

Interprofessional primary healthcare student placements: Qualitative findings from a mixed-method evaluation

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Interprofessional education (IPE) is championed as an innovative approach to prepare the future health workforce to address the complex needs of consumers and tackle a range of contemporary healthcare challenges worldwide. An interprofessional work-integrated learning experience (WIL), whereby students were immersed in international and rural settings and worked in teams to deliver primary healthcare project outcomes, was developed, implemented, and evaluated with undergraduate health students. Qualitative evaluation of the IPE program aimed to investigate the experiences and perceptions of 62 students through focus group interviews, is reported. Students regarded the placement as a rich learning environment and reported positive experiences in interprofessional collaborative competencies. Major themes included: overall perceptions and attitudes, scope of practice, improved teamwork skills, future practice, and placement preparation. Students strengthened their learning with, from and about other professional groups and identified challenges and implementation issues. Findings from this study will inform future implementation of interprofessional WIL experiences.

Keywords: Interprofessional education, work-integrated learning, interprofessional practice, primary healthcare, clinical placements, health professional education

Effective interprofessionalism, a shared decision-making approach, is becoming a key feature of primary healthcare delivery, and is fundamental to patient-centered care. In Australia, interdisciplinary care is a core component of best practice models in health professional education and service delivery (Davies, Fidler, & Gorbis, 2011). Interprofessionalism contributes to better patient outcomes through improving communication, cost-effectiveness, efficiency, and person-centered care (World Health Organization [WHO], 2010). Interprofessional education (IPE) aims to enhance attitudes, knowledge, skills, and behaviors for collaborative practice, which subsequently leads to improvements in clinical practice (Reeves et al., 2016). The fundamental rationale for interprofessional education is that if health professional students learn together, they will be better prepared for interprofessional collaboration (Sundberg, Reeves, Josephson, & Nordquist, 2019).

At a regional Australian university, an interprofessional experiential clinical placement experience for undergraduate healthcare students in primary healthcare settings was developed, implemented and evaluated. The IPE program was implemented in 2017 in primary healthcare settings in rural and

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remote Australian communities and internationally (Cambodia and Vietnam). This paper reports the qualitative evaluation of the IPE program, which aimed to investigate the attitudes, knowledge, skills and behaviors of students towards interprofessional collaboration and teamwork. Focus group interviews were conducted with nursing and allied health students, at the completion of the immersion IPE placement. The results of the study aim to inform the future development of similar WIL programs.

INTERPROFESSIONAL EDUCATION

In Australia, IPE is not standardized and no cross profession accreditation and/or overarching accreditation authority exists that recognizes the quality assurance and accreditation activities of other accreditation authorities (Health Professions Accreditation Councils' Forum (HPACF) , 2017). The Australian Health Practitioner Regulation Agency (AHPRA) and HPACF suggest that to address barriers to IPE and to better organize and plan IPE delivery in Australia, innovative methods of interprofessional learning needs to be supported.

Multiple approaches to implementing IPE can be identified in the literature. Education programs are often classroom based which is regarded as the most appropriate method for delivering IPE to a large cohort of students (Lapkin, Levett-Jones, & Gilligan, 2013; Nasir, Goldie, Little, Banerjee, & Reeves, ., 2017). However, there are limitations to delivering high-quality sustainable IPE programs in an academic context (O'Carroll, Braid, Ker, & Jackson, 2012). Indeed, experiential learning provides students with valuable practice-based learning opportunities and has been shown to be more effective in strengthening collaborative competencies (Brewer & Jones, 2013). IPE placements are often undertaken in acute hospital settings rather than in primary healthcare and are quite often structured around shifts and existing structures rather than an immersive experience.

INTERPROFESSIONAL EDUCATION IN PRIMARY HEALTH CARE SETTINGS

Interprofessional education and collaboration is regarded as being particularly important in primary healthcare settings. Primary healthcare involves integrating and expanding systems and services to promote population health and health promotion across a broad range of disciplines (Curran, Sargeant, & Hollett, 2007). It requires collaboration for the best and most efficient use of all health professionals and resources (Curran et al., 2007). Primary healthcare therefore rests on a holistic approach to patient care, and this holism is a fundamental tenet of IPE.

According to the literature, there is considerable value in the intensity of immersive IPE experiences in primary health care settings. Students from diverse healthcare and related disciplines on such placements are required to work and live together and respond to the challenges of negotiating an unfamiliar environment as a team (Tran, Kaila, & Salminen, 2018). However, there are a limited number of studies that investigate the experiences of students participating in IPE placements in resource-poor primary healthcare settings (Anderson & Thorpe, 2014; Phafoli et al., 2018).

In response to these gaps in interprofessional education and research, The School of Health and Human Sciences at Southern Cross University developed an IPE placement in primary healthcare settings (rural/remote and international) for undergraduate students in the disciplines of nursing, speech pathology, occupational therapy and podiatry. All students were enrolled in a unit of study underpinned by Primary Healthcare and Health Promotion. The teaching and learning undertaken in this unit provided the academic context for the IPE placement.

METHOD

This qualitative study is part of a larger evaluation of an IPE placement in primary healthcare settings, which utilised an exploratory, longitudinal, mixed-method design. Quantitative methodology included pre- and post-placement questionnaires with IPE participants (results published elsewhere). For the current study, students participated in focus groups immediately following the conclusion of the placement. This paper outlines the findings of the thematic analysis of these interviews.

Procedure

Focus groups were conducted by both a research assistant and placement facilitators and were audiotaped and later transcribed by the research assistant. Focus groups were conducted separately for the Cambodia, Vietnam, and Rural Australian placement groups. Each group included Nursing, Speech Pathology, Podiatry, and Occupational Therapy students. The focus group discussion guide was constructed specifically for the study and was reviewed by a senior expert team. A set of questions guided the focus group discussion with the aim to explore students' perceptions and experiences of the IPE program:

- What does interprofessionalism mean?
- What knowledge have you gained in learning more about the various health professions as a result of this placement?
- How has your understanding of/or attitude towards primary health care and interprofessional collaboration change?
- What are the benefits of interprofessional collaboration at the patient care level?
- How has this opportunity to participate in this interprofessional placement influenced your practice/work in the future?

Data Analysis

Thematic analysis is a flexible research tool that provides a detailed and nuanced account of the data (Vaismoradi, Turunen, & Bondas, 2013). A thematic analysis employing an inductive method was selected as the most appropriate analytical approach for interpreting and making sense of the data. Whilst deductive analysis and the use of a predetermined theoretical framework was debated by the research team, an inductive approach was considered to generate a richer description of the data (Braun & Clarke, 2006). Inductive analysis was also selected as it is a useful method for examining the perspectives of diverse participants and identifying key themes strongly linked to a data set (Fereday & Muir-Cochrane, 2006). The 6-step approach defined by Braun and Clarke (2006) was used. Key steps included, familiarization with data, generation of initial codes, searching for themes, reviewing themes, defining, and naming themes, and report production. The coding and emergent themes were crosschecked, refined, and confirmed by the research team.

Ethics

Ethical approval was granted by the Southern Cross University Human Research Ethics Committee (ECN-17-178) and methods conformed to the guidelines of the National Statement on Human Experimentation (NHMRC, 2007). Participants were e-mailed the participant information statement and indicated informed consent by completing an online consent form. All participants consented to participation and recording.

Participants

A total of 62 students participated in this phase of the research. Focus group participants included undergraduate nursing ($n = 32$) and allied health ($n = 30$) students. Allied health students included speech pathology, occupational therapy and podiatry. The mean age of the students was 30 years (SD 8.1, range 19-46), and the majority were female (79%), with no previous IPE experience (89%).

RESULTS

IPE aims to enable different professionals to collaborate more effectively by bringing them together to learn with, from and about one another. Multiple learning domains were identified and were grouped into the following themes:

1. Overall perceptions and attitudes of placement: Learning About IPE
2. Scope of practice: Learning About us and them; Learning From other professions
3. Improved teamwork skills: Learning With
4. Future Practice: carrying it forward
5. Placement Preparation

Overall Perceptions and Attitudes of Placement: Learning About Interprofessional Education

Students expressed satisfaction with the quality of the IPE program and the associated learning opportunities. For many students, the multidisciplinary and teamwork dimensions of this placement made it a particularly valuable and rewarding experience.

I think, in this placement, teamwork has been essential, collaboration has been invaluable, and it's a great learning experience. The multidisciplinary [aspect], primary health promotion, learning the role of the nurse and other disciplines, it's more than I ever thought it would have been. (PI1.1)

The placement experience also improved students' knowledge of the concepts and principles of interprofessional collaboration. After participating in the program most students were able to clearly define interprofessional practice as "people from different professions coming together to share their expertise with the aim to provide holistic care that identifies individual needs" (PR1.1).

Many of the students' comments indicated that the placement experience led to more open and positive attitudes towards interprofessionalism. They expressed increased appreciation for the importance and value of effective collaboration and teamwork. Many students acknowledged that the placement experience helped them understand how collaboration and teamwork can ensure that healthcare prioritizes the health needs of service users and their communities.

I guess coming here it has reinforced to me how important it is to consider your patient, community, or demographic and provide appropriate tailored healthcare for them. It's really important to bring it back to the person or community or whoever's at the centre, to make sure it connects with them and works for them. (PI2.8)

Interestingly, some students recognized that while effective interprofessional collaboration is fundamental to person-centered care, poor communication between disciplines can impact on patient care. "More people involved in care may result in different opinions, it can be quite confusing for the patient if the professionals aren't communicating correctly".(PR1.4).

Scope of Practice: Learning about Us and Them; Learning from Other Professions

Many of the students who participated in the program, articulated a more nuanced understanding of their own role, scope of practice and responsibilities, as well as that of the other disciplines. For some students, learning about reciprocal scopes of practice reinforced the importance of only operating within the borders of their own disciplinary knowledge and skills. Their comments illustrate concerns that borrowing skills from other disciplines, or extending scope, may not be good practice. “You need to be able to identify when to refer, I think that’s the big thing, that line where I can see an issue and know I need to do something about that and I’m not the best person to do it” (PI1.8).

Improved Teamwork Skills: Learning With

IPE involves learning *with* students from other disciplines, including the acquisition of critical thinking and social skills associated with collaboration. Working interprofessionally was perceived as an effective way to break down traditional barriers between disciplines, with opportunities to work in teams for the benefit of the patient. Many students reflected on the various ways that the placement improved their teamwork skills, “all of us working together we’ve been able to collaborate and share information” (PI2.1).

The students commented on the ways in which their immersion in unfamiliar and challenging environments facilitated their team building.

I think it’s because we were overseas, I think that has been the biggest contributing factor that brought the team together as a whole as you’ve had to learn to work together, whether it be professionally or living together, you had to be a team (PI1.3).

Students indicated that their professional communication skills were strengthened by the placement experience. Students suggested that their cross-discipline communication skills improved because the placement was conducted in primary healthcare settings rather than the usual acute hospital environment.

In the normal hospital when I’ve been on placement I’ve come across other health professional students and you go “what are you doing” and have a chat but that’s about as much interaction as you get because they go off and do their own thing. . . . It’s very referral focused (PI2.1).

Students also reported that their ability to communicate with their supervisors and senior staff also improved.

I’m more confident approaching people that are higher than me whereas before I was a little bit reluctant and scared to do that because I was a student. So, I think that’s the biggest learning experience for me that I’ve enjoyed. (PR2.1)

Students expressed an increased confidence in their preparedness to work with students from other disciplines effectively as a team. Many asserted that they also felt they gained confidence in their clinical skills and decision-making ability because of the shared decision-making opportunities with other students. They ultimately felt that this improved their overall confidence in approaching clinical problems.

As a team, being able to work, and bounce ideas, with other students you’re confirming your thoughts, . . . you’ve been able to feel really confident and feel better about your decision because

you've been able to have that chat with another student and they've agreed or thought of another idea.(PI2.3)

Students reflected on their experiences of learning to work together, "pooling of knowledge" with team members to develop innovative and creative solutions to the various health issues that they encountered. Problem-solving skills improved as a result of the opportunity to draw upon the different skill sets of the various disciplinary backgrounds to collaboratively develop shared-care plans for clients. "If you work together as a team a lot more solutions can be found" (PR3.2).

For many students the placement provided them with a safe and constructive learning environment wherein they could challenge and confront each other's decision-making in a respectful manner. The development of these conflict-resolution skills was often linked to the immersive nature of the placement.

. . . even if there was a disagreement or a challenge in our work, we still find a way through because we want to help the person at the other end and we also want to support each other. I think that's being part of the team, to have those healthy challenges. (PI1.1)

Students frequently reflected on the ways in which they learned to communicate and clearly explain their own clinical reasoning and general decision-making to others. Many students reiterated "the more we're educated about each other's roles, the more informed we are about how to ask each other for help, and how to educate each other" (PI1.6). Their comments indicated a strengthened willingness to act as a leader and mentor for their peers across the disciplinary divides.

Future Practice: Carrying It Forward

The focus group data revealed important information relating to students' willingness to apply their interprofessional knowledge and skills in their future professional practice. The students revealed their 'intention to change', or their commitment to carry the learning experiences forward into their future practice. For most students, the placement had a profound impact on their practice, explaining they would work interprofessionally in the future.

It's completely changed the way I'll practice in the future – one hundred percent. I won't be afraid to approach other disciplines. I won't ever disregard any of their reports or assessments - not that I have – but I certainly place more value in it. (PR2.2)

Placement Preparation

The students indicated the need for a more comprehensive pre-placement preparation as some "had no idea what to expect from their placements". They specifically highlighted their limited exposure to IPE theory and practice prior to coming on the placement as being problematic. They felt under-prepared for the complexities of working in an interprofessional team and suggested this be addressed in future programs.

DISCUSSION

Effective teamwork improves the work environment by contributing to higher levels of respect among team members and improved job satisfaction (Korner, Wirtz, Bengel, & Goritz, 2015; Song et al., 2017; Walker, Cross, & Barnett, 2018). Interprofessionalism also purports to enhance knowledge of other

professional roles and responsibilities while fostering mutual understanding between members of the healthcare team (Brewer & Flavell 2018; Walker et al., 2018).

IPE is increasingly being recognized as central to preparing students for the challenges of working in an interprofessional primary healthcare workplace. This paper has reported the qualitative evaluation of an IPE placement conducted with nursing and allied health students in rural and international primary healthcare settings. The study offers insights about the challenges, opportunities and benefits of primary healthcare IPE placements in rural/remote and resource-poor international settings.

The results of this qualitative study indicate that, following an intensive immersion IPE placement experience, students strengthened their learning with, from and about other professional groups. Students reported positive increases in their interprofessional collaborative competencies and multiple interprofessional learning domains were identified. Major themes included: overall perceptions and attitudes, scope of practice, improved teamwork skills, future practice and placement preparation. This study provided valuable insights about the importance of considering IPE learning enablers when planning, implementing and evaluating inter-professional placements in these contexts.

Overall Perceptions and Attitudes: 'Learning About' Interprofessional Education

The placement facilitated participants' learning about IPE. Students who participated in the IPE placement expressed satisfaction with the learning opportunities provided, enhanced understanding of interprofessional practice and valuing the importance of interprofessionalism. The findings of the study suggest that the IPE experience improved students' belief in the value of interprofessional practice. Students variously reflected on the importance of interprofessionalism in the delivery of primary healthcare, the contribution it makes to person-centered care, the holistic nature of IPE, and the way interprofessionalism enhances overall quality of care and leads to improved patient outcomes.

The literature affirms the importance of IPE in facilitating person-centered care. The collaborative approach focuses on the users and their health needs rather than on the services and professional interest (da Silva, Peduzzi, Orchard, & Leonello, 2015). IPE research suggests that interprofessionalism can lead to positive outcomes for patients (WHO, 2010). Evidence is accruing to indicate that because IPE improves professional practice it can lead to much better clinical outcomes (Kent & Keating 2013; Reeves, Perrier, Goldman, Freeth, & Zwarenstein, 2013). The results of this study indicate that the placement facilitated students' understanding that successful interprofessionalism can improve person-centered care and enhance patient outcomes.

Scope of Practice: 'Learning About' Us and Them, and 'Learning From' Other Professions

The findings of this study suggest that the placement strengthened students' knowledge of their own scope of practice as well as improved their understanding of the roles and responsibilities of other professions. The IPE competency of learning about and learning from other professions was addressed in the placement program. For some students, learning about reciprocal scopes of practice confirmed the importance of operating within the borders of their own discipline and alongside other disciplines. According to the literature, an effective interprofessional team is characterized by each member's knowledge and understanding of each other's roles and responsibilities (Lapkin et al., 2013). IPE encourages students to look beyond their own discipline, improving their awareness of the role and services other disciplines provide (Kent & Keating, 2015). IPE fosters mutual respect and understanding between members of the healthcare team (Korner et al., 2015). The communicative integration facilitated by IPE helps to address negative attitudes towards other disciplines and helps to

promote respect for other professionals (Reeves et al., 2013; Walker et al., 2018). According to the results of this study, IPE in primary healthcare settings has the potential to provide opportunities for students to develop positive attitudes towards other disciplines. The IPE placement provided opportunities for exploring and comparing professional identities, which consequently strengthened respect for other professions as well as knowledge of the discipline's scope of practice.

Improved Teamwork Skills: 'Learning With'

As well as learning about and from other professional groups, the literature emphasises that a fundamental component of IPE involves learning with students from other disciplines (Brewer & Flavell 2018). Participants in the study reflected on the various ways that the placement improved their teamwork skills. IPE has been shown to equip students with the skills to work more collaboratively across professions (Renschler, Rhodes, & Cox, 2016; Walker et al., 2018). Kent & Keating (2015) reported greater preparedness for interprofessional teamwork among students who had engaged in IPE placements compared to those who had not.

The findings also demonstrate that the IPE placement improved a student's confidence in communicating with other students within their interprofessional team as well as with their superiors. The dialogue between members of the healthcare team can be understood through Habermas' theory of communicative action (Habermas, 1991). For Habermas, the goal of communication is a democratic interaction guided by the pursuit of mutual understanding, in which inter-subjective understanding is sought and common outlooks are achieved (da Silva et al., 2015). This communicative practice strives towards the sharing of normative outlooks (da Silva et al., 2015). Students on the placement learnt to bridge disciplinary divides through effective communication with one another and develop shared normative outlooks.

Linked with communication skills is increased confidence as a result of the placement experience. Many students asserted that they felt they gained confidence in their clinical skills, their decision-making and their ability to work effectively as a team. This finding is consistent with literature wherein students gaining confidence is often reported as a dominant theme. Two domains of confidence are emphasized in the literature and have likewise been improved by the IPE placement. These include confidence with clinical skills (Kent & Keating, 2015) and confidence interacting with students from other disciplines (Kent & Keating, 2015).

The findings from this study also indicate that students developed stronger problem-solving skills as a result of their interprofessional teamwork opportunities. In the IPE practice model, joint decision-making is valued (Lapkin et al., 2013). A key aspect of undergraduate IPE is learning together with other disciplines to develop joint therapeutic plans (da Silva et al., 2015). Students' discussed a strengthened willingness to act as a leader and mentor for peers across the disciplinary divides. Ultimately, the study confirms that IPE placements, particularly those conducted in primary healthcare settings, have the potential to strengthen learning with other disciplines through enhancing teamwork skills.

Future Practice: Carrying it Forward

Behavioral change involves the transfer of interprofessional skills and learning to the workplace and includes the willingness of learners to apply new knowledge and skills about collaborative work to their practice style (Reeves et al., 2016). The findings of the study illustrate that the IPE experience improved teamwork skills in a group of students who have the potential to improve collaborative

practices in their future workplaces. Students displayed intention to change, which is an important precursor to behavioral change in the workplace. For most students, the placement had a significant impact on their practice style, and they displayed a commitment to being much more interprofessionally minded health practitioners.

However, this intention to change doesn't always mean that students will actually maintain their newfound interprofessional aptitudes when confronted with the realities of the still very much rigid and hierarchical health workplace. According to the literature, there is often little evidence that IPE learning does actually transfer to future practice (Reeves et al., 2016). As Lapkin and colleagues (2013) claim, this is due to the timescale from the IPE intervention to professional practice, as well as the various influencing factors that emerge during that period. In light of this, a longer period follow-up of this study is suggested to analyze whether interprofessional competencies acquired are sustained into future practice. Future research should generate data on whether the placement intervention has induced any long-term shifts in the way students interact with other healthcare professionals.

Interprofessional Education Learning Enablers

Contextual factors are likely to have contributed to the successful outcomes of the IPE placement and its positive impact on interprofessional competencies. Enablers that emerge from the findings include: primary healthcare setting rather than acute, self-directed learning structure, practice rather than classroom-based clinical simulations, and immersive experience in resource-poor settings.

Primary healthcare placements are regarded as providing students with the opportunity to independently manage clients with a wide range of clinical needs using a holistic approach (Phafoli et al., 2018). This is confirmed in the findings of the current study. For some students, their cross-discipline communication skills improved because the placement was conducted in primary healthcare settings rather than the hospital environment.

Many of the IPE opportunities on the placement were structured so that learning was self-directed. It was evident throughout the focus groups that students regarded the self-directed learning as fundamental to confidence building. Students valued working with other students to make shared decisions rather than the traditional student-preceptor or facilitator dyad that is often relied upon in clinical placements. The lack of micro-managing from facilitators was favourably regarded as an empowering aspect of the placement. This finding is consistent with the literature, which suggests that the most effective IPE method encourages learners to be self-directed, critical and reflective thinkers (McNair, Stone, Sims, & Curtis, 2005). Considerable evidence from research elsewhere indicates that quality IPE should incorporate learning activities and projects that are jointly negotiated by students (Reeves et al., 2016).

IPE is often campus or classroom-based which has been regarded by some educators as the most appropriate method for delivering IPE to a large cohort of students (Lapkin et al., 2013). However, practice-based learning opportunities rather than classroom programs have been shown to be more effective in strengthening collaborative competencies (Reeves et al., 2016; Tran et al., 2018). Research suggests that the practice placement environment provides relevant and motivating IPE learning experiences (O'Carroll et al., 2012).

For most students in the current study, the practice-based nature of the primary healthcare settings provided both challenges and opportunities that culminated in valuable learning opportunities. This could be attributed to the nature of the practice-based primary healthcare of the placement settings.

The results of the study suggest that immersion in isolated and under-serviced rural and remote regions, as well as resource-poor international settings, profoundly influenced students' IPE learning. The intensity and value of the immersive experience is confirmed by other studies such as Tran et al., (2018). Students on such placements are required to work and live together and negotiate an unfamiliar environment as a team (Tran et al., 2018). The findings of this study confirm that immersion in these settings has the capacity to strengthen students' collaborative competencies including teamwork skills and shared problem solving skills. Being out of their comfort-zone and immersed in unfamiliar and challenging resource-poor settings made for rich interprofessional experiences.

Placement Preparation

While this was a successful IPE intervention that produced positive educational outcomes, there are several notable improvements that could be made. This was a pilot program and the identification of lessons learnt is essential for informing the design, development and delivery of future programs.

The study demonstrated that placement preparation for students needs to be strengthened in future programs. Students felt they had limited opportunities to learn together in interprofessional teams prior to the placement and this negatively impacted on their interaction with students from other disciplines. The IPE experience was a component of a separate unit for each discipline, meaning that the academic content was different for each professional group. According to best practice methods, students should engage in IPE learning prior to their placement experience. Effective placement preparation enables students to learn together in multi-professional groups and delivers structured academic content centred on teamwork and collaboration (Lapkin et al., 2013). Successful methods for teaching IPE include seminars, workshops, and simulations (Reeves et al., 2013). Coordinated placement preparation would enable students to interact in shared learning spaces, facilitating the development of preliminary collaborative competencies. The provision of IPE reading material is an essential component of this. Consequently, students would be far more prepared for the placement experience and have a more comprehensive understanding of the various domains of collaborative practice.

Limitations of the Study

Students from all disciplines were interviewed together, which restricted the ability to draw conclusions about any differences in perceptions and experiences between each disciplinary group. Further studies would aim to obtain responses from each discipline group separately in order to facilitate this level of analysis.

As noted above, despite students' assertions that their newly acquired IPE competencies would transfer to their future practice as health professionals, it is difficult to determine whether this is the case. Future research is required that focuses on a longer follow-up period to explore whether collaborative skills are sustained into future practice (McFadyen, Webster, Maclaren, & O'Neill, 2010). Research in the future could also benefit from conducting pre-placement focus groups to compare the level of change in collaborative competencies with post-placement data.

CONCLUSION

This was an innovative student-led immersion clinical experience in rural and international primary healthcare settings rather than a traditional hospital IPE placement. The findings of this study demonstrated that the interprofessional placement proved a rich learning experience that enhanced

students' overall collaborative competencies. Students from different disciplines successfully learned with, from and about each other. A significant lesson learned from the pilot program is that future IPE placements would be improved by strengthening student pre-placement preparation. This study adds to the growing body of literature that explores the way IPE placements can assist in moving healthcare education beyond clinical learning in disciplinary silos to a more interprofessional and collaborative model.

REFERENCES

- Anderson, E. S., & Thorpe, L.N. (2014). Students improve patient care and prepare for professional practice: An interprofessional community-based study, *Medical Teacher*, 36(6), 495-504. doi.org/10.3109/0142159X.2014.890703
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi.org/10.1191/1478088706qp063oa
- Brewer, M. L., & Jones, S. (2013). An interprofessional practice capability framework focusing on safe, high-quality, client-centred health service. *J Allied Health*, 42(2), e45-49.
- Brewer, M. L., & Flavell, H. (2018) Facilitating collaborative capabilities for future work: What can be learnt from interprofessional fieldwork in health. *International Journal of Work-Integrated Learning*, 19(2), 169-180.
- Curran, V., Sargeant, J. & Hollett, A. (2007). Evaluation of an interprofessional continuing professional development initiative in primary health care, *Journal of Continuing Education in the Health Professions*, 27(4), 241-252. doi.org/10.1002/chp.144
- da Silva, J., Peduzzi, M., Orchard, C., & Leonello, V. (2015). Interprofessional education and collaborative practice in primary health care, *Journal of School of Nursing*, 49(2), 15-23. doi.org/10.1590/S0080-623420150000800003
- Davies, A., Fidler, D., & Gorbis, M. (2011). *Future work skills 2020*. Retrieved from www.iff.org
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5, 80–92. <https://doi.org/10.1177%2F160940690600500107>
- Habermas, J. (1991). *The theory of communicative action: Reason and the rationalization of society* (Vol. 1). Oxford, UK: Polity Press.
- Health Professions Accreditation Councils' Forum. (2017). *independent review of accreditation systems within the national registration and accreditation scheme for health professions*. Retrieved from <https://www.coaghealthcouncil.gov.au/Projects/Accreditation-Systems-Review>
- Kent, F. & Keating, J. (2015). Interprofessional education in primary health care for entry level students – A systematic literature review. *Nurse Education Today*, 35(12), 1221-1231. doi.org/10.1016/j.nedt.2015.05.005
- Korner, M., Wirtz, M. A., Bengel, J., & Goritz, A. S. (2015). Relationship of organizational culture, teamwork and job satisfaction in interprofessional teams. *BMC Health Services Research*, 15, 243. [doi:10.1186/s12913-015-0888-y](https://doi.org/10.1186/s12913-015-0888-y)
- Lapkin, S., Levett-Jones, T., & Gilligan, C. (2013). A systematic review of the effectiveness of interprofessional education in health professional programs. *Nurse Education Today*, 33(2), 90-102. doi.org/10.1016/j.nedt.2011.11.006
- McFadyen, A. K., Webster, V. S., Maclaren, W. M., & O'Neill, M. A., (2010). Interprofessional attitudes and perceptions: results from a longitudinal controlled trial of preregistration health and social care students in Scotland. *Journal of Interprofessional Care*, 24(5), 549–564. doi.org/10.3109/13561820903520369
- McNair, R., Stone, N., Sims, J. & Curtis, C. (2005). Australian evidence for interprofessional education contributing to effective teamwork preparation and interest in rural practice, *Journal of Interprofessional Care*, 19(6), 579–594. doi.org/10.1080/13561820500412452
- Nasir, J., Goldie, J., Little, A., Banerjee, D. & Reeves, S. (2017). Case-based interprofessional learning for undergraduate healthcare professionals in the clinical setting, *Journal of Interprofessional Care*, 31(1), 125-128. doi.org/10.1080/13561820.2016.1233395
- O'Carroll, V., Braid, M., Ker, J., & Jackson, C. (2012). How can student experience enhance the development of a model of interprofessional clinical skills education in the practice placement setting? *Journal of Interprofessional Care*, 26(6), 508-510. doi.org/10.3109/13561820.2012.709202
- Phafoli, S. H., Christensen-Majid, A., Skolnik, L., Reinhardt, S., Nyangu, I., Whalen, M., & Stender, S.C. (2018). Student and preceptor perceptions of primary health care clinical placements during pre-service education: Qualitative results from a quasi-experimental study, *Nurse Education in Practice*, 28, 224-230. doi.org/10.1016/j.nepr.2017.10.012
- Reeves, S., Fletcher, S., Barr, H., Birch, I., Boet, S., Davies, N., McFayden, A., Rivera, J., & Kitto, S. (2016). A BEME systematic review of the effects of interprofessional education: BEME Guide No. 39, *Medical Teacher*, 38(7), 656-668. doi.org/10.3109/0142159X.2016.1173663
- Reeves, S., Perrier, L., Goldman, J., Freeth D., Zwarenstein, M. (2013). Interprofessional education: effects on professional practice and health-care outcomes, *Cochrane Database of Systematic Reviews*. 28(3). [doi: 10.1002/14651858.CD002213.pub3](https://doi.org/10.1002/14651858.CD002213.pub3).

- Renschler, L., Rhodes, D., & Cox, C. (2016). Effect of interprofessional clinical education programme length on students' attitudes towards teamwork, *Journal of Interprofessional Care*, 30(3), 338-346. doi.org/10.3109/13561820.2016.1144582
- Song, H., Ryan, M., Tendulkar, S., Fisher, J., Martin, J., Peters, A. S., Frolkis, J. P., Rosenthal, M. B., Chien, A. T., & Singer, S. J. (2017). Team dynamics, clinical work satisfaction, and patient care coordination between primary care providers: A mixed methods study. *Health Care Manage Rev*, 42(1), 28-41. doi:10.1097/hmr.0000000000000091
- Sundberg, K., Reeves, S., Josephson, A., & Nordquist, J. (2019). Framing IPE. Exploring meanings of interprofessional education within an academic health professions institution. *J Interprof Care*, 1-8. doi:10.1080/13561820.2019.1586658
- Tran, C., Kaila, P., & Salminen, H. (2018). Conditions for interprofessional education for students in primary healthcare: a qualitative study. *BMC Medical Education*. 18(1), 122. doi:10.1186/s12909-018-1245-8
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing Health Science*, 15(3), 398-405. doi:10.1111/nhs.12048
- Walker, L., Cross, M., & Barnett, T. (2018) Mapping the interprofessional education landscape for students on rural clinical placements: An integrative review. *Rural and Remote Health*. 18(2):4336. doi:10.22605/RRH4336
- World Health Organization (WHO). (2010). *Framework for action on interprofessional education & collaborative practice*. Retrieved from http://www.who.int/hrh/resources/framework_action/en/



About the Journal

The International Journal of Work-Integrated Learning (IJWIL) publishes double-blind peer-reviewed original research and topical issues dealing with Work-Integrated Learning (WIL). IJWIL first published in 2000 under the name of Asia-Pacific Journal of Cooperative Education (APJCE). Since then the readership and authorship has become more international and terminology usage in the literature has favored the broader term of WIL, in 2018 the journal name was changed to the International Journal of Work-Integrated Learning.

In this Journal, WIL is defined as "*an educational approach that uses relevant work-based experiences to allow students to integrate theory with the meaningful practice of work as an intentional component of the curriculum*". Defining elements of this educational approach requires that students engage in authentic and meaningful work-related task, and must involve three stakeholders; the student, the university, and the workplace. Examples of practice include off-campus, workplace immersion activities such as work placements, internships, practicum, service learning, and cooperative education (Co-op), and on-campus activities such as work-related projects/competitions, entrepreneurships, student-led enterprise, etc. WIL is related to, but not the same as, the fields of experiential learning, work-based learning, and vocational education and training.

The Journal's main aim is to enable specialists working in WIL to disseminate research findings and share knowledge to the benefit of institutions, students, co-op/WIL practitioners, and researchers. The Journal desires to encourage quality research and explorative critical discussion that leads to the advancement of effective practices, development of further understanding of WIL, and promote further research.

The Journal is financially supported by the Work-Integrated Learning New Zealand (WILNZ), www.nzace.ac.nz and the University of Waikato, New Zealand.

Types of Manuscripts Sought by the Journal

Types of manuscripts sought by IJWIL is primarily of two forms; 1) *research publications* describing research into aspects of work-integrated learning and, 2) *topical discussion* articles that review relevant literature and provide critical explorative discussion around a topical issue. The journal will, on occasions, consider best practice submissions.

Research publications should contain; an introduction that describes relevant literature and sets the context of the inquiry. A detailed description and justification for the methodology employed. A description of the research findings - tabulated as appropriate, a discussion of the importance of the findings including their significance to current established literature, implications for practitioners and researchers, whilst remaining mindful of the limitations of the data, and a conclusion preferably including suggestions for further research.

Topical discussion articles should contain a clear statement of the topic or issue under discussion, reference to relevant literature, critical and scholarly discussion on the importance of the issues, critical insights to how to advance the issue further, and implications for other researchers and practitioners.

Best practice and program description papers. On occasions, the Journal also seeks manuscripts describing a practice of WIL as an example of best practice, however, only if it presents a particularly unique or innovative practice or was situated in an unusual context. There must be a clear contribution of new knowledge to the established literature. Manuscripts describing what is essentially 'typical', 'common' or 'known' practices will be encouraged to rewrite the focus of the manuscript to a significant educational issue or will be encouraged to publish their work via another avenue that seeks such content.

By negotiation with the Editor-in-Chief, the Journal also accepts a small number of *Book Reviews* of relevant and recently published books.



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