connectedness.

The sense of belonging to the broader group of faculty and/or the DPT program was a variable element across participant perspectives. Associated faculty who were also alumni of the CU DPT program spoke more comprehensively about belonging to the program and the broader group of faculty. They identified how this further connected them to both the individuals involved in teaching and the curriculum itself. They drew parallels between their time in the program as students and their experience now as associated faculty. This facilitated new perspectives around efforts in curriculum design and training of associated faculty, and enlightened them on the extent of their impact on students. Associated faculty who were not alumni spoke of connection to the program, but less so about connecting with core faculty. A final subset said they only felt belonging with the smaller cohort of associated faculty and core faculty with whom they most often worked. This illuminated another gap in the associated faculty experience. More can be done to intentionally facilitate the opportunities for connection that facilitate belonging, which is important in the faculty experience and development of identity.

Social identity (which includes professional identity) refers to “an individual’s self-concept in relation to his or her membership of social groups” (Burford, 2012, p. 144). The related social identity theory posits that individuals classify themselves and others into various social categories, influencing their sense of belonging and identity formation. Interestingly, identifying with a community of practice is associated with positive attitudes towards members

of the same group (in-group members) and more negative attitudes towards out-group members. This contributes to potential biases and conflicts arising between groups (Hogg et al., 2004). In this study, participants clearly categorized themselves as members of the associated faculty group, distinct from core faculty members. Their stories conveyed excitement at getting to know core faculty over time, respecting their leadership, and occasionally seeking feedback. The descriptions aligned more with peripheral membership in this group, and there were implications of a hierarchical sense between groups. This perceived hierarchy could potentially create barriers to belonging (Willetts & Clarke, 2014).

The struggle to find balance between clinical and academic roles seemed to create some stress for associated faculty, negatively impacting emotional well-being. Given that teaching is often embedded within a day of clinical practice, associated faculty expressed concern regarding challenges of time management, completing tasks such as patient documentation, getting back and forth between clinic and the university, and generally juggling responsibilities during the day. Some felt they were at a point where they had to choose between these roles. This was not a positive option as they did not want to give up teaching, but were also not ready to dive full time into teaching. This is an example of someone actively in transition (Anderson et al., 2012). These transitions are hard because they affect self-esteem, career conditions, and ultimately, identity. Associated faculty at this transition point must decide whether they return solely to clinical practice or if they work on adapting to new demands. Without a sense of belonging or evolution of identity, and without dedicated mentors or support structures, the individuals at this point may decide attaining balance is too hard and return to clinical practice (Anderson et al., 2020). It is possible for associated faculty to navigate this complex space between clinic and educational practices. This requires, however, a flexible professional identity that allows some intersection

along the borders of each identity and a metacognitive ability to manage the challenges of change (Aguayo-González & Weise, 2022). Enhanced development and support structures could allow faculty developers to intervene and assist with these transitions, supporting change in a direction that aligns with an individual's career goals.

In alignment with social identity theory, associated faculty who experienced belonging spoke of the positive benefits to confidence, desire to do well in their role, and perceived access to support (Willettts & Clarke, 2014). For those who felt less connected, perhaps the learning opportunities within the workplace community were too implicit. Wald (2015) suggests that this can be made more explicit through guided reflection activities that follow experiential (teaching) activities. The author also connects professional identity formation to resilience, and suggests other andragogic strategies that could be woven into faculty development sessions to enhance identity and thereby resilience for managing challenging scenarios within a role. Beyond reflection, these strategies include: teaching mindfulness, exploration of roles, establishing a mentor, creating workplace goals, and formative feedback. Associated faculty should be connected within a community of practice, where they teach and learn together in the classroom environment and learn together as a social group during faculty development opportunities. Faculty developers likely need to do more to explicitly facilitate these activities.

Participants frequently spoke about the positive outcomes of adding the associated faculty role to their clinical positions, with many alluding to reprieve from clinical burn out through teaching activities. A subtle spread of affect or attitude was noted in this category. Numerous participant comments were inwardly focused, describing a sense of self-gratification acquired from the position; they expressed enjoying the role simply because it was fun and made them feel good. The other subset focused more externally, suggesting their gratification came

from knowing they were a part of the education process and supporting the next generation of physical therapists; this was more of an altruistic, pay-it-forward attitude. The individuals with this external lens articulated value and a sense of worth in their role as educators and tended to align with stages 3 and 4 along the identity formation continuum. Concepts that appeared aligned with positive emotional well-being included higher perceptions of confidence and self-efficacy along with a sense of belonging. Confidence and self-efficacy can both be enhanced through teaching strategies, so faculty developers should be aware to assess these constructs and address noted gaps (Bruning et al., 2011). Participants also suggested that frequency of attendance, recognition of their value, experience over time, and development supports all contributed positively to their confidence and satisfaction in their role - both modifiable things if gaps are identified.

Connection and belonging within a community of practice are integral to shaping the professional identity of physical therapist faculty members. Recognizing and addressing hierarchical perceptions, promoting the contributions of associated faculty, and facilitating continuous interaction and learning can foster a sense of belonging and identity formation among faculty members. By nurturing a supportive community environment, institutions can optimize faculty members' performance and satisfaction in their roles as educators.

### ***Centrality of Roles and Development as an Educator***

Descriptions of roles involved descriptions of responsibilities, what one does, and the tasks completed. Identity, on the other hand, is far more complex, requiring descriptions of values, ethics, motivations, and moral decisions that contribute to a sense of being (Cruess et al., 2015; Jensen et al., 2019). In most instances, study participants focused on describing roles when asked to articulate their identity. This was most true when asked to describe their educator

identity, but was also apparent in descriptions of physical therapist identity. This may have been because associated faculty lacked depth in understanding the identity construct as described earlier. Participants spoke largely in positive terms about how they performed their professional roles. When describing teaching, there was often a sense of excitement as they described the new or different tasks they performed each day, which differed from the routine of clinical practice. They also described dedication to performing the roles to the best of their ability.

Participants were appreciative and complementary of the development sessions which provided the foundations of their knowledge and teaching skill. Many participants provided specific examples of how they applied newly learned teaching skills in the learning environment, pulling key content points they felt had been very helpful for navigating teaching in the labs. They frequently cited using questioning as a learning tool and connected it to enhanced student learning, as opposed to simply answering student questions. The specificity of examples provided by participants suggested integration of knowledge and application of teaching skills. In other words, the faculty development program appeared to facilitate change in teaching behaviors, not just knowledge. This notion of behavior change was reinforced in the field observations, as participants were observed applying strategies in real-time.

Other concepts that associated faculty repeatedly shared as helpful were learning about feedback structures, maintaining alignment with core faculty content approach, student assessment, and feeling more confident having challenging discussions with students. Development of the educator through the faculty development program was centered on the roles of teaching; activities focused on developing the necessary knowledge and skill for teaching in DPT labs, but not attitudes or professional formation. Further development of these sessions would be beneficial for a more rounded approach to associated faculty development.



Participants also spoke of learning through experience, which connected to the concept of workplace learning within communities of practice (O'Sullivan & Irby, 2011; Wenger, 1998). They discussed learning from each other and core faculty, reflecting on improvements in confidence and skill over time. The workplace community serves as a vital space for experiential learning and skill development among associated faculty. Within this community of practice, faculty members learn not only the skills of teaching but also navigate the academic climate and setting. This experiential learning contributes to the growth of skills and confidence, fostering a sense of belonging and identity as educators (Wenger, 1998).

There was a suggestion that the recency of teaching also impacted confidence, skill, and engagement. The more frequently participants were in labs and classes, the more comfortable they seemed in the role. Conversely, those who described having large gaps in time between teaching opportunities described frustration in having to relearn things and review materials more deeply, and sometimes felt like they were starting over each time in terms of confidence and skill. There may be benefits in facilitating some frequency with attendance in teaching for both associated faculty and students.

While associated faculty are in a supportive role, they seemed to overlook the critical fact that they have direct teaching impact on students. Participants who had completed some or all of the faculty development series shared robust examples of how they directly teach students, including reinforcing key learning principles in the moment, providing opportunities for repetition of skills, creating a safe and supportive place for learning and making errors, providing formative feedback, and using questioning to facilitate clinical reasoning and reflection. These are key examples of associated faculty both embracing their own adaptive learning and facilitating master adaptive learner traits in students. Such traits are critical in developing faculty

and graduates who thrive in today's complex health professions environments. Despite providing these examples, the majority of associated faculty who teach in labs had the attitude of we 'just assist,' suggesting the importance of their teaching role evades them.

Participants with lower levels of experience and less exposure to the faculty development program still expressed enjoyment in the role but articulated greater need for support. Others spoke about feeling nervous, worried about doing the "wrong thing," and expressed some doubt that they were qualified for the position. Similarly, when more experienced associated faculty reflected on their evolution over time, they remembered the transition to teaching feeling scary and hard, when they had no intentional support in place at that time. Several expressed frustrations with the lack of opportunity to connect and the absence of a clear path forward in the teaching realm. When interviews of those participants were deductively coded, data analysis suggested they had lower confidence and clarity in their roles, and all had hierarchical or compartmentalized identities.

A lack of understanding of academia persists in this group of educators. Discussion around pay, navigating bureaucracy, and hiring processes aligned with this concept. Several participants also expressed frustration with the absence of promotion opportunities within a clinical faculty role and/or the lack of opportunity to transition into a full-time faculty position. There seemed to be a low level of awareness that programs cannot simply hire anyone with interest; there are an acutely finite number of DPT faculty positions, making it unrealistic for everyone interested to obtain employment. Relatedly, at least at CU, where the DPT program resides within a School of Medicine at a State institution, creative options for promotion or hiring are limited due to very traditional academic titles and processes. Having a clearer understanding of such academic processes, rules, and regulations has been shown to enhance

satisfaction in teaching roles (Condon et al., 2015). Historically, associated faculty have not been given much exposure to academia (Bilyeu, Niski, et al., 2023), and this seems to be a mistake, further contributing to the associated faculty experience.

### ***Needs***

The category of needs was deemed different from the core theoretical concept of interleaving, although there is substantial overlap in the ideas. The needs shared by participants along with emergent needs from data, fed the concept of interleaving. Perceived needs of associated faculty were explicitly explored in the interviews through a direct question: “What needs do you currently have that are not being met.” Needs were expressed at the level of the person. For example, a few participants desired clear opportunities for individual feedback on their teaching skills. Interleaving can be described as more systemic – even though an individual may not have directly identified a need for feedback, the existing lack of feedback may have further contributed to the interleaving process. The words within the middle ring of Figure 7, the graphic of the grounded theory, are thus a combination of participant-articulated needs and the broader themes that emerged from the whole study. These are the gaps that represent the frequently interspersed blank pages in the associated faculty experience.

### ***Supporting the Transition – Identities in Flux***

Transitioning from a clinical role to an academic one is a significant challenge many physical therapist faculty members face. Even for associated faculty with lower levels of teaching responsibility, this career modification seems surprisingly challenging, yet remains a largely desirable choice for most. Utilizing Schlossberg's transition theory as a framework, this section further explores the experiences and challenges associated with this transition process, highlighting the need for targeted support strategies.

Analyzing the transition process through the lens of the 4S framework—situation, self, support, and strategy—revealed support structures and gaps. Participants in this study all made the move into teaching autonomously, a key feature that should make this transition easier to manage, versus a change forced upon them (Anderson et al., 2012). Although the change was self-directed and typically viewed as positive, participants were struck by the fact that it was more challenging than anticipated, and the early transition was “scary.” Clinicians transitioning into academic roles often face challenges such as low confidence, feelings of inadequacy, and gaps in knowledge and skill. These challenges not only hinder their ability to fulfill their teaching responsibilities but also impede the construction of a robust professional identity as educators (Browne et al., 2018; Steinert et al., 2019).

Supports and strategies within the 4S framework that appeared to ease the role transition for associated faculty included belonging, peer interactions, institutional support, and the faculty development program. However, gaps in support structures were noted, particularly related to self-efficacy and social support. Many participants described feelings of being in flux and struggled with resolving perceived conflicts between their roles as clinicians and educators. Minimal evidence of substantial identity transitions emerged from the data. This struggle indicates a need for tailored support to assist individuals in navigating this role transition, and perhaps more importantly, identity transition.

Many participants seemed to be stuck *between* their identities as clinicians and educators, viewing the roles as potentially dichotomous rather than envisioning the opportunity for integration. It was as if the transition process was blocked, perhaps by the construct of interleaving, leaving some participants unable to resolve the intersecting of identities. More specifically, this perceived conflict hindered their ability to fully embrace their role as physical

therapist educators. Faculty developers need to provide mentorship and development opportunities explicitly focused on identity to facilitate a smoother transition to physical therapist educator.

The transition from clinician to educator is a complex process that requires targeted support to facilitate identity transformation. The 4S framework provides a comprehensive view of transition and can assist faculty developers in identifying mechanisms to support both the person and the process. Well-managed transition helps individuals make positive meaning out of change and a stronger foundation is laid for the progressive formation of professional identity. The hope is that the professional identity of the clinician can begin to intersect or merge with that of the educator as the teaching role progresses. By addressing the challenges hindering the transition process and leveraging supportive strategies, institutions can better support faculty members in navigating this significant career shift and fostering a sense of belonging and professional identity as physical therapist educators.

### ***Summary of Experience***

Working as associated faculty remains an overall positive work experience for all associated faculty interviewed, providing individuals a new professional outlet still intimately connected to the physical therapy profession. Fostering identity, well-being, knowledge, skill, and belonging within a community of practice appear key to elevating the experience for those involved. It is apparent, however, that interleaving permeates all conditions of experience for associated faculty. No individuals seemed to have complete or comprehensively fulfilling experiences, sometimes across all areas of import, sometimes within only a few. Experience and identity for associated faculty remain punctuated by blank pages waiting to be filled. The existing faculty development program appeared to successfully enhance participants' knowledge,

skills, and understanding of some learning theories, but it was not successful in facilitating belonging or identity formation. The remaining gaps need to be filled through intentional, guided activities within a faculty development program and facilitation of a community of practice.

## **Recommendations**

The results of this study suggest that the associated faculty experience is more complex than many anticipate. In alignment with other health professions research, this study also found that most associated faculty identify as a clinician first, and well-integrated clinician-educator identities were rare. The resultant grounded theory focused on interleaving, or the numerous gaps, scattered throughout each individual's experience and identity. These gaps, however, are eagerly waiting to be filled.

This study suggests that faculty benefit from clear communication regarding their role, access to resources that allow for teaching preparation, well defined expectations, understanding of institutional limits or boundaries, informal mentorship, and ongoing opportunities for formal teaching and identity development. The effect of small recognitions such as having a title, formal badging/identification, introductions to faculty and students, and regular formative feedback on associated faculty's sense of worth and inclusion should not be underestimated. Medical and nursing education literature provide further suggestions for intentionally addressing development and belonging. Evidence-based suggestions for associated faculty development programs include:

1. Participation in a targeted *longitudinal* faculty development series. Single session formats are not as successful in changing behavior in educators (Steinert et al., 2016).
2. Faculty development opportunities should focus intentionally on identity formation. Activities to support identity formation include: narrative writing and reflection

(Aguayo-González & Weise, 2022); identity seminars (O'Sullivan et al., 2021); embedding identity content into existing programs, such as asking questions related to career goals and identity into an orientation session; exploration of roles during faculty development activities; building opportunities for connection, such as group learning; and facilitation of mentoring relationships (Steinert et al., 2019).

Additionally, focus on identity should happen early within faculty development structures (Browne & Collett, 2023)

3. Faculty development opportunities should focus on teaching knowledge, skills, and behaviors. These programs should allow for cumulative learning, practice, reflection, and feedback (Steinert et al., 2016).
4. Intentional community building activities to facilitate belonging, such as professional group activities, social activities, invitations to attend select meetings (Steinert et al., 2019).
5. Feasibility and sustainability of such programs require institutional support (Bilyeu, Reilly, et al., 2023; Steinert et al., 2016)

In summary, the key areas on which to focus development are knowledge, skills, and behaviors related to teaching; community building to facilitate belonging; and formation of identity.

Learning as a community can occur during formal development sessions, through mentorship activities, and through experiential learning during the teaching process.

### **Limitations**

This dissertation contributes to the sparse literature related to physical therapist associated faculty, presenting a grounded theory explaining their experience and professional identity; however, a number of limitations should be considered. First, the purposive sampling

that was necessary for this study brings several limitations. There is the potential for the introduction of bias as participants are selected, particularly when employing maximum variation sampling. The process is subjective, and the researcher could have favored some subjects over others for reasons not aligned with the study, making the sample less representative. Similarly, only one intrinsically bounded system was studied. Each of these considerations limits the generalizability of the findings.

Second, participants had varying levels of recency with teaching. During the interview process, some participants were actively teaching, others were not involved with students during that particular semester. This variation in proximity to the teaching role could have impacted their stories and recollections, contributing to recall bias.

Third, while changes in knowledge and skill were articulated by participants and evidence of teaching behaviors observed during field observations, no objective assessments of knowledge or teaching skill were collected, nor was any quantitative data analysis performed. No conclusions can be drawn on changes in teaching skill related to the faculty development series.

Finally, the role of the researcher created several potential limitations. The researcher who conducted all interviews was known to many participants and was intimately connected to the development and implementation of the faculty development program. This creates the potential for reactivity or researcher influence on the participants. Participants may have felt less able to share negative impressions.

### **Future Research**

This dissertation provided a grounded theory on the experience and identity of associated faculty teaching in a DPT program. Grounded action builds from theory to create a plan to address social or organizational problems (Merriam & Tisdell, 2016). With the explanatory



theory now in place, a larger scale quantitative or mixed methods grounded action study focused on assessing the outcomes of the existing faculty development program would be a prudent next step in determining efficacy of the program and need for potential modification to best address identified associated faculty needs.

The grounded theory laid out in Figure 7 additionally suggests a quantitative research project examining findings via a pathway analysis model; studying categorical relationships and their directionality may help researchers develop a more granular understanding of the associated faculty experience and guide timing or sequencing of specific content areas within faculty development opportunities. Such future studies need to apply robust methodologies, provide clear details on faculty development structure/content to allow for reproduction, and be willing to report negative outcomes. Once robust faculty development programs exist, researchers should assess their efficacy in advancing knowledge, promoting identity formation, and changing behaviors related to teaching.

This study touched on the idea of transition. There is meaningful potential in studying this more broadly to gain a better understanding of the full transition process and its impact on identity formation when clinicians transition into academic roles. This line of inquiry could further develop understanding of how to support individuals through these career changes.

There is very little research on identity development in the physical therapy profession, and most of the existing literature is based in countries other than the United States, where the roles and expectations of physical therapists are different. This makes even the limited available literature challenging to generalize to local physical therapists and programs. This study illuminated a potential identity formation gap more broadly in the profession. Given the dearth of available research on identity, future studies should examine identity and its formation in

students, practicing clinicians, and clinician-educators to gain a full picture of identity across the profession.

## **Conclusion**

The physical therapy profession strives for excellence in practice and education. Faculty support and development have been clearly recognized as a gap in this journey since 2017. An abundance of medical and nursing education literature suggests evidence-based guidelines for how to structure and implement faculty development opportunities. In spite of this messaging, physical therapy programs have been slow to adopt and/or share how they are meeting the faculty development directive. Associated faculty, in particular, have limited access to development opportunities and the grounded theory presented here suggests their experience and identity as educators is incomplete. As a profession, we are called to meet all apprenticeships - knowledge, skill, and professional formation - to meet the moral obligations to society. To do this at the highest level requires individuals who have *become* clinician educators, that is, those who have embodied the key values and attributes of both clinical practice and education. Thus, supporting professional formation across all levels of DPT faculty (core, associated, and clinical) is critical to maintaining a strong and viable profession.

Associated faculty who participate in lab and classroom teaching within DPT programs do not have sufficient support, understanding of expectations, or sense of belonging to fully integrate into the role nor develop the educator identity to the level necessary for the highest levels of performance and success. For associated faculty, the interleaving of experience also leaves open and uninhibited room for growth as educators; cognitive room exists to learn new things and expand their skillset as educators. These gaps can be filled with intentional faculty development opportunities focused on educator skill, identity formation, and belonging. By

addressing the challenges hindering the transition for clinicians moving into teaching positions and leveraging supportive strategies, institutions can better support faculty members in navigating this significant career shift and foster a sense of belonging and professional identity as physical therapist educators.

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<https://doi.org/10.1111/ijn.12108>

# Appendix 1

## IRB Exemption Letters



**Date:** November 8, 2023

University of South Dakota  
414 E. Clark Street  
Vermillion, SD 57069

**PI:** John Korkow  
**Student Investigator(s):** Catherine Bilyeu  
**Re:** Initial - IRB-23-228 *Exploring the experience and identity of clinical associated faculty teaching in a Doctor of Physical Therapy program*

The University of South Dakota Institutional Review Board has rendered the decision below for this study. Because this study is exempt, its approval does not expire. Please submit a closure form to the IRB when this study is complete.

**Decision:** Exempt

**Category:** Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:  
Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or

**Research Notes:** Interview methods; study also reviewed & determined exempt by another IRB; no signature on consent form; recorded interview to create a transcript; field observation; recruiting email.

Colorado Multiple Institutional Review Board, CB F490  
University of Colorado, Anschutz Medical Campus  
13001 E. 17th Place, Building 500, Room N3214  
Aurora, Colorado 80045

303.724.1055 [Phone]  
303.724.0990 [Fax]  
[COMIRB Home Page](#)  
[comirb@ucdenver.edu](mailto:comirb@ucdenver.edu) [E-Mail]  
FWA00005070 [FWA]

UCD Anschutz Medical Campus | UCD Downtown Denver Campus | University of Colorado Health | Denver Health and Hospitals | Colorado Prevention Center | Children's Hospital Colorado | Colorado School of Mines | VA Eastern Colorado Health Care System

### Certificate of Exemption

31-Oct-2023

<b>Title:</b>	Exploring the experience and identity of clinical associated faculty teaching in a Doctor of Physical Therapy program
<b>COMIRB#:</b>	23-1979
<b>Investigator:</b>	Catherine Bilyeu
<b>Subject:</b>	Initial Application
<b>Funding Source(s):</b>	No Sponsor~
<b>Panel:</b>	UCD Panel S
<b>Effective Date:</b>	31-Oct-2023
<b>Exemption Category:</b>	2
<b>Submission ID:</b>	APP001-1

**SUBMISSION DESCRIPTION:**  
Initial Exempt Submission

Your COMIRB Initial submission APP001-1 has been determined to be EXEMPT from IRB review. There is no requirement for continuing review and your study has not been given an expiration date.

For the duration of your protocol, any change to the Principal Investigator, or any changes that may affect the exemption determination must be submitted to COMIRB before implementation of the changes. Information on how to submit changes (amendments) and reports of unanticipated problems for your study to COMIRB can be found on the COMIRB website <http://www.ucdenver.edu/research/comirb/submissions/>.

When your research is complete, please notify COMIRB by e-mail at [COMIRB@ucdenver.edu](mailto:COMIRB@ucdenver.edu)

**REVIEW DETAILS:**

Category 2

This protocol meets the criteria for exempt Category 2, as it involves administration of a survey and interview procedures.

Click here to open your submission: [Submission Page](#)

**Appendix 2**  
**Consent Form**

**Study Title: Exploring the experience and identity of associated faculty teaching in a Doctor of Physical Therapy program**

**Principal Investigator: Catherine Bilyeu PT, DPT**

**COMIRB No: 23-1979**

**Version Date: 10/30/2023**

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You are being asked to be in this research study because you are Associated Faculty (lab instructors) within the University of Colorado DPT program. You are an important stakeholder in the education of future Doctors of Physical Therapy. Your perspectives on your role in education are important for us, as each educator impacts our students in unique ways.

If you join the study, you will participate in a one-hour interview with the principal investigator. The interview questions will focus on your experiences as a clinician and an educator, as well as an exploration of your professional identity. Interviews will be audio-recorded using an online platform. You will also have the choice to participate in one observation session, whereby the principal investigator will simply observe your lab teaching and interactions with students during a your regularly scheduled 60 to 120-minute class session.

This study is designed to learn more about the experience and identity of associated faculty who teach in the University of Colorado Doctor of Physical Therapy program. This information can be used to develop theory around the needs of this group of educators, who historically have not had access to development resources.

We do not expect you to be exposed to any physical or psychological risk during this study. There may be risks the researchers have not thought of.

This study is not designed to benefit you directly.

Every effort will be made to protect your privacy and confidentiality by: all information collected will be stored on a secure University of Colorado server. Audio recordings will be deleted as soon as transcribed. Transcriptions will be stored for 5 years and then erased.

You have a choice about being in this study. You do not have to be in this study if you do not want to be.

The data we collect will be used for this study but may also be important for future research. Your data may be used for future research or distributed to other researchers for future study without additional consent if information that identifies you is removed from the data.

If you have questions, you can call **Catherine Bilyeu** at 303-724-0496. You can call to ask questions at any time.

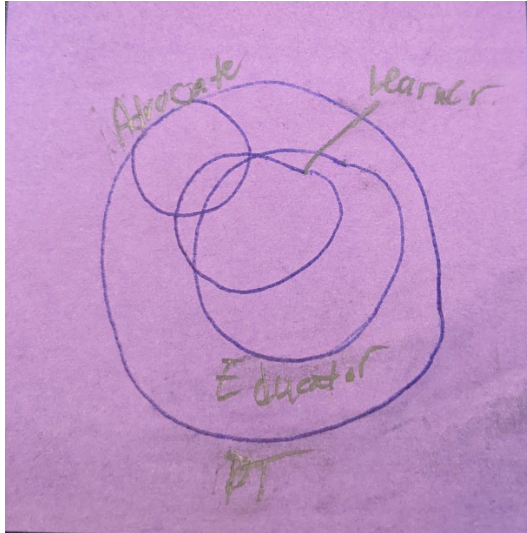
You may have questions about your rights as someone in this study. If you have questions, you can call COMIRB (the responsible Institutional Review Board) at (303) 724-1055.



## Appendix 3

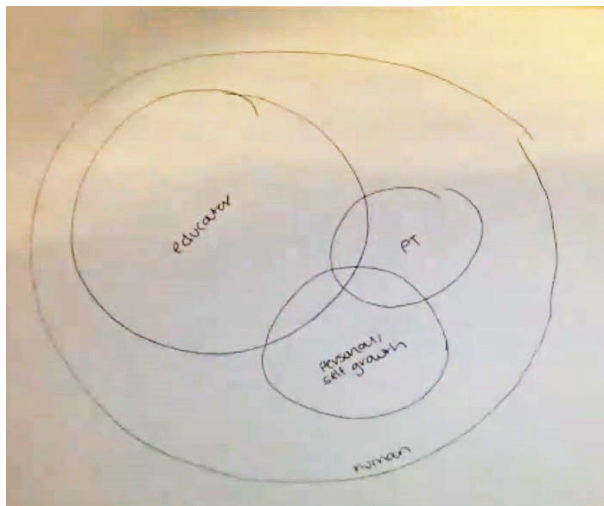
### Participant Generated Images of Professional Identity

#### Participant 3



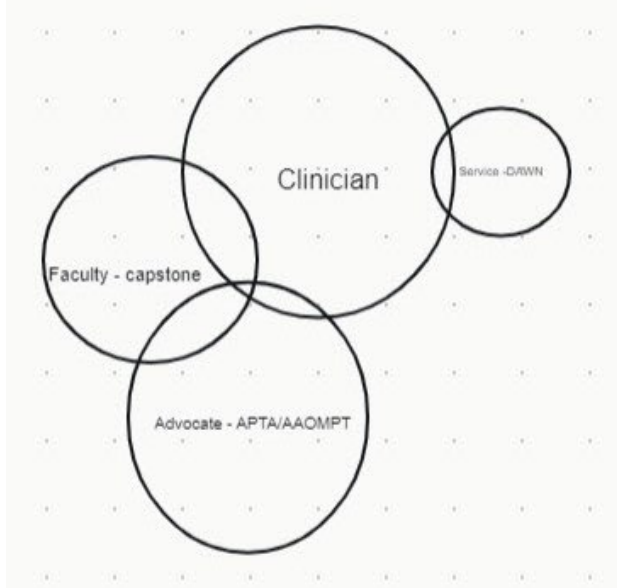
Participant 3 felt his identity was grounded in advocacy, both clinically and in the classroom. The educator piece was strongly described in the context of patients, with students mentioned secondarily. The image and words identified here aligned with the interview findings.

#### Participant 4



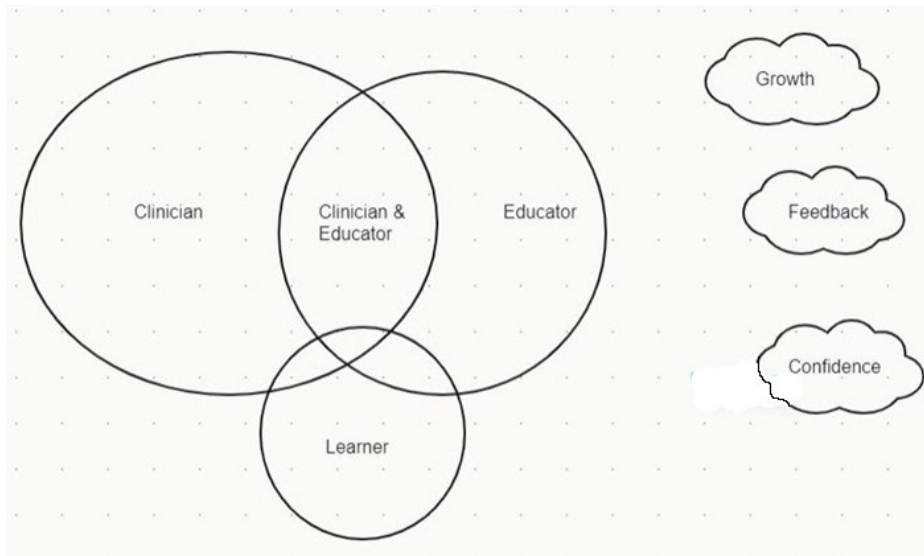
Participant 4 drew “educator” as a very large identity component, but largely spoke of being a physical therapist. Interestingly, she described it as within her physical therapist role, but here drew it very separately. She viewed herself as “sort of” an educator in the context of students. The very large educator component here was described as the importance of education within patient care.

## Participant 5



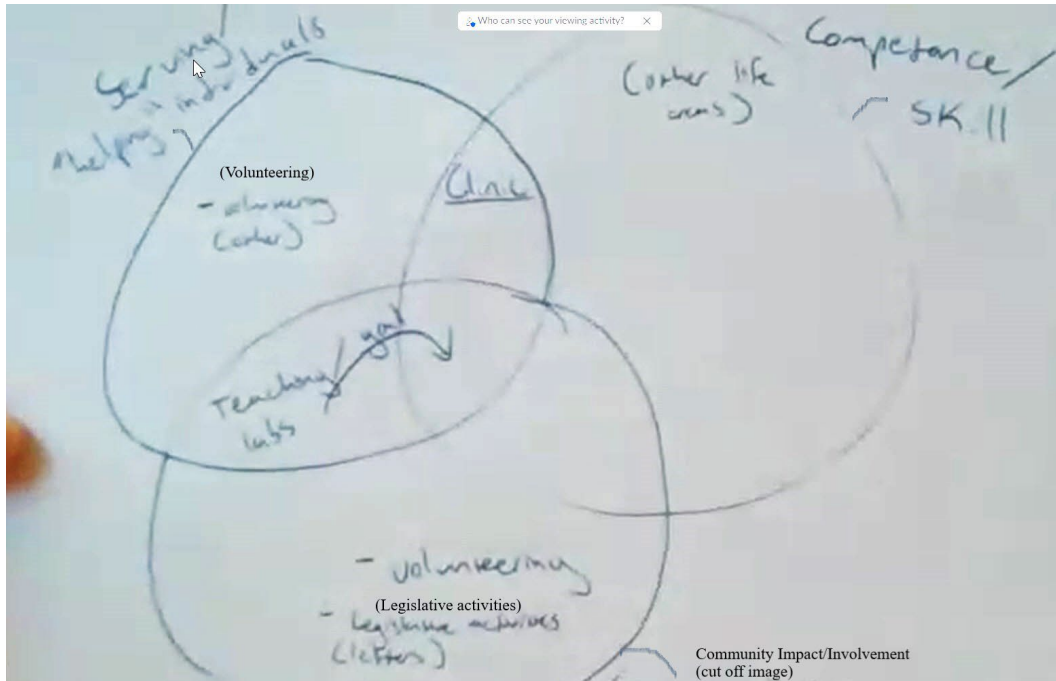
Participant 5's image largely aligns with her verbal description. She identified primarily as a clinician and felt educator was most prevalent in her role in classroom teaching, rather than labs.

## Participant 6



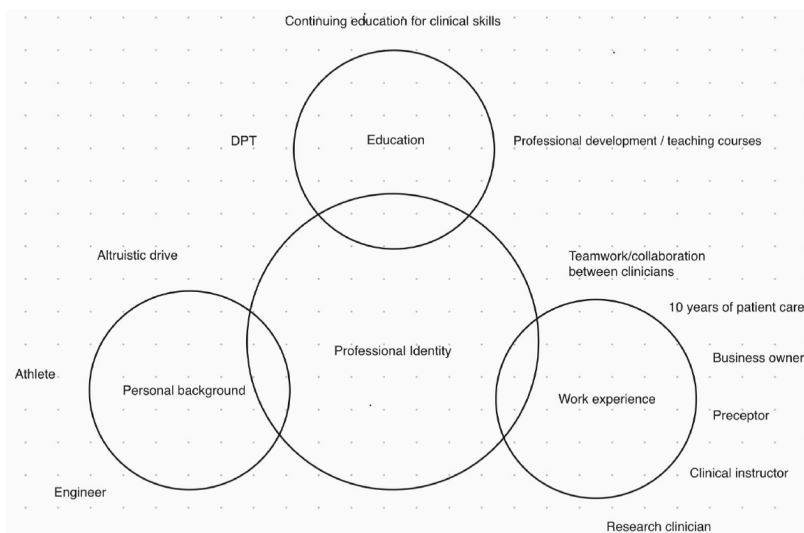
Participant 6's identity is one of the more integrated, demonstrated both through interview comments and this image. While she still identified primarily as a clinician, educator was an integrated part of that both in the clinic and the labs. The items off to the side were described as necessary components to be successful in all roles.

## Participant 7



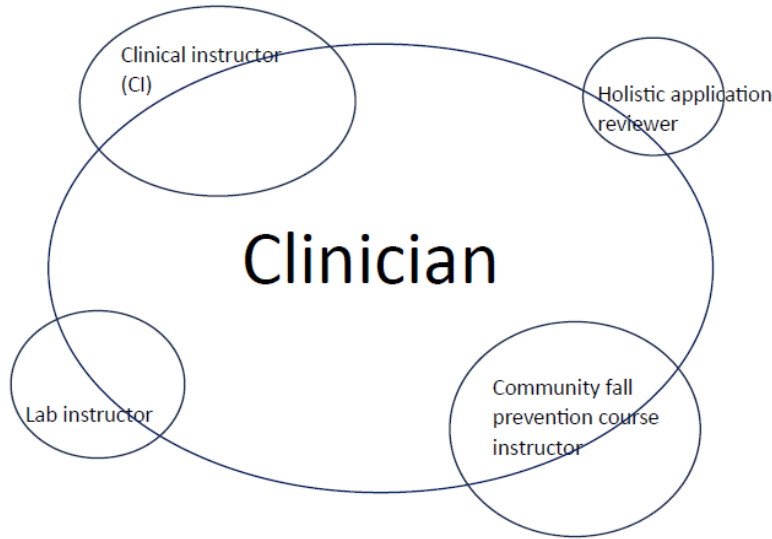
Participant 7 described teaching in labs under the value of “serving.” The arrow indicated that teaching in labs was moving into the competence realm (but not there yet). The image and interview description are largely in alignment. (Image augmented with typed text for readability.)

## Participant 8



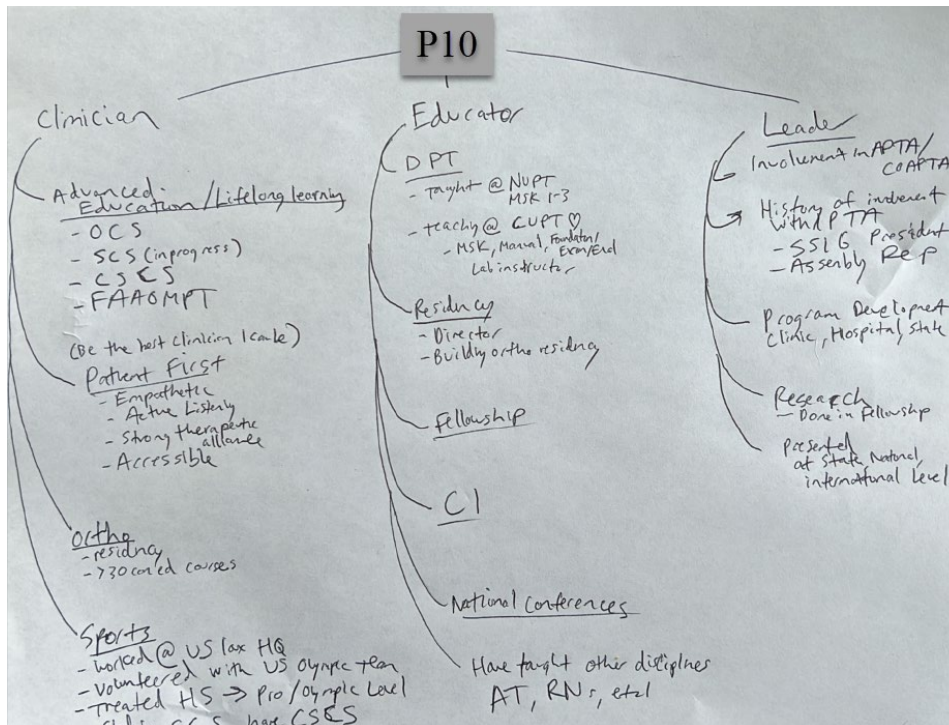
Participant 8 (P8) really struggled to verbalize an identity, but here shows a great deal of detail. Interestingly, she outlines “education” in the context of her own education. She does identify “clinical instructor” as a component of work experience but does not mention lab or classroom teaching.

## Participant 9



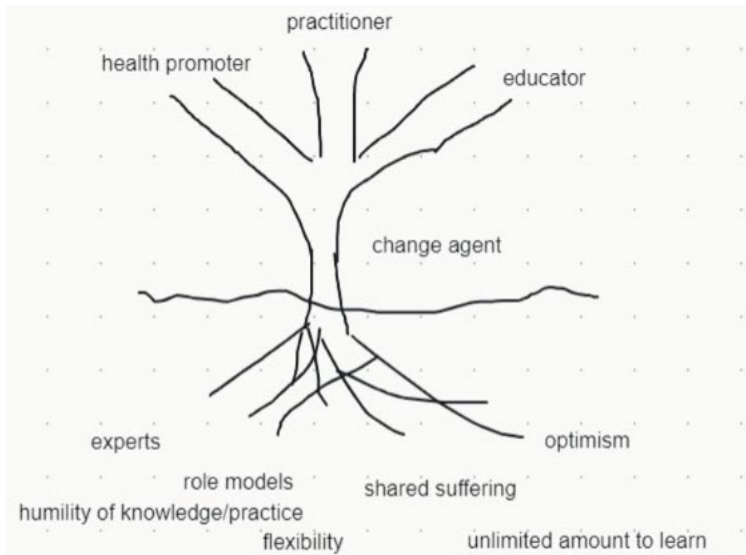
Participant 9 clearly has a central clinician identity. Her identity components at the university are small, shown here as barely overlapping constructs with clinician.

## Participant 10



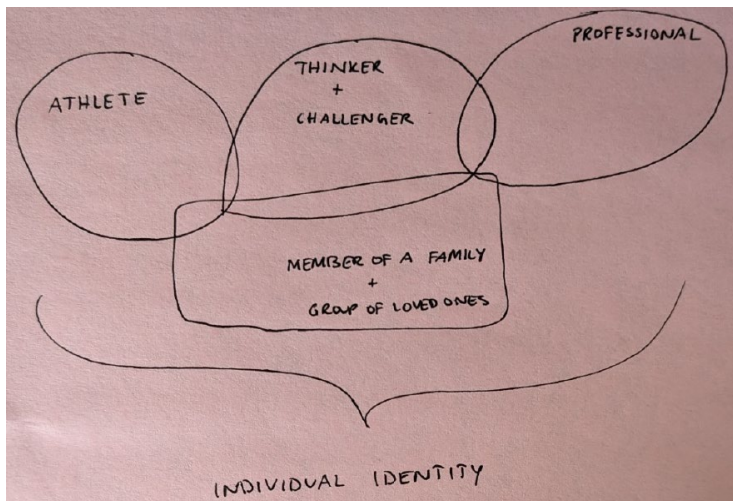
Participant 10 has three clear delineations of professional identity that lie under his personal identity (blinded as P10). Although shown without overlap here, there was more of an intersecting sense of identity in the verbal description.

## Participant 11



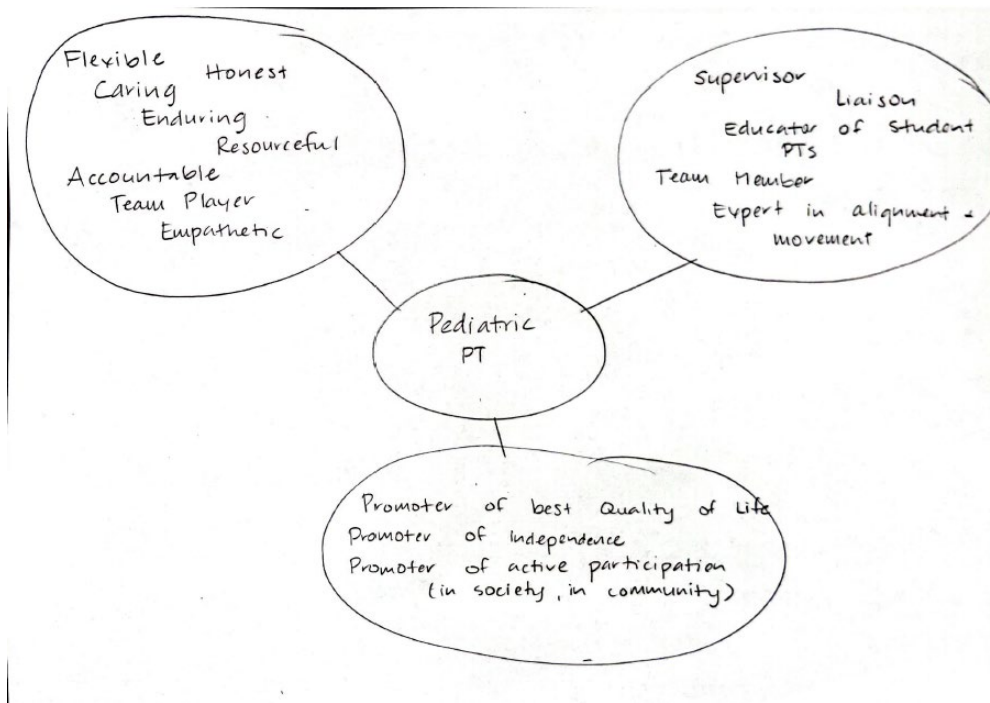
Participant 11 stated the top of the tree and the roots both support the ideal of being a “change agent” for patients and students. The items at the bottom “feed” the identity. This is one of the more comprehensive and integrated professional identities demonstrated, grounded in values, beliefs, and motives.

## Participant 12



Participant 12 appears to view professional and personal identities as intertwined. It is intriguing that this does not align much with his interview data, where he spoke of a long-standing educator roll and expressed strong frustration about how to make a clear move into an academic role.

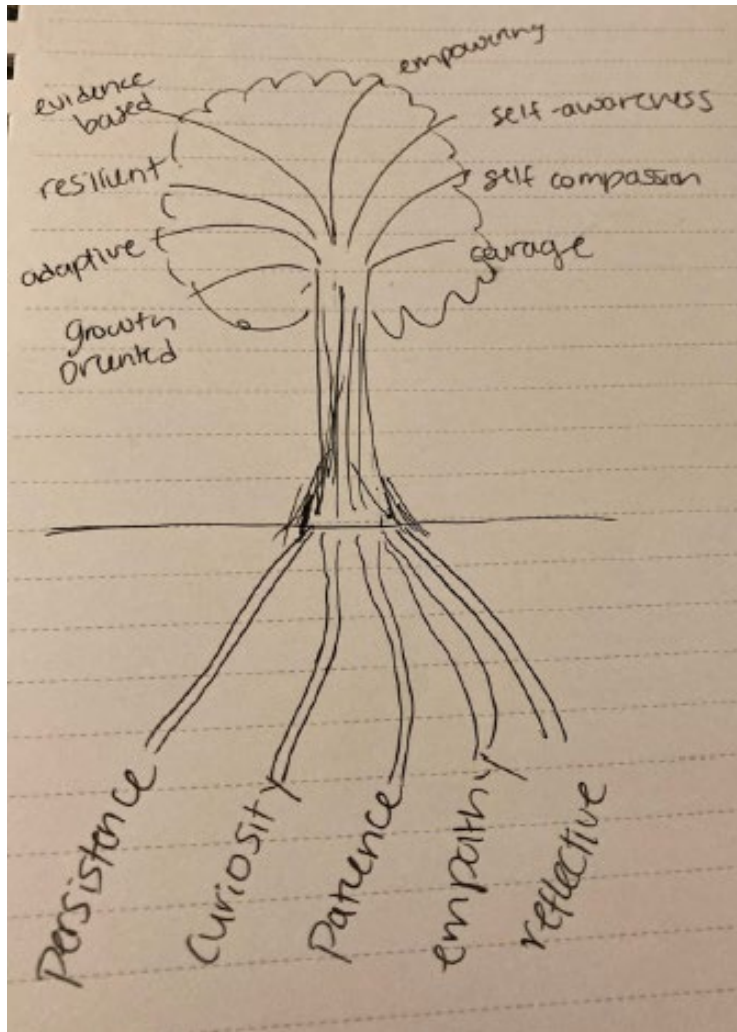
## Participant 13



Participant 13's identity appears firmly grounded in the physical therapist realm. Note the word educator appears as a small component in one region. This aligns with her hesitance to describe herself as an educator in the interview.

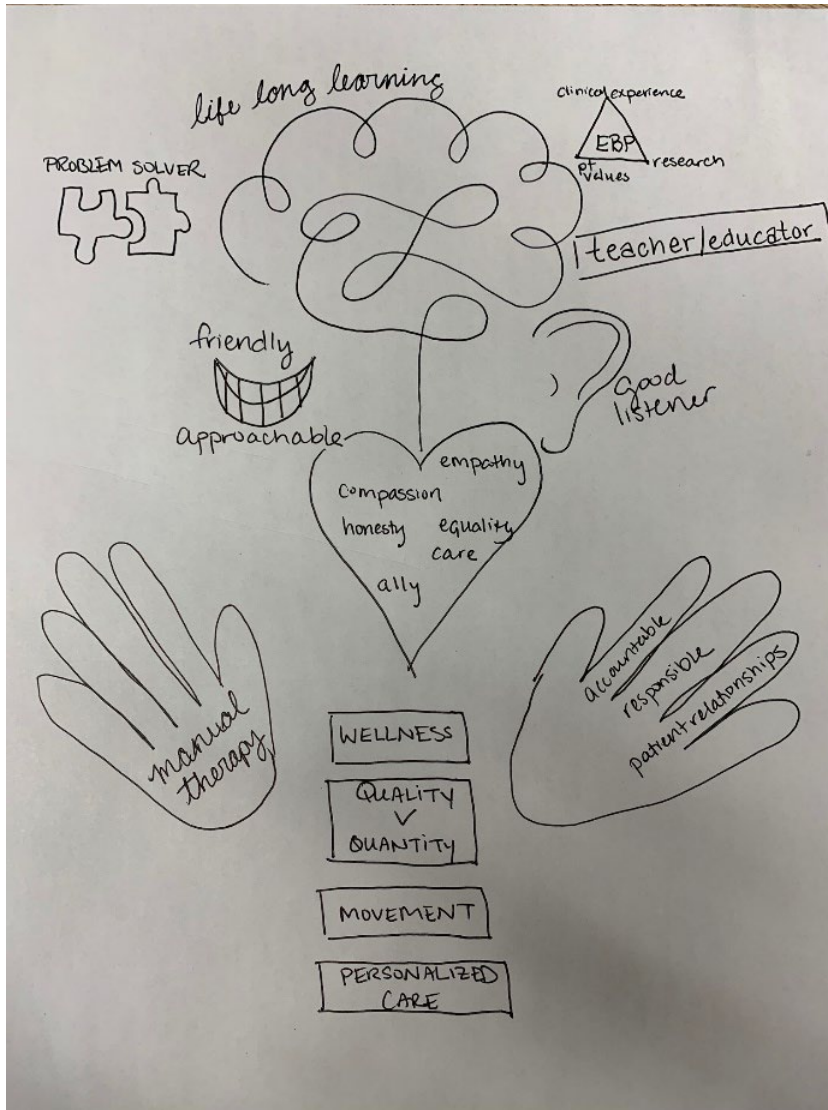


## Participant 15



Participant 15's drawing is grounded in the personal attributes and values she discussed in the interview. When asked to describe this image, she stated the whole page indicated her as a physical therapist, and this drawing represents what contributes through this identity to providing optimal patient care.

## Participant 16



Participant 16 drew a much more detailed vision of her professional identity, as compared to her verbal description. She described the top components as “feeding into” the hands, which represent the hands-on nature of the physical therapy profession, and the boxes at the bottom represent the important patient outcomes driven by her identity.



## Participant 17



Participant 17 indicates 3 distinct, equally sized, and non-overlapping components of her professional identity. Curiously, she spoke heavily about the impact of being a mentor and mentee as part of an educator role and that is minimally evident here, rather it appears as one component of many within the realm of educator.