

The Integration of an Immersive Interprofessional Education Curriculum among First Year Doctoral Students in Occupational Therapy and Physical Therapy

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Megan E. Albright OTD, OTR, CHT
Clinical Assistant Professor
Department of Occupational Therapy
mealbrig@iu.edu, 317-278-1822

Tracy A. Dierks, PhD
Associate Professor
Department of Physical Therapy
tdierks@iu.edu, 317-274-3147

School of Health and Human Sciences – Coleman Hall
1140 W. Michigan St.
Indianapolis, IN 46202

Project Checklist:

Statement of support from the department chair or school dean by e-mail to Linda Houser (lhouser@iupui.edu) - as a separate file not included in the proposal.

Simple budget : A detailed budget is not necessary. Nevertheless, please include a brief paragraph/details indicating how you intend to spend the grant money.

IRB (Institutional Review Board) approval is not required for the proposal, but must be obtained prior to transfer of funds if the proposal is selected.

Abstract

Interprofessional collaboration is a primary component of healthcare practice. The purpose of this proposal is to develop and implement an immersive semester-long interprofessional education curriculum for first year Occupational Therapy (OT) and Physical Therapy (PT) students. Students will work collaboratively on a cumulative project, participate in combined lectures, labs, and teaching assistant sessions, and experience patient role playing. These activities and experiences will produce outcomes related to the promotion and development of professional collaboration between OT and PT, the development of professional collaboration skills for clinical practice, and the enhancement of critical thinking skills used for collaborative practice.

Purpose of the Project:

The modern health-care model has been rapidly evolving into a system of collaborative practice. In this approach, multiple health workers from different professional backgrounds collaborate to provide comprehensive services by working with patients, their families, and communities, which allows for the highest quality of care across settings.¹ When two or more professions work together to achieve common goals and solve problems related to patient care, treatments and assessments are completed together with the focus being on the patient as a whole and quality of life, rather than on a diagnosis or treatment. Such components of patient care are foundational to both Occupational Therapy (OT) and Physical Therapy (PT) practice; two professions that regularly engage in collaborative practice. However, this collaborative approach is primarily a result of training and experience gained within the clinical practice setting, with virtually no training or experience occurring within the academic educational level. As such, the OT and PT entry-level workforce is not prepared for collaborative practice. When considering the call from the World Health Organization¹ for a collaborative practice-ready workforce at entry-level, it becomes evident that there is a glaring need for the integration of interprofessional education (IPE) into both the OT and PT professional curriculums.

IPE within health professions is a pedagogical approach used to prepare students to provide patient care in a collaborative practice environment.² By collaborating with other professional programs throughout a student's tenure, students learn how to work and engage with those in other professions and are exposed to the expertise of such professions, gaining insight into how other programs contribute to patient care.² Students are then better able to recognize when interprofessional collaboration is warranted. Both OT and PT focus on rehabilitating patients to improve and regain independence and participation. As such, instituting curriculums grounded in IPE would enable students to begin the practice of a collaborative environment, further developing professional skills for collaborative practice throughout their career.³

The purpose of this project is to develop and implement an immersive IPE curriculum for first year students in the OT and PT biomechanics courses. Until recently, it has been challenging to incorporate IPE consistently as the two programs have differed in terminal degrees. However, both programs now have the same terminal doctoral degree and timeline. We aim to combine past learning experiences and projects into a truly

immersive IPE curriculum throughout the semester. The overall goal of this project is to create and implement several collaborative learning activities and experiences into the OT-T671 and PT-P513 biomechanics courses. We have three specific goals for this project which are designed to: 1) promote and develop the professional collaboration between OT and PT students; 2) initiate and develop professional collaboration skills for clinical practice among OT and PT students; and 3) enhance critical thinking skills used in team approaches to solve clinical problems. To accomplish these goals, we will implement: 1) combined OT and PT students for select lecture sessions; 2) combined OT and PT students for select lab activities; 3) select cross-profession lecture delivery; 4) select lab practical competency exams where the role of the patient is played by a student in the other profession; 5) combined Teaching Assistants (TAs) sessions; and finally, 6) a cumulative Movement Analysis project. We anticipate the Movement Analysis project to be the most impactful IPE component due to its breadth and depth as it involves OT and PT students divided into small groups to complete a semester-long project involving the evaluation of movement. Students will create video of an assigned movement, review literature, and conduct a comprehensive movement analysis culminating in a final paper.

Intended Outcomes / Assessment Methods

Goal 1: Promote and develop the professional collaboration between OT and PT students.

The first step in producing a collaborative practice-ready workforce at entry level is to allow students to engage in educational experiences where they can begin to place value in the roles of other professions in patient care. In many cases, this simply means a student must first become aware of what a different profession does in health care. As such, our intended outcomes for Goal 1 involve capturing student perceptions of the value of collaborating with other healthcare professionals. To accomplish Goal 1, we will institute several activities and experiences where both OT and PT students work together to achieve common goals. First, all students will be combined for a select number of lectures and lab activities to promote a common level of knowledge and skills among the two professions. Next, some lectures provided to a single cohort will be delivered by the instructor of record from the collaborative profession to promote a level of expertise in the collaborative profession. We will also have students in one profession play the role of a patient for the other profession during a lab practical competency exam to promote a sense of hands-on skill and experiences in a clinical environment. We will have

TAs specific to each profession lead select sessions where all students and TAs are combined to promote a sense of collaborative leadership and expertise. Lastly, the Movement Analysis project will have students in both cohorts working together in small groups throughout the semester to evaluate movement. We anticipate this experience to promote several aspects of professional collaboration as students collaborate to produce a product of their work. To measure Goal 1, we will survey the students with questions related to their perceptions regarding the collaborative experiences within the courses. First, in week 1 we will have students complete a 1-page expectation paper for the collaborative component between the two courses. The bulk of our assessment for goal 1 will occur at the completion of the course through a Qualtrics survey. This survey will include 2-3 open ended questions aimed at gathering data related to how the collaborative experiences influenced or changed a student's impression of the value of establishing a collaborative profession, and if they have a better appreciation of the other profession's role and contribution to health care

Goal 2: Initiate and develop professional collaboration skills for clinical practice among OT and PT students.

Goal 2 is focused on acquiring the necessary skills to effectively collaborate. This requires that students engage in activities and experiences where students in both professions work together and receive feedback on the process to achieve a common goal. The primary activity for accomplishing Goal 2 will be the Movement Analysis project. The cumulative nature of this small group project should allow for the development of professional collaboration skills in several ways throughout the semester. This includes time management skills, delegation and distribution of work responsibilities, responding to constructive criticism, and producing a product of their work. Goal 2 will also be accomplished through less traditional activities and experiences through lab practical proficiency examinations and TA sessions. Students must also experience collaboration skills in the context of the patient and clinical environment relative to each profession. To this end, lab practical proficiency exams will include patient role playing by students in the collaborative profession's cohort. This should allow students to experience collaboration from the perspective of both the therapist and the patient within a profession's environment. We will also have some TA sessions where the TA's for both OT and PT will lead sessions that include both OT and PT students, allowing students to develop collaboration skills with the guidance of senior students who have successfully completed the biomechanics courses.

To measure Goal 2, we will use both subjective and objective measures. For the Movement Analysis project, we will first consider successful completion of each submitted section of the project as an indicator for the development of professional collaboration skills. We will also survey the students to gain insight into how successful groups were in collaborating to complete the project. We will use both open-ended questions and Likert scale questions aimed at gathering data about how well a group worked together and if the group was efficient and effective in completing the project. Relative to each student, we will also gather data about how the collaboration would help in a clinical setting and how it helped to prepare the student for such a setting. For lab practical efficiency exams, the student playing the patient will complete a peer assessment form, which is independent of the grade for the student being tested. This peer assessment form will include open-ended questions relating to how playing the role of the patient allowed the student to learn about the other profession, in addition to Likert scale questions on peer performance. For TA sessions, attendance will be recorded and reported as a percentage of the total class size, in addition to individual student frequency. We will also survey the TAs to capture data relative to their observations on how well students collaborated throughout the semester, and the value in these sessions as a means for developing collaboration skills. We will also have the unique opportunity to capture data from the TA's regarding how working with the other profession in the TA leadership role improved one's own collaboration skills.

Goal 3: Enhance critical thinking skills used in team approaches to solve clinical problems.

As students accomplish Goals 1 and 2, critical thinking skills should naturally improve. Thus, Goal 3 is largely centered on student performance and perceptions for the Movement Analysis project, lab practical efficiency exams, and written exams. Individual student performances on graded examinations and projects reflect mastery of course material. However, at the doctoral level for OT and PT, these graded activities also reflect performance in critical thinking, a fundamental component of each profession's approach to patient management necessary for entry level. We will directly assess critical thinking in the lab practical proficiency exams. For the Movement Analysis project, critical thinking will be a component of the grading rubric, thus allowing us to assess individual sections of the project to better capture critical thinking skills. Specifically, students must evaluate the kinematics and kinetics of their movement and synthesize this information to

determine how functional movement would be affected. This requires students to think at the highest levels of Bloom's taxonomy of the cognitive domain. We will also survey the students with open-ended questions and Likert scale questions aimed at capturing data about how the collaborative activities have influenced critical thinking, and how a student's critical thinking skill has developed over the course of the semester.

Data Analysis Approach

All surveys will be conducted through Qualtrics, an online survey platform supported by the School of Health and Human Sciences. For the survey data, the two primary faculty of this proposal will independently conduct open coding of the data to formulate categories using NVivo, a qualitative data analysis software supported by IUPUI. This process will follow a grounded theory model in which the two faculty separately code and identify key themes from the transcribed Qualtrics data. If coding discrepancies occur, we will resolve them through discussion and validate them through NVivo's inter-rater reliability function. The initial categories will be assessed for thematic organization followed by a cross comparison of themes. Quantitative data will be assessed using Likert scales, grading rubrics, and formal grades for exams and the project. Means, standard deviations, and percentages will be calculated to show student outcomes. All results will be integrated into a coherent description of the programmatic IPE outcomes for the three goals of this proposal.

Evaluation and Dissemination of Results

Findings will be shared within both the Departments of OT and PT as a potential model for instituting IPE. Findings will be formally disseminated first as a submission to the E.C. Moore Symposium. Additionally, findings will be submitted as an abstract to both the American Occupational Therapy Association and American Physical Therapy Association annual conferences to advocate for continued IPE between each profession. We will continue to assess data and review findings as more cohorts complete the two courses over the next several years. This will aid in determining long-term curriculum development of IPE between OT and PT, with a goal of securing a curriculum enhancement grant to institute IPE throughout all three years of the OT and PT programs. We are especially interested in assessing how IPE throughout the entirety of both an OT and PT student's tenure influences how students identify themselves in the workforce at entry level. It is our hope that these entry level professionals are more unified, creating a truly collaborative practice workforce.

Budget: \$5,000

The development of this proposal will occur in the Summer 2022 session, with implementation in the Fall 2022 semester. However, both Dr. Albright and Dr. Dierks are on 10-month salary contracts. Therefore, the budget for this proposal is for faculty summer salaries to provide the necessary time for curriculum development. The budget will be split into two stipends for summer salary: \$2500 faculty stipend to Dr. Albright for time spent on project and \$2500 faculty stipend to Dr. Dierks for time spent on project.

References

1. Van Diggele, C., Roberts, C., Burgess, A., Mellis, C. (2020). Interprofessional education: tips for design and implementation. *BMC Medical Education*. 20(Suppl 2): 455 World Health Organization. (2010). Framework for Action on Interprofessional Education and Collaborative Practice. Retrieved from: http://www.who.int/hrh/nursing_midwifery/en
2. Buring, S.M., Bhushan, A., Broeseker, A., Conway, S., Duncan-Hewitt, W., Hansen, L., Westberg, S. (2009). Interprofessional Education: Definitions, Student Competencies, and Guidelines for Implementation. *American Journal of Pharmaceutical Education*. 73 (4) Article 59.
3. Anderson, E. (2016). Evaluating interprofessional education: an important step to improving practice and influencing policy. *Journal of Taibah University Medical Sciences*. 11(6), 571-578.