

PRAC Assessment Grant Final Report Format

(Must be submitted within 30 days of completion of the project)

Include the following:

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6. Project Title

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

7. Project Dates

May 2022 – March 2024

Please respond to the following as thoroughly as possible:

1) Provide a summary of overall project accomplishments as related to the intended outcomes of the project described in the proposal.

We successfully developed and implemented an immersive interprofessional education (IPE) curriculum for first year doctoral students in the Occupational Therapy (OT) and Physical Therapy (PT) programs. Development of our IPE initiative began in Summer 2022. We pilot tested our IPE initiative in the Fall 2022 semester by integrating the pilot curriculum into the OT (T671) and PT (P513) biomechanics courses. In Summer 2023, we analyzed the data from our pilot testing and further developed and refined our IPE curriculum. We then implemented our

immersive IPE curriculum in the same two courses for Fall 2023. We were able to successfully implement 6 IPE experiences throughout these courses: 1) combined lectures, 2) combined labs, 3) cross-profession lectures, 4) lab practical competency exam, 5) combined teaching assistants (TA), and 6) clinical projects.

IPE Experience 1: Combined Lectures. We had a total of 3 combined lectures to promote a common level of knowledge and skills among OT and PT students. The first was an IPE orientation module occurring during the first week of the semester. We learned from our pilot data that we cannot assume that students are aware of and understand the role that a different profession or discipline has in health care, as we initially did. Therefore, we created an orientation module to begin to learn about IPE teammates and the collaborative profession. IPE orientation began on the first day of each discipline's class where the collaborative instructor came and provided a 15-minute introduction about themselves and the collaborative profession. The bulk of the orientation module then occurred in a separate 2-hour class with all students combined, and included orientation to IPE in the courses, a team activity, and completion of the pre-survey. The other 2 combined classes occurred towards the end of the semester and involved functional assessments (posture, walking gait). The total in-class time for this IPE experience was 8 hours.

IPE Experience 2: Combined Labs. Both courses had a weekly lab component where students learned and practiced clinical skills. To coincide with the 2 combined lectures on functional assessments, we combined students for these 2 corresponding lab sessions. This allowed students to further promote a common level of knowledge and technical skills among professions. Students were split into smaller groups and worked together while learning and practicing clinical assessments involving posture and gait. The total in-class time for this IPE experience was 8 hours.

IPE Experience 3: Cross-Profession Lectures. Select lectures for a discipline specific cohort were delivered by the instructor from the collaborative discipline to promote a level of expertise among the collaborative professions. For this IPE experience, Dr. Dierks (PT) provided 4 lectures to OT students in an area of his expertise, while Dr. Albright (OT) provided 2 lectures to PT students in an area of her expertise. The total in-class time was the same for both professors at 8 hours.

IPE Experience 4: Lab Practical Competency Exam. Both courses had 2 lab practical competency exams. For the second exam, students played the role of a patient for each other and provided formal peer feedback as the patient. This experience promoted a sense of hands-on skill and experiences in a clinical environment. Students independently created pairs of 1 OT and 1 PT. For the exam, an OT instructor graded the OT student while the PT student played the patient and completed a peer feedback form, and vice-versa. The total in-class time to complete both exams was 1 hour. However, this IPE experience required significant out-of-class time for students to practice and prepare for their respective exam.

IPE Experience 5: Combined Teaching Assistants. Both courses employed 3 TAs that held weekly sessions to aid and mentor students throughout the semester. We then held combined TA sessions approximately once per month where all 6 TA's and all students were combined. This

promoted a sense of collaborative leadership and expertise among students and the professions. These combined TA sessions were primarily focused on the IPE clinical projects (IPE Experience 6). This environment allowed students to learn from and interact with a TA in the collaborative discipline, while still allowing them to interact with the TA from their own discipline. TA sessions were voluntary and occurred outside of class time, with each session occurring for 1-2 hours.

IPE Experience 6: Clinical Projects. Both courses had 2 clinical projects that were completed in groups consisting of OT and PT students. The first was the Posture Project consisting of pairs of students (1 OT + 1 PT). This coincided with the combined posture lecture and lab and involved performing an in-person standing posture analysis on a non-student and a subsequent completion of a paper. The second clinical project was the Motion Analysis Project (MAP), which was the most extensive and involved of all the IPE experiences. This was a semester-long cumulative project completed in groups of 7-8 students (3-4 OT + 4 PT) and involved the analysis of a functional or rehab related movement. Each MAP group was subdivided into a lower body group and an upper body group. Several checkpoints occurred throughout the semester beginning in week 1 (MAP team activity at IPE Orientation) and concluding with project submission in week 16. The subgroups worked together throughout the project but completed and submitted their own project. The total in-class time was 4-5 hours where groups were able to get together and work while instructors were available for assistance. However, this IPE experience required extensive out-of-class time throughout the semester as MAP groups and subgroups had to coordinate schedules and met regularly to complete work for the checkpoints.

2) Describe data collection methods and provide an analysis of the findings.

Our primary objective outcome measure was the Interprofessional Collaborative Competency Attainment Scale (ICCAS). This is a valid and reliable survey used to self-assess a person's interprofessional collaboration/education abilities. The ICCAS is used at the Rehabilitation Hospital of Indiana where many OT and PT students perform their fieldwork/clinical rotations. We used a modified version consisting of 17 questions grouped according to the 4 IPE Core Competencies per the Interprofessional Education Collaborative (Figure 1). The modified ICCAS was administered through Qualtrics at pre-semester and post-semester. Pre was given at the end of the IPE Orientation module and in addition to the 17 questions, we included 3 questions related to past IPE experience. Post was given on the last day of class, and we included 1 additional question related to time spent out-of-class on IPE, along with 3 subjective open-ended questions about the impact of the 6 experiences on IPE skill development.

For the Fall 2023 semester, we had a combined 74 responses to the ICCAS survey. At pre, 65 students (88%) reported that they had never had any formal IPE experiences. For the 9 reporting previous IPE experience, nearly all were a rehab tech or similar position; thus IPE was occurring in a clinical setting and not at the academic level. At post, 53 students (73%) reported that they spent between 10-30 hours on IPE outside-of-class time throughout the semester; only 6 reported less than 10 hours, while 5 reported over 40 hours. When combined with approximately 30 hours spent on IPE in-class, the majority of students spent upwards of 40-60 total hours on IPE spread across the 6 IPE experiences throughout the semester, creating a truly immersive IPE curriculum.

For the ICCAS, all 17 questions significantly improved at the end of the semester (Figure 1). Pre ranged between 0.3-0.5 and post ranged between 3.7-4.2 for the 17 questions. A score of 0 indicated no prior IPE experience, and thus a lack of the skill, while a max of 5 indicated “excellent” skill. With nearly all students entering their first semester with no IPE skillset, participating in our immersive IPE curriculum allowed students to develop IPE skills that they believed were “very good” (ICCAS score of 4) in all IPE core competencies. Furthermore, for the 9 students that had prior IPE experience, the pre-ICCAS mean was 3.1 (mode between 2 to 3), which is well below the post means for all students. Subjective data from the open-ended questions indicated that the majority of students believed the clinical projects (IPE experience 6) greatly impacted their team skills, especially in the development of their communication and scheduling skills. Students also believed that the lab practical competency exam (IPE experience 4) was especially impactful at gaining an appreciation for the skills of the collaborative profession. Suggestions for updating the IPE experiences largely centered around scheduling conflicts & perceived differences in foundational knowledge between the collaborating professions.

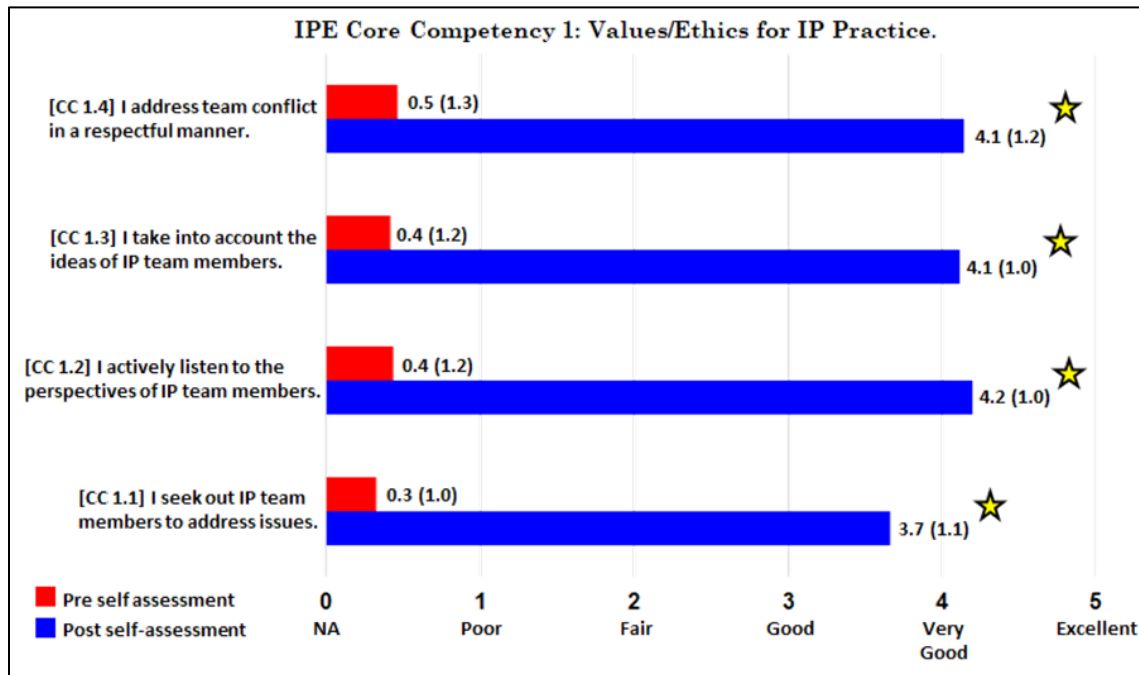


Figure 1. Student outcomes (mean, SD) from the modified ICCAS for IPE core competency 1 questions. Questions for IPE core competencies 2-4 resulted in similar outcomes. A yellow star indicates a significant difference between pre-post.

To date, we have disseminated our findings at a regional and national level. At the regional level, we presented our IPE curriculum at the 2024 Plater-Moore Conference on Teaching and Learning in Indianapolis, IN. We were awarded a 30-minute interactive presentation where we described our innovative research, demonstrated our strategies, and reflected on lessons learned. We had an interactive component where participants formed small groups and went through the MAP team activity and the ICCAS. Through this session we made several contacts and are currently working with 2 of them to begin the first steps of incorporating our work into other

programs. At the national level, we presented at the annual American Occupational Therapy Association INSPIRE 2024 meeting in Orlando, FL. We were awarded a poster session and had several interested participants as to how to effectively develop and implement IPE curriculums. Also at the national level, we are currently developing an abstract for submission to the 19th annual Physical Therapy Education Leadership Conference in October of 2024, which has a primary focus session dedicated to IPE. Lastly, while significant improvement occurred over the first semester, it remains unknown if acquired IPE skills are maintained or can be further developed by graduation & upon entry-level. Thus, we are currently scheduling an initial meeting with the neurology course instructors in OT and PT to begin the development of a Curriculum Enhancement Grant. This project will aim to use our immersive IPE curriculum as the model to develop a similar curriculum in year 2 of the OT and PT programs, specifically in the neurology courses where OT and PT students are together.

3) Describe any obstacles/challenges encountered, and 4) what changes, if any, were made to address these obstacles/challenges.

Developing and implementing an immersive IPE curriculum for 2 professional programs is a daunting task that is certainly not without obstacles and challenges. Our biggest obstacle had long been aligning the schedules between the OT and PT programs. It wasn't until recently that the OT program moved from a 2-year Master's level program to a 3-year Doctoral level program, making it consistent with the PT program. This allowed scheduling of the 2 biomechanics courses to occur in the Fall semester of year 1 and increased the OT cohort size to resemble PT. This change allowed us to begin our early IPE efforts by having 2 combined lectures (IPE experience 1), a semi-combined lab (IPE experience 2), and 1-2 cross-profession lectures (IPE experience 3). Once we learned that it was feasible to implement IPE in this manner, we then began to develop our immersive IPE initiative.

We spent 2 years (Fall 2021 to Fall 2022) developing and pilot testing our IPE initiative before implementing the IPE curriculum in the Fall of 2023. This first year was an unfunded feasibility project where we quickly encountered our next challenge, which was space and resources. We learned that we could not expand the combined labs (IPE experience 2) and clinical projects (IPE experience 6) or adequately conduct a combined lab practical competency exam (IPE experience 4) with 7-8 exams at the same time for 80 students in a day without the proper lab space and resources. It was also difficult implementing the MAP without consistent schedules outside of class and space for students. However, by securing the PRAC grant, we gained administrative support to better align schedules and space to expand combined labs, broaden the MAP and incorporate the posture project, and accommodate a combined lab practical exam. This commitment to our IPE initiative was instrumental in further aligning schedules and securing space in the new Health Sciences building where OT and PT moved in Spring 2023, leading to the implementation of our immersive IPE curriculum in Fall 2023.

In terms of obstacles related to the IPE curriculum itself, our biggest challenge has been related to professional advocacy. The first goal of our IPE curriculum is to promote and develop the professional collaboration between OT and PT students. Initially, we mistakenly expected that students would inherently be aware of the role that the collaborative profession has in health care. Since all students fulfilled observation hours upon admission to our programs, it seemed

logical that the 2 professions would have interactions. However, we quickly realized through the MAP that this was not the case. We regularly observed a lack of advocacy where students would not take initiative to promote their professional skills; often relegating responsibilities to those they deemed superior, despite students having a similar level of skill and knowledge. To address this barrier, we developed and implemented the IPE Orientation module. This provides students with information about the collaborating professions and gives the MAP groups their first activity together in week 1. The MAP activity first allows them to get to know each other and the skills that all students bring to the MAP team. The group must then work collaboratively to complete questions related to the MAP and finally questions about each profession. While the orientation module seems to be quite impactful at addressing this challenge, we plan to further expand our efforts in 2024 in the vector analysis component of the MAP with the addition of assigned joints.