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Professional Identity Formation Through a Peer Learning, Integrated Clinical Experience

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Abstract

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ABSTRACT

Purpose: The purpose of this study was to explore the experiences and perceptions of first-year DPT students related to professional behaviors and professional identity formation after an integrated clinical experience facilitated by peers. **Methods:** Forty-one first-year DPT students from an accredited Doctor of Physical Therapy program participated in a class assignment designed to collect qualitative data regarding their experiences with professional behaviors and professional identity formation after completing an integrated clinical experience. Incident coding processes analyzed responses to open-ended assignment prompts. **Results:** The most frequent professional behaviors students felt they could demonstrate during the integrated clinical experience were “communication” and “PT skills and values.” The most frequently coded categories for professional identity formation were “Self-development” and “Relationships/Connection.” **Conclusion:** DPT students’ perspectives on professional behaviors and identity can be formulated with on-campus integrated clinical experiences. As such, innovative means for improving the clinical experience and developing professional behavior and identity are warranted.

Keywords: MeSH terms: professional identity, professional behaviors, clinical education

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INTRODUCTION

Professional identity, defined as the values, attitudes, beliefs, and knowledge one may share with peers within their professional group, is critical in developing a physical therapist.^{1,2} Developing one's professional identity begins early in the Doctor of Physical Therapy (DPT) program curriculum, evolving throughout the profession.³⁻⁵ As the DPT student moves beyond academia to employment, there needs to be a solid foundation of professional identity to prepare for the transition to physical therapy practice. Multiple factors that contribute to one's professional identity include, but are not limited to, cultural competence, community partnerships, knowledge, and values outlined by the American Physical Therapy Association (APTA).^{1,6} Such values include knowledge, altruism, social responsibility, duty, excellence, compassion, caring, collaboration, and integrity.⁶ The DPT curriculum, in conjunction with the APTA Code of Ethics, requires institutions to follow CAPTE Standards to address and develop professional ethics, values, and responsibilities.⁷

Professional behavior is measured in the domains of affect, psychomotor, and cognition, all of which are part of the learning process as a DPT student. Each of these domains is vital in moving the DPT student along in developing professional behaviors.⁸ Whereas technical skills are critical to future clinicians, the conversation around non-cognitive professional behavior is of interest in the literature. For example, clinical instructors (CIs) have expressed patient advocacy, empathy, acceptance of feedback, and time management as highly important professional behaviors for the DPT student transitioning from the academic curriculum to the clinic.⁸

Preparing a DPT student in the technical and non-cognitive areas of professional identity and behavior is critical for their clinical experience. Professional behaviors of the DPT student that CIs value include accepting responsibility for learning, empathy and professionalism, and communication skills.⁸ Unfortunately, CIs have reported unprofessional behaviors that negatively impacted the clinical experience including lack of interest, poor communication, and attitude.⁸

In addition to CIs recognizing deficiencies in the DPT student's professional behavior, deficits in the evolution of professional identity and behavior have been recognized by the National Study of Excellence and Innovation in Physical Therapy Education, data from the learning sciences, and the Carnegie Foundations' Preparation for the Professional Program.⁹⁻¹⁷ Recommendations include, but are not limited to, 1) standardized learning outcomes and individualization of the learning process, 2) integration of clinical experience and formal knowledge (e.g., application), 3) developmental continuum for professional competence, integrated clinical experiences, early focus on professional identity and learning and adaptive expertise, 4) addressing gaps and the next steps for lifelong learning for the learner, and 5) collaboration of medical societies (i.e., AMA) on the development of a medical workforce policy for the US. Preparing a DPT student in academia in these specific domains, including the proposed recommendations, may serve a role in the DPT clinical experiences. It is interesting how these modifications may impact professional identity and behavior. Knowing professional behavior and identity are continuously shifting and building throughout an individual's life, looking at how first-year DPT students are impacted is worth exploring.

Preparing the student before the clinical experience through community-run programs may serve as a bridge to address CIs' expectations and potentially contribute to this call for reform in the DPT curriculum.¹⁸ Such programs have improved patient outcomes, enhanced clinical confidence for DPT students, applied knowledge, recognition of cultural factors, comfort level in providing services to individuals with diverse backgrounds, and awareness of personal biases.^{19,20} Additionally, student-led community-based programs have identified students' perspectives to shift based on their experience; "The experience inspired them to think about how they might incorporate their commitment to social responsibility into their career as a physical therapist."¹⁸ The use of standardized patients for DPT students entering the clinical setting revealed four primary themes to include "seeing through the patient's eyes," "standardized patients offer unique contributions to student learning," "timely verbal feedback adds a deeper understanding of professional behavior in preparation for the clinic," and "verbal feedback promotes student self-efficacy of professional behaviors." Additionally, integrating DPT students in environments outside of the traditional curriculum has been shown to improve cultural competence, particularly professional identity advocacy.

Knowing that professional identity and behavior are critical components to both the DPT curriculum and continued professional path, would early exposure to patient care assist with the recommended reform for such a curriculum? Standardized patients provide an ample amount of exposure to students. However, community-based programs offer the complex variables the students will encounter upon entering their clinical experiences. This study aimed to explore the experiences and perceptions of first-year DPT students related to professional behaviors and professional identity formation after an integrated clinical experience (ICE) facilitated by peers. For this study, DPT students in the first-year cohort are defined as "DPT1 students," and DPT students in the second-year cohort are defined as "DPT2 students".

Research Questions

- 1) How do DPT1 students perceive their ability to demonstrate professional behaviors after an ICE amongst peers?
- 2) How do DPT1 students describe their professional identity formation due to an ICE amongst peers?

METHODS

Design

This descriptive, cross-sectional study utilized a non-experimental methodology designed to collect qualitative data gathered through two prompts from a course assignment. The prompts were categorized into two sections: professional behaviors and professional identity formation. The two prompts, asked in the form of open-ended questions, are presented in Appendix A. While the first prompt was open-ended, it did instruct students to provide a list of behaviors they were able to practice and demonstrate. DPT1 students participated in an early ICE led by DPT2 students for community participants with neurological and pediatric diagnoses. The question prompts were designed to gather DPT1 students' perceptions of professional behaviors and professional identity formation following these ICE experiences.

In the prompts, the terms "professional behaviors" and "professional identity" were not formally defined, however, students had received content related to both terms concurrently through the curriculum during the same semester. Students were instructed to respond based on their encounters with these ICEs with peers. The Institutional Review Board approved the study at the researchers' institution (Protocol 875).

The ICEs utilized a pre-existing community-based wellness program built into the DPT2 neurological and pediatric curricula. In this community-based wellness program, DPT2 students worked in small groups to plan and execute weekly treatment sessions, including establishing a plan of care for all community participants under the supervision of faculty members and licensed physical therapists. Because this was the first ICE of the curriculum for the DPT1 students, their role during these experiences was to gain exposure to these populations as well as practice foundational psychomotor and affective skills to reinforce coursework.

The ICEs took place over a 10-week semester, in which DPT1 students were required to complete a minimum of 3 experiences, each one hour in duration. DPT1 students were required to participate in at least one experience with the neurologic population and one experience with the pediatric population to expand the breadth of their overall experience. DPT1 students were encouraged to respond to the assignment prompts within 24 hours of their ICE in order to best capture their perceptions and experiences.

Subjects

The investigators utilized the responses to a course assignment of 41 current DPT1 students from an accredited DPT program in the United States.

Procedure

The course assignment was made available and accessed through the students' learning management system, Blackboard Inc. (Reston, VA). Students were informed that submission of their assignment served as consent to participate in a course quality improvement study, in which significant results may be disseminated. Individual student assignment submissions were deidentified and downloaded from Blackboard Inc. onto a password-protected computer for analysis. Students were notified retroactively of the option to opt out of the study and not have their responses included without penalty to their grade for the course assignment.

Analysis

The course assignment included two open-ended questions, with the first question instructing students to record a list of behaviors, related to demonstrating professional behaviors and professional identity formation after participating in ICEs with the cohort one year above them. Two of the three researchers have doctoral-level training and education in qualitative research methodology with one of the researchers having published several studies that utilized qualitative research methodology. The researchers employed an inductive coding process to analyze the narrative responses of each question separately. Initially, an open coding approach was utilized, with all researchers assigning codes to each question response. For integrity purposes, the researchers coded the same ten assignments independently. The authors examined those ten codes and discussed differences until agreement was reached. Through this process, all three researchers developed a set of codes that were then used to continue the open coding process independently. The codes were grouped into categories following this initial review using thematic analysis coding. The researchers collaboratively determined major categories represented by the codes and subcategories for each. See Tables 1 and 2 for coding and category development for each assignment prompt.

Table 1. Professional Behaviors Coding and Category Development

Code	Category
Communication	Listening Asking Questions
Encouragement	Support Motivation Positivity/Positive attitude
Patient-Centered Care Collaboration	Not further defined With: Community participants Peers Faculty
Professional Dress PT Skills	Not further defined Gait analysis Vitals Safety Critical ^\thinking Consent Documentatuion
Values	Respect Courtesy Integrity Comfort Inclusion Advocacy Compassion

Table 2. Professional Identity Formation Coding and Category Development

Code	Category
Communication	Trust
Positivity	Not further defined
Collaboration	With: Community participant Peers Faculty
ICF Model	Lifespan Holistic approach
Skill Application	Not further defined
Relationships & Connection	Rapport Care Support Empathy
Self-Development	Confidence Reassurance Lifelong learning Dynamic thinking

RESULTS

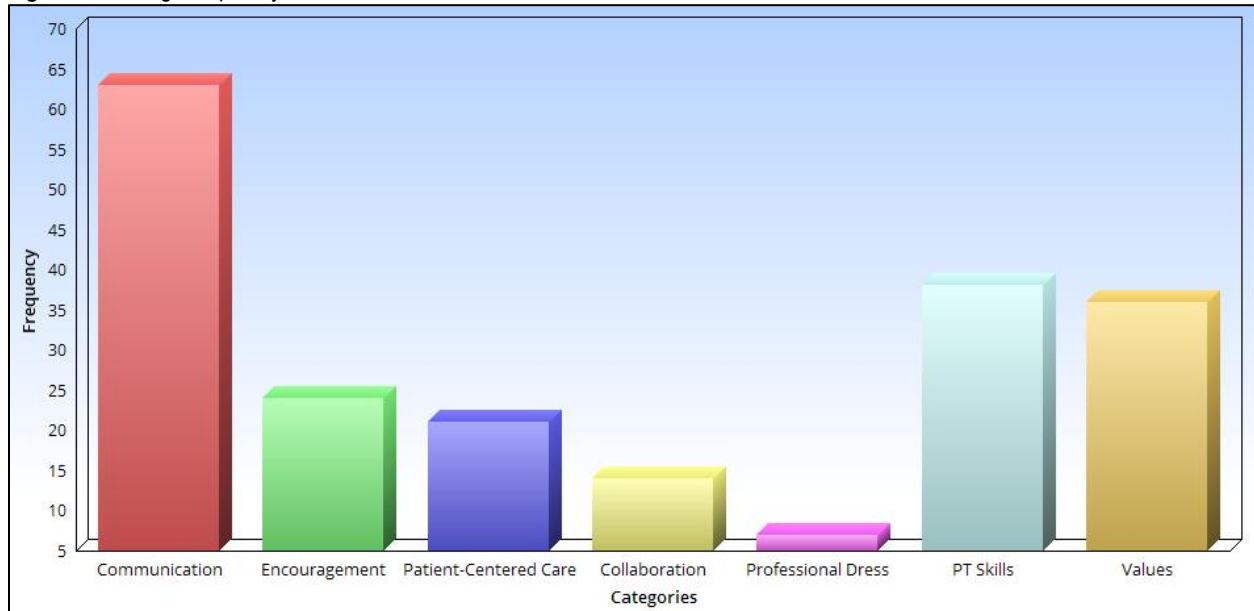
Professional Behaviors Students Demonstrated during ICEs

Figure 1 depicts the major categories identified as professional behaviors students had the opportunity to exhibit during an ICE with peers in the cohort above them. Students predominantly commented on communication and its various forms as a means to demonstrate professionalism. "Communication" included any responses related to students' opportunity to communicate professionally with various stakeholders, including community participants, caregivers, peers in their cohort and the cohort above, and faculty, and how each encounter required modifications to their professional communication. Active listening and asking questions to elicit valuable information were included as subcategories for communication, and students reported the opportunity to practice verbal and nonverbal communication.

The next most frequent codes students commented on regarding the professional behaviors they demonstrated during ICEs were PT skills and values. The “PT skills” code included any responses related to clinical skills necessary to the job role of a physical therapist regardless of setting or patient population (e.g., gait analysis, safety, vitals assessment, critical thinking, documentation, etc.). The “Values” code included any responses related to ideals such as respect, courtesy, integrity, comfort, inclusion, advocacy, compassion, etc.

Less significant codes students noted were “Encouragement,” “Patient-Centered Care,” “Collaboration” (with various stakeholders), and “Professional Dress.” The “Encouragement” code included any response related to providing patients with support, motivation, or positivity. The “Patient-Centered Care” and “Professional Dress” codes were not further defined. The “Collaboration” code included any responses related to working with various stakeholders, exclusive of communication.

Figure 1. Coding Frequency of Behaviors



Beginning of Professional Identity Formation during ICEs

Figure 2 depicts the major codes related to how students have begun to shape their professional identity as future physical therapists through participation in an ICE with peers in the cohort above them. Most significantly, students commented on their self-development and the relationships or connections they could establish. The “Self-Development” code included any responses related to student improvements in various qualities, such as confidence, thinking skills, and lifelong learning. The “Relationships and Connection” code included any responses related to the rapport or support they provided or received while working with various stakeholders, including community participants, caregivers, peers in their cohort and the cohort above, and faculty.

The next most significant codes students commented on related to their professional identity formation due to their participation in an ICE were “Skill Application” and “Positivity.” The “Skill Application” code included any responses related to the ability to utilize or practice skills learned in the didactic portion of the curriculum in a clinical environment. The “Positivity” code was not further defined. Another code students mentioned related to how this ICE facilitated early professional identity formation as a future physical therapist was using the World Health Organization’s “International Classification of Functioning, Disability and Health (ICF) Model.” This code included any responses related to the direct citation of the ICF Model but also included terms related to lifespan or holistic approaches to patient care.

Finally, the “Communication” and “Collaboration” codes were the least frequently mentioned regarding an ICE and its effect on professional identity formation as a future physical therapist. The “Communication” code included any responses related to students’ opportunity to communicate professionally with various stakeholders, including community participants, caregivers, peers in their cohort and the cohort above, and faculty, and how each encounter required modifications to their professional communication. Similarities between students’ experiences emerged across all major themes in the professional identity formation prompt (Table 3).

Figure 2. Coding Frequency of Professional Identity Formation

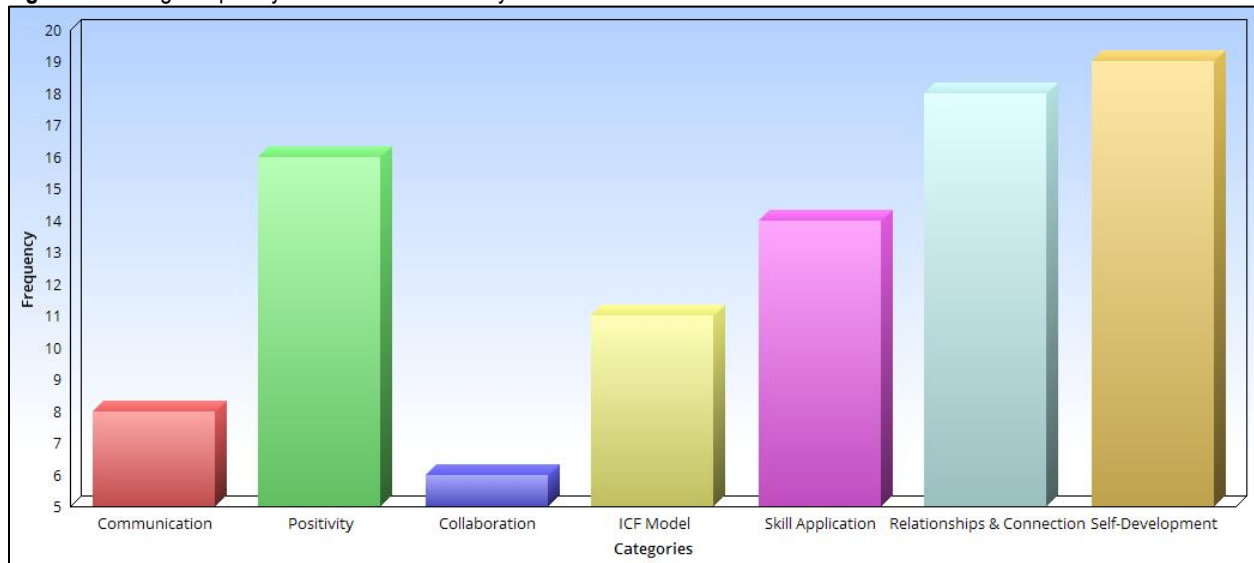


Table 3. Similarities in Student Experiences with Professional Identity Formation

Major Themes	Student Quotes
ICF Model	<p><i>"It showed me how important it is to use the ICF model in real life on real patients."</i></p> <p><i>"These experiences have allowed me the opportunity to apply skills I have learned and has taught me the importance of taking a holistic approach to every patient."</i></p> <p><i>"These experiences allowed me to gain a better understanding of how we can work with people with different types of conditions throughout the entirety of the lifespan."</i></p>
Relationships/Connection	<p><i>"...this experience helped me better understand and connect with patients of all ages and injuries."</i></p> <p><i>"The clinical experiences provided me realistic expectations of how to interact with patients and build rapport while still tapping into the professional expectations we've gone over in previous classes."</i></p> <p><i>"These part-time clinical experiences have started to shape my professional identity by allowing me to...see how important patient-centered care is and how important the provider-patient relationship is. Participating in these experiences makes me want to be the best version of a PT I can be."</i></p>
Self-Development	<p><i>"These experiences have made me realize the dynamic thinking and role that we must possess to be successful. Each individual and population presents very differently and as a result, we need to be adaptable."</i></p> <p><i>"...reminded me to grow this identity to be the best PT I can be for my future patients."</i></p> <p><i>"This experience could likely change my entire professional identity."</i></p> <p><i>"The most notable experience for me was seeing how positive and upbeat the patients were, despite their unique circumstances. Seeing how the 2nd years were able to tap into this positivity and use it to fuel their treatment plan was inspiring and excites me for my future as a student and PT."</i></p>
Positivity	<p><i>"Showcasing positive attitude."</i></p> <p><i>"Proper patient (positive) interactions and encouragement."</i></p> <p><i>"I promoted positivity in a patient struggling with exercise."</i></p>

DISCUSSION

The research indicates that early and effective exposure to professional behaviors and experience aids in fostering professional identity formation within the DPT programs. Development of learning activities to support these affective domain skills can be challenging. One way of introducing these skills within a DPT program has been one-day ICEs. Based on course and programmatic feedback from clinical partners and students during prior one-day ICEs, these experiences require abundant time and clinical partner resources and logistics (e.g., class scheduling modifications, transportation challenges, etc.). To reduce strain on clinical site support of students and valuable clinician time, finding alternate means of introducing and developing foundation professional identity and behavior skills is desirable. The findings of this study support the potential of peer-based learning of affective domain skills related to professional identity and behavior, such as altruism and collaboration. The didactic coursework in the DPT curriculum supports CAPTE standards equated with cognitive, affective, and psychomotor. However, it is of interest when and how the affective domain begins to develop and evolve in the DPT curriculum.

The results of this study propose that early exposure (e.g., DPT1 students) to community participants, under the guidance and supervision of more experienced (DPT2 students), contributes to this early and necessary development of professional identity and behavior. In this semester-long ICE experience where DPT1 students worked alongside DPT2 students in a community wellness program for persons with chronic neurologic conditions, the DPT1 students were able to identify parts of the experience that aligned with their knowledge of professional behavior identification, including the codes of "Self-development," "Relationships and connections," "Skill application," "Positivity," "ICF Model," and to a lesser extent "Communication" and "Collaboration." Though the language is inconsistent, there are obvious similarities between the words selected by the students to describe the impact of the experience on their professional identity development and the language put forth by our professional association. This similarity was also noted in the students' descriptions of the professional behaviors they had the opportunity to exhibit during this semester-long ICE experience. The primary behaviors identified by the student included communication with varied stakeholders, delivery of physical therapy skills, values associated with being a physical therapist, collaboration, professional dress, patient-centered care, and encouragement. These directly align with the APTA Core Values and demonstrate appropriate introductory level understanding and experience of professional behaviors.

The findings underscore the importance of early exposure to professional behaviors without the unnecessary burden of time or resources. By matching first-year students with more experienced peers in a community wellness setting, DPT1 students were immersed in real-world scenarios, witnessing and emulating the professional behaviors of peers and faculty while interacting with community participants and caregivers. According to the provided results, this direct observation and interaction laid a robust foundation for understanding the professional role and behavioral expectations within the physical therapy profession. A noteworthy outcome, assumed by the authors, was the added advantage conferred upon the upperclassmen involved in this program, despite this data not being collected. CAPTE requirements specifically request proof of learning activities associated with supporting the development of the student physical therapist as a facilitator. Anecdotally, the involvement of the DPT2 students in teaching and mentoring DPT1 students in the clinical environment provided invaluable and necessary low-stakes exposure to the role of teacher. These early pedagogical responsibilities equipped them with foundational teaching skills and added to their own professional development. While data was not collected from the upperclassmen regarding the impact of this experience on their experience and development of clinical teaching, there is potential to explore this topic more in future research.

Furthermore, this innovative approach to clinical education may yield practical benefits by reducing the burden on clinical partners.⁸ By integrating this structured community clinic experience, the strain of numerous half-day and one-day ICEs on valued clinical partners was notably alleviated without reducing value. The change in the structure of the ICEs supports the effective skill development of DPT1 students and fortifies partnerships between academic institutions and clinical settings. While it is unknown how many other DPT program curricula include ICEs prior to terminal clinical experiences, this study may serve to support DPT education programs in doing so for the previously stated reasons.

Limitations

This data represents the experiences and perceptions of DPT1 students enrolled in the same academic program and cohort. Therefore, the generalizability of our findings is limited and may not similarly reflect the experiences and perceptions of other DPT1 students in other academic institutions. Additionally, our results do not apply to the physical therapist assistant (PTA) student population, although data from that population may demonstrate similar themes if examined. Another limitation of this project is that the data reflects the experiences and perceptions of DPT1 students during ICEs. Therefore, we cannot determine whether these experiences and perceptions are directly related to the ICE or result from other aspects of the didactic curriculum. An additional limitation is that students were not inquired about any negative impacts as a result of their participation in the ICEs. Finally, the authors acknowledge that had data been collected via semi-structured interviews rather than written submissions, additional, more detailed information regarding the students' experiences may have emerged. Further exploration is necessary to

examine the perspectives of other stakeholders in developing DPT students' professional behaviors and professional identity during ICEs. Other stakeholders could include other DPT students, CIs, faculty, community participants or patients, and others. Additionally, future research could focus on DPT students' experiences and perceptions of professional behaviors and professional identity formation during different formats of ICEs, such as the utilization of external clinical sites or increased frequency and duration of experiences. It would also be beneficial for future research to explore whether students experienced any negative impacts as a result of their participation in the ICEs, as this was not a focus of this current study. Finally, because of the previously noted study limitation regarding the format of data collection, future studies could be conducted utilizing semi-structured interviews to capture more refined information regarding student experiences with professional behaviors and professional identity formation after an ICE.

CONCLUSION

This project highlights DPT1 students' perspectives on professional behaviors and professional identity formation after an ICE. Such innovative methods may contribute to building foundational skills within DPT programs. Our results support achieving the desired results in initial professional identity formation and practice with professional behavior demonstration outside of ICEs on-site with a clinical partner. Further, ICEs could occur on campus utilizing program resources and peers as teachers and role models of desired behaviors.

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Disclosures: The authors have no disclosures.

Ethical Approval: IRB Protocol #875

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Appendix: Skills Log for DPT 726: Part-Time Clinical Experience 1

Courses from previous semester (Spring Year 1)

DPT 700: Clinical Biomechanics

Skill	Observed (O)/Practiced (P)	Comments
Surface anatomy palpation and identification of bony and soft tissue structures		
Body mechanics (patient and SPTs)		
Gait analysis		

DPT 702: Principles of Inquiry

Skill	Observed (O)/Practiced (P)	Comments
Implementation of evidence-based practice		

DPT 750: Lifespan Continuum

Skill	Observed (O)/Practiced (P)	Comments
Assessment of risk factors for lifestyle conditions		
Patient education re: risk factors/activity modifications		
Application of ICF Model		

DPT 752: Tests, Measures, and Mobility

Skill	Observed (O)/Practiced (P)	Comments
Vital Physiologic Status		
Goniometry & MMT		
Bed mobility, transfers		
Prescription/Fit of Assistive Devices		
Locomotion (Gait, wheelchair propulsion, stair negotiation)		
Modalities		

What professional behaviors were you able to demonstrate during your experience?

How have these experiences begun to shape your professional identity as a future physical therapist?

Student Name:	Experience (NW/Peds):	Date:
Faculty Signature:		

Student Name:	Experience (NW/Peds):	Date:
Faculty Signature:		

Student Name:	Experience (NW/Peds):	Date:
Faculty Signature:		