A speed-networking model for facilitating interprofessional education and work-integrated learning

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This article reports on an evaluated workshop using a speed networking method to promote inter-professional work-integrated learning (WIL) in a tertiary classroom setting. The article includes specific reference to speech-language therapy, nursing and social work, three of the seven disciplines that engaged with the exercise. Social constructivist learning theory is discussed with reference to development of work readiness for interprofessional teamwork among final year speech-language therapy students. The practical considerations used in facilitating the workshop are explained, with findings derived from a thematic analysis of the evaluation feedback provided. The key outcomes from the learning exercise identified an increased understanding of diverse professional identities amongst students whilst challenging pre-existing disciplinary stereotypes. Finally, the pedagogical implications of facilitating this WIL initiative are discussed.

Keywords: Speed-networking, speech-language therapy, interprofessional education, social constructivism

The role of quality inter-professional teamwork for enhancing service user outcomes in health and social care settings is widely acknowledged (Nygren et al., 2021). Even so, newly qualified practitioners report lack of confidence, knowledge and experience, and fear of rejection by professionals, playing a part in compromising interactions with individuals from other occupational groups in healthcare teams (Pfaff, 2014). Importantly, multiple studies attest to the positive impact inter-professional work-integrated learning (WIL) can have for students prior to entering employment with this ultimately leading to increases in understanding, knowledge and skills in communicating well between disciplines (Lawlis et al., 2016; Naumann et al., 2021). This article reports a successful approach to instigate a WIL initiative in the classroom setting to foster engagement with inter-professional education among final year speech and language therapy (SLT) students. The article begins with a review of literature related to the emergence of WIL in health disciplines, noting both the conditions that have enabled WIL to flourish in these fields as well as constraints to fostering inter-professional learning in tertiary education. The learning initiative used a 'speed networking' format which involved groups of students interviewing a range of professionals about their roles, tasks, theoretical influences and experiences in the field. As part of the activity, professionals from different sectors and disciplinary fields reflected upon where their practice might intersect with that of SLT. The process for completing this exercise is discussed in detail below. The nexus between different theoretical knowledge and practice in the field was examined in each round of the exercise, using an occupational lens. This 'speed networking' activity aligns with a constructivist framework where opportunities for active peer engagement with learning were encouraged, enabling students to co-construct the question schedule, participate in the interviewing of professionals and generate reflections upon new learning. In keeping with the definition of WIL proffered by the International Journal of Work-Integrated Learning (2021), the exercise included students, university staff and professionals from the workplace/community.

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LITERATURE REVIEW

There are a broad number of healthcare disciplines that involve programmes of study delivered within a tertiary education setting that incorporate both theoretical and clinical/practice education. Examples of these disciplines include but are not limited to Dietetics, Radiology, Occupational Therapy, Nursing, Dentistry, SLT, Pharmacy, Social Work (SW), Psychology and Medicine. In recent years there has been an increased recognition of the role of WIL in the development of knowledge, skills and professional identity within health education (Jackson, 2017). WIL enables students to further augment the skills and knowledge they have acquired in the classroom setting and apply these in practical environments. The learning then becomes a reciprocal process between the classroom and clinical area and the transferring of skills is influenced by the student, tertiary educator and clinical provider (Jackson, 2017). A shared goal of producing work ready graduates, acknowledges the collaborative responsibility and equal importance of learning environments within the academic institution and industry provider settings (Jackson, 2017). Hewitt et al. (2018) identified key drivers for the increase in WIL in higher education including producing a work-ready workforce, support from within the education sector and demand from students related to the perceived benefits of further skill development and enhanced employability. Nursing, Social Work and SLT all draw on the principles of WIL in the construction of their undergraduate curriculum in New Zealand (New Zealand Speech-language Therapists' Association, 2019; Nursing Council of New Zealand, 2021; Social Workers Registration Board, 2021;).

There is an increased recognition of the contribution that multiple disciplines make in the care planning and support of a patient with complex health care needs. Quality patient-centered care acknowledges the role of multi-disciplinary team contributions to the overall healthcare outcomes and experience for the patient (Newhouse & Spring, 2010). Interprofessional Education (IPE) is now recognized as an important component in preparation for, and within, the WIL environment (Pennbrant & Svensson, 2018). IPE has been defined by the World Health Organization as an experience that "occurs when students from two or more professions learn about, from and with each other." (WHO, 2010).

Engaging in IPE has improved collaborative practice, teamwork and communication within healthcare environments and allowed students to gain confidence in their interprofessional skills and knowledge (Machin et al., 2019). Creating IPE opportunities enables students to develop a mutual respect and understanding for different professional perspectives, language and culture and can alleviate bias, prejudice and stereotypical thinking toward alternate professions (Machin et al., 2019; Marchioro et al., 2014). Students also develop a deeper understanding of their own profession within the multi-disciplinary context when they are engaged in sharing what is distinct about their own discipline (Jowsey et al., 2020). It is also noted that members of faculty involved in developing IPE opportunities gain a greater understanding of the role of their healthcare colleagues (Marchioro et al., 2014). Students report involvement in IPE as improving communication, teamwork, gaining appreciation of different professional perspectives, improved confidence and promoting a patient-centered focus (Gudmundsen et al., 2020; Lim & Noble-Jones, 2018; Timm & Schnepper, 2021).

Not surprisingly there are some reported barriers to implementing IPE opportunities within undergraduate student programme design. Curriculum constraints can pose a challenge. For example, deciding which content would need to be removed or reallocated within a programme to accommodate IPE can be contested (Newhouse & Spring, 2010). A lack of support from faculty and administration to facilitate alterations to timetabling and resourcing issues can also limit IPE opportunities (Machin et al., 2019). Information technology systems including patient documentation

require further development to include interprofessional specific recordings (Gudmundsen et al., 2020).

It is important to consider at what point in the curriculum the IPE experience is best placed. Students appear to gain more out of IPE once they have developed their own sense of professional identity and are more readily able to differentiate their profession from others (Machin et al., 2019). IPE should ideally be delivered in both classroom and clinical settings in order that students develop an understanding of both the theoretical and clinical inter-professional similarities and differences (Newhouse & Spring, 2010). However, professions can be socialized into behavioral norms that maintain a hierarchy based on a biomedical model (Machin et al., 2019), and students are vulnerable to observing negative inter-professional behavior and underlying power differentials between disciplines that can impede constructive IPE practice (Lim & Noble-Jones, 2018; Newhouse & Spring, 2010). Considering the balance of the different professions when designing IPE, aids in promoting equity and a reciprocal learning transaction (Machin et al., 2019). IPE design and learning objectives also need to be well considered to ensure that interprofessional practice experiences are authentic (Timm & Schnepper, 2021).

PEDAGOGICAL ALIGNMENT

While the traditional didactic lecture style is still commonly used in the tertiary education sector (Bates, 2015), greater emphasis on creating contemporary learning and teaching spaces recognizes the need to cater for diverse learning styles (Koohestani & Baghcheghi, 2020). This emphasis addresses the need to help students develop a broader range of skills and access different types of knowledge in ways that prepare them better for future employment environments. The speed-networking method for encouraging interactive collaborate peer learning is one example of a departure from traditional forms of didactic delivery. Speed-networking has been used in tertiary education within disciplines such as Engineering (Kahl, 2015), Information Systems (Moussawi et al., 2018) and Social Work (Maidment & Crisp, 2007). The WIL literature is replete with examples of innovative strategies for effectively engaging students using methods that both resonate with the capabilities needed for preparing students for the future workforce while encouraging active learning (Ferrer et al., 2020; Kay et al., 2019). This speed networking activity aligned strongly with adopting a social constructivist framework for engaging with WIL in the classroom. From the social constructivist perspective, learning is conceptualized as a social activity that requires, at particular points, scaffolding by way of formal instruction or guidance (Mintzes, 2020). In this respect, the speed networking exercise also reflects aspects of Vygotsky's (1978) zone of proximal development. Drawing from cognitive theory, constructivist learning acknowledges the centrality of a student's previous knowledge and experience. The introduction of new information utilizes group or peer-based activities offering opportunity to modify previous understandings (Hrynchak & Batty, 2012). This process results in the reconfiguration of long-term memory representations, to integrate new information from the environment and activities undertaken (Svinicki as cited in Hrynchak & Batty, 2012, p. 797). Throughout the speed-networking exercise, students work in groups to formulate the questions posed to the professionals, conduct the interviews, take notes and debrief. This focused group work was intentional to foster a team approach to the learning activity, encouraging students to take responsibility for carrying out different roles and tasks as they would in an authentic work environment. All phases of the speed-networking exercise promoted characteristics associated with constructivist learning principles such as peer social interaction and collaboration; accessing diverse practice perspectives and facilitating opportunities to formulate shared meaning making about inter-professional teamwork during the debriefing (Hord, 2009). This approach to IPE echoes aspects of dialogic learning where knowledge

development occurs through the exchange of views between students and professionals, with an emphasis on promoting a more egalitarian learning space than traditional didactic forms of teaching offer (Freire, 1970). Importantly, dialogue-intensive pedagogies have proven effective in knowledge retention and transfer (Resnick et al., , 2015), along with enhancement of collaborative reasoning and problem solving (Geil, 1998). Each of these attributes are much needed and keenly sought by newly qualified professionals and their employers (Higgs et al., 2019). Importantly in the New Zealand context, WIL initiatives need to take account of acknowledging the primacy of obligations to Māori derived from the 1840 Treaty of Waitangi. This includes adopting learning strategies that are likely to resonate with Māori students. The speed-networking exercise drew upon the idea of fostering a tuakana-teina learning relationship between the students and diverse professionals, reflecting an attempt to decolonize traditional learning practices (Winitana, 2012). In this particular context an older or more experienced person (tuakana) provides opportunity for a younger or less experienced person (teina) to elicit learning about inter-professional work. Of significance here is that the roles between tuakana and teina may be reversed at any time resulting in the transaction having benefits for both parties, thus reflecting a mana-enhancing (trust and mutual respect) process (Winitana, 2012). These dialogues between tuakana and teina in the classroom served to reflect those that would take place during future employment.

Finding ways to help students understand how to integrate theory with practice has been a significant challenge experienced across applied disciplinary education for many years. Research from speech and language therapy, nursing and social work all attest to the struggle in helping students to bring together key concepts and foundational knowledge with practice observed or undertaken in the field (Maidment, 2022; McAllister et al., 2011; West, 2016). The speed networking exercise enabled dialogue to ensue, specifically about how these connections were made by professionals from different disciplines, affording opportunities for students to discover how theoretical ideas and knowledge bases were shared. In particular reference to bio-psycho-social assessment, person centered practice, acknowledgement of indigenous models of practice and ecological systems theory were common across a number of the disciplines. Similarly, professionals were attuned to critical theory, with reference to how issues of stigma, discrimination and social exclusion were addressed in their respective fields. Students were encouraged to question the different professionals about what theories informed their practice and to explore the epistemological genesis of these. Prompting discussion about how theory and practice were integrated was intended to align specifically with fostering learning about how theory taught in the classroom was used in the field. The notion of praxis, in terms of how practitioners reconceptualized their professional work in light of knowledge gleaned from experience was discussed. It was clear after the debriefing from the exercise that in some instances both practitioners and students were challenged in their thinking and gained knowledge from these conversations.

METHOD

Twenty-seven final year SLT students attended the IPE session. The students had some prior experience of IPE during their clinical practice education programme (e.g., in hospital settings) and had engaged in several previous IPE learning activities. Prior to the speed-networking exercise, students were briefed about the structure and process for the session. They were provided with information such as the professionals in attendance, the timing and rotations of small groups, and constructed a schedule of questions they would ask during each rotation. The professionals who participated in the experience represented diverse occupational groups such as nursing, policing, education, disability support, counselling, and social work. In preparation for the speed-networking exercise, participants were provided with an outline of objectives for the session. These objectives were to (1) provide

students with the opportunity to interact with experienced professional, (2) foster learning about the diversity of professions that students will interact with once they graduate, and (3) develop understanding of the diverse clients that students will support in their work as practicing speech-language therapists.

Seven stations (tables labelled A to G) were set up in teaching and learning spaces, with a professional located at each station. Due to room sizes and availability, three rooms were used simultaneously for the session. Two stations were located in two of the rooms and three stations were in the remaining teaching space. The speed-networking activity took place during a scheduled seminar class. As students arrived for the session, they were asked to self-allocate into 7 small groups (n=3 or 4). Each group was provided with a written schedule which included the station letter label, each professional's name and discipline, instructions for the activity and start time for each of the 7 rotations. Once the student groups were organized, each professional briefly introduced themselves in a panel format.

The session schedule included 10 minutes for each rotation discussion and 5 minutes for transition between stations. This time allocation also supported the student groups to move between rooms when required. The end of each rotation was initially signaled by a hand-held ring tone alarm. However, the volume was insufficient to be heard above the animated discussions taking place. As a result, the end of each rotation was then signaled verbally and non-verbally by the facilitator. In keeping with promoting hospitality snacks were supplied.

Students were also asked to nominate a note-taker from their group for each rotation. The intention was to create an all-class resource for students to understand what each group discussed. The note-takers' role was to create a written record of the key points, all groups' notes were combined and made available to students in keeping with constructivist peer-learning principles. At the conclusion of the exercise all students and professionals gathered in a single room. The facilitator and students expressed thanks to the professionals for sharing their time and knowledge. Professionals then communicated what they had gained from the session reflecting reciprocity associated with the tuakana teina relationship. Students then remained to further reflect and debrief about the learning derived from the speed-networking exercise and completed an evaluation.

Students participated in a written feedback activity to evaluate the session. The project was exempt from full ethics committee review based on the University's ethics review criteria for teaching evaluation. However, ethical research processes were followed. This included providing participants with information about the voluntary nature of participation (i.e., that they could choose not to respond to any questions presented), the potential for the evaluation to be used for publication and that any comments would be anonymous. Consultation about ethical data gathering from this exercise was undertaken at the host institution and it was established that evaluation of this teaching initiative fitted within existing protocols for the provision of confidential teaching evaluation. This evaluation involved the presentation of 5 questions via the Mentimeter.com online platform (www.mentimeter.com). The activity commenced with each student being provided with an access code to join the platform via their personal devices (i.e., smartphone, tablet or laptop computer). The first screen included the following instructions for students:

To help me understand your experience of this session please respond to the following five questions. Please note that:

- some of the information (including quotes) that you provide may be used in a presentation or publication about the exercise.

- these responses are anonymous (I will not know who makes which comments)
- no information that identifies you will be used in any publication or presentation
- if you do not want your words used – please do not respond or mark your response with X

Each question was presented sequentially at the top of the main screen with students accessing personal devices to make their responses. As student responses were entered, these were displayed on the main screen in front of the class in the form of speech bubbles. All responses were anonymous with no information available to link a student with their response. Approximately 3 minutes was provided for students to respond to each question before the next question was presented. Although students were able to submit multiple responses, the number of student responses ranged from 22 (for question 5) to 28 (for question 2).

The five questions presented to students were –

1. What did you find useful about the IPE speed-networking/networking session?
2. What would you change about the session?
3. What are three things you have learned from the session?
4. How might what you have learned in the session influence your future practice?
5. What other educational strategies might enhance your understanding of the multi-disciplinary roles in health and/or education?

ANALYSIS

An inductive reflexive approach was followed to examine student responses to these questions (Braun & Clarke, 2021). This involved (a) reading responses several times, (b) initial code generation, (c) identifying themes, and (d) reviewing and labelling themes. Responses were reviewed and code generation involved identifying unique concepts or units of meaning (e.g., understanding the SLT role, learning about professions, and, gaining information). A total of 62 unique codes were identified across all response data. The development of themes then involved reviewing identified codes together with data extracts in order to determine broader meanings. Initial themes were then reviewed against the data in order to refine and label the themes. It is acknowledged that having students comments visible to others in real-time may have impacted on the data collection. However, the impact of this is considered minimal as students appeared focused on responding individually and there was a time lag of several seconds between entering their responses and these being displayed on the screen.

EVALUATIVE FEEDBACK

Two main themes were identified from response data from questions 1, 3 and 4. These were learning and understanding and interprofessional collaboration These themes and illustrative quotes from the data are presented below.

Learning and Understanding

Students described the session as supporting their learning and increasing their understanding of other professions, their own profession, and how different professional roles are linked with their future work as speech-language therapists e.g. "I learnt about the possibilities of my career, who I can work with and the experiences I could encounter. It gave me reassurance that my future team members will be there to support me."

Students reported an increase in understanding regarding the work of other occupational groups as well as appreciating that the exercise allowed them to acknowledge stereotypical thinking related to different disciplinary cohorts. Opening up the opportunity for students to gain understanding of their own perceptions and unconscious bias related to different professions appeared to be valuable learning to influence future work place relations within an interprofessional context. "I found it really interesting to see the wide scope of practice each profession had – I didn't realize how many stereotypes I had in my mind of each profession."

The session also appeared to support students learning and understanding about the broad scope of their future work as Speech-language therapists and the variety of professionals that they may encounter in their work. "Being more aware about just how many professionals we may work with."

In addition, the students identified an increased understanding of the potential diversity of their own occupation and its contribution to the wider healthcare system. "I learned how diverse our role can be."

Interprofessional Collaboration

The theme interprofessional collaboration was identified from data provided in response to questions 1, 3 and 4. This involved students reflecting that the session provided a range of opportunities to support their understanding of the benefits and practices involved in working collaboratively with other professionals. Examples are: "It was really useful to see not only how other professions were related to mine, but also how we would work together." "Learning how SLTs are involved with a number of different professionals. What those professionals find useful working with SLTs and what we can do in our future practice to enhance client outcomes by working with these professions." "How interconnected professions are across the board. How flexible each person needs to be to work interprofessionally." "More opportunities to work alongside other student professionals."

The theme identified from data generated from questions 2 and 5 was future enhancements.

Future Enhancements

Future enhancements was identified as a theme from the student comments related to aspects of the session that they thought could strengthen future speed-networking exercises. For example, student responses described a desire for additional time to spend in the session.

Students also expressed that they would have appreciated each professional providing a take-home document for future reference and requested further opportunities to engage with professionals and students from diverse disciplinary backgrounds. Examples are: "Having more lectures or educational interactions with people from other areas." "I would love to hear from physiotherapist, occupational therapist, physician." "Potentially more time! Loved having a chat but in some aspects I felt as though I had more questions." "More opportunities to work alongside other student professionals."

DISCUSSION

The SLT students appeared to relish opportunities for connecting with other disciplines and attested to the usefulness of this exercise as evidenced by their feedback provided. Key aspects of social constructivism such as peer learning within a dialogic context were integral to the speed-networking process. The conversations were animated and promoted a deeper understanding of interprofessional dynamics. The structure of the exercise was such that traditional power dynamics evident between

disciplines in healthcare settings appeared to be absent, as students were freely engaging in their conversations with the professionals. Facilitating this experience within the classroom setting allowed students to engage with other disciplines prior to their final pre-registration clinical placement, affording opportunities to better prepare for their work in multi-disciplinary team settings. The conversations modelled constructive dialogue that strengthened the connections for students between theory and practice not only within their own discipline but across the occupational groups. These conversations also modelled authentic instances of professional consultation that could be continued by students when out in the field.

Students appeared to better understand the scope of their own discipline as well as have a more informed understanding of what other disciplines contributed to the interprofessional space. The process of comparing and contrasting a range of disciplinary approaches also enabled students to gain a greater understanding of diverse professional identities as evidenced in their feedback. As identified in the literature multiple disciplines can hold entrenched stereotypical thinking about other occupational groups in healthcare, where IPE has been identified as a means for addressing potential professional bias (Darmayani et al., (2020). The student feedback identified how this exercise allowed them to recognize and acknowledge their own pre-conceived ideas about other disciplines. Raising awareness of the wider and overlapping contribution that disciplines make to health consumer care may strengthen understanding of interprofessional collaboration and address potential misunderstanding that can occur regarding multi-disciplinary team input. Students expressed some surprise during the debriefing at the level of collaboration between professionals in different healthcare settings. This attuned the authors to consider how learning from professionals who work outside of the healthcare sector aligns with current emphasis on cross-sectoral collaboration (Puebla Fortier & Coulter, 2021). Cross-sectoral collaboration refers to "information, resources, activities and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately" (Bryson et al., 2006, as cited in Puebla Fortier & Coulter, 2021, p. 146). Increasing emphasis on the need for cross-sectoral collaboration to address complex issues is evident in the literature (Binot et al., 2015; Ladekjær Larsen et al., 2022). As such this exercise provided an authentic reflection of how communication, teamwork and patient-centered care involves contribution from a diverse range of occupational groups and sectors. The speed-networking exercise allowed a quick succession of engagement with a wide network of professionals modelling the integral nature of cross-sectoral collaboration to promote integrated holistic care (Klinker & Agger, 2020).

Pedagogically the speed-networking initiative aligned to work integrated principles. There was a constructive alignment between the exercise and learning outcomes for the course that addressed several graduate attributes. These attributes include enhancing community engagement, promoting work-preparedness and developing communication and team-work knowledge. The exercise also facilitated an appreciation for diverse disciplinary cultures that allowed students to begin recognizing their own stereotypical thinking related to SLT and other professions. Professionals recognized the role of work-integrated learning for student knowledge and skill acquisition, and this was evidenced through their enthusiastic engagement with the process and willingness to be involved. The debrief session identified that reciprocal learning had taken place between the student groups and the professionals, and this led to an enhanced understanding of the role of SLT in healthcare.

Some suggestions for future engagement in IPE with a WIL focus include incorporating students from other disciplines to strengthen peer teaching and learning at multiple stages in the educational programmes. It is recommended that this IPE student collaboration occur in the latter stages of the undergraduate programmes in order that students have developed a clear understanding of their own

disciplinary professional identity. It is suggested that IPE opportunities are extended beyond the classroom to within practicum settings to reinforce the applied nature of collaborative and interdisciplinary practice for students. This might occur through foundational curriculum development with interprofessional WIL at the center. The current initiative could be emulated in different educational programmes with a multiple range of professions. Alternatively, the speed-networking method could be adopted utilising a case study design with professions providing input related to their role as it pertains to the case study. Researching this pedagogical design on a larger scale may provide further evidence to support both speed-networking and the benefit of IPE in the WIL environment.

LIMITATIONS

One of the limitations within the current exercise relates to the physical environment where the speed-networking exercise was conducted. Due to timetabling constraints, the exercise needed to be facilitated across three different classrooms and this potentially impacted on the flow of the exercise. This arrangement also meant that the facilitator was required to move between locations, and this proved challenging at times to maintain timekeeping. In future it would be beneficial for this exercise to be undertaken within one or adjoining classrooms. This exercise was focused on input from largely health-related professionals and it would have been of benefit to include health care consumers and or family members to give their unique perspective on engaging in health care services within an interprofessional context. There are also other disciplines outside of health that contribute to the wellbeing of an individual and their family such as schoolteachers, legal personnel, local electorate representatives and community support staff. This speed-networking exercise was a one-off initiative. To facilitate meaningful understanding and engagement and strengthen WIL outcomes it is acknowledged that IPE must be embedded within the pedagogical foundation of curriculum design.

CONCLUSION

Through incorporating the knowledge and expertise of multiple professions within the SLT classroom setting student understanding related to their role and that of others in the healthcare environment has been strengthened. The role of IPE in fostering constructive relational practice has been highlighted in this exercise, potentially contributing to addressing stereotypical disciplinary barriers. A student-centered approach utilising a speed-networking method allowed authentic engagement with multiple disciplines. This interactive IPE activity was closely aligned with constructivist pedagogy and WIL principles.

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