

INTERPROFESSIONAL EDUCATION

Interprofessional education: Building social capital among faculty. Are we there yet?

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Abstract

Introduction: Interprofessional education (IPE) is advocated by governments, health professional bodies and universities as key to health professional education and improvement in patient safety. Although many universities have implemented scaffolded IPE curricular models across multiple disciplines, few have reported on faculty perception of this approach. This study sought to explore faculty perception in response to a new IPE curriculum model using the theoretical lens of social capital theory.

Methods: In 2021, 24 key University of Sydney Faculty of Medicine and Health (FMH) academics (from nursing, medical imaging, pharmacy, oral health, dentistry, applied science, health science, dietetics, medical science and occupational therapy) involved in the delivery of IPE were invited to participate in individual interviews. Using the conceptual lens of social capital theory, framework analysis was used to categorise themes in the data.

Results: In total, 46% (n = 11) of invited FMH faculty were interviewed. Positive elements to the implementation of the curriculum model included a feeling of connectedness, recognition of a scaffolded approach to IPE integrated in existing coursework and growing interest of early career academics in IPE. However, a number of challenges were revealed, including structural barriers in course design, timetabling, misunderstanding regarding the IPE curricula and inequity in distribution of workload.

Conclusion: Social capital theory provided a useful framework to consider the perceived enablers and barriers to the newly established IPE curriculum. Although the findings indicate that faculty felt positive about implementing the IPE curriculum, a number of barriers were identified, highlighting the need for increased faculty training and broader engagement in development of IPE curricula.

Keywords: interprofessional education; social capital; curriculum; faculty

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Introduction

Interprofessional education (IPE) is defined by the World Health Organisation (2010) as occurring “when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes” (p. 13). To varying extents, IPE is advocated by governments, healthcare regulators and universities as key to health professional education and improvement in patient safety and care (Steven et al., 2017; Thistlethwaite et al., 2019). The inclusion of interprofessional experiences within university health professional education activities contributes to improving students’ collaboration, communication and leadership skills in preparation for entering the healthcare workforce (Brock et al., 2013; Dalton et al., 2007, Reeves et al., 2013; Reeves et al., 2017). Another strong driver to implement IPE is the requirement from health professional regulators that students learn to work collaboratively in healthcare teams. A recent review of governance models for quality assurance discussed the “need to achieve greater alignment between the academic and health service governing systems”, suggesting an integrated governance structure to improve the link between education and practice (O’Keefe et al., 2020, p. 1148).

Effective education and training in interprofessional education is required to ensure a “collaborative practice-ready health workforce” (Khalili et al., 2019, p. 19) capable of optimising the individual skills within healthcare teams, sharing case management and providing improved health outcomes (Global Forum on Innovation in Health Professional Education, Board on Global Health, & Institute of Medicine, 2013; Khalili et al., 2014; Khalili et al., 2019). Although the importance of developing skills for effective collaboration is widely accepted, it is too often that the first time health professionals work together is as new graduates (Lawlis et al., 2014; Mladenovic & Tilden, 2017; Reeves et al., 2017). This is largely due to the complexities of universities delivering IPE. Widely reported barriers include the logistical issues and timetabling associated with IPE activities (Curran et al., 2015; Evans et al., 2019) and the preference of individuals to work within their established silos (Horsburgh et al., 2001; Keshtkaren et al., 2014; Salamonson et al., 2009).

The design of student-centred learning activities with content that is simultaneously relevant to multiple health professions and suitable for large-scale implementation is critical to success (Bloomfield et al., 2021; Burgess & McGregor, 2022). Additionally, how faculty respond and engage with IPE initiatives is an important factor. A failure to properly prepare faculty for their IPE roles and responsibilities has been cited as a significant barrier to the success of IPE (Cuff et al., 2014). Initiatives that target both individual and organisational change assist in breaking down these barriers to IPE by creating opportunities for collaborative learning and practice (Cuff et al., 2014; Hinderer et al., 2016; Steinert, 2005). Such initiatives are deliverable in varying formats, such as regular meetings, facilitation guides, role modelling and formal training (Acquavita et al., 2014; Bogossian et al., 2023; Di Prospero & Bhimji-Hewitt, 2011). In a recent study

collecting data on the current state of IPE within higher education globally, Khalili and colleagues (2022) reported that less than half of the responding universities provide dedicated faculty training and development in IPE.

While internationally, higher education institutes are increasingly supportive of IPE activities, there is an identified need for further reporting regarding the associated challenges and enablers, to specifically inform successful administration of IPE curriculum models (Bogossian et al., 2023; Lee et al., 2019). Given this research gap, we sought to explore faculties' perceptions of strategies and academic engagement in the implementation of IPE curricula at a large Australian university. Using the theoretical framework of social capital theory, our primary research questions were:

1. What are faculty perceptions of a newly established interprofessional learning curriculum?
2. What are perceived enablers and barriers to successful implementation of the interprofessional learning curriculum?

Conceptual lens

Social capital theory is one of the many sociocultural learning theories that views social interactions as key to learning (Hean et al., 2003). Social capital has been described as “a collective asset in the form of shared norms, values, beliefs, trust, networks, social relations, and institutions that facilitate cooperation and collective action for mutual benefits” (Bhandari & Yasunobu, 2009, p. 408). First developed by Bourdieu (1986), the concept of social capital has been adapted and built on by various sociologists (Bhandari & Yasunobu, 2009). The conceptual lens of social capital has been used previously to describe the gains and challenges of student network participants within interprofessional activities (Hean et al., 2003). However, less has been reported on how faculty perceive student and faculty involvement in IPE activities.

Building on theory development by Nahapiet and Ghoshal (1997), Lee and colleagues (2019) suggest that the lens of social capital theory can also be used to identify, understand and overcome the barriers to IPE. They note that in the context of faculty development, social capital consists of not only the network but also the assets that are mobilised within that network, which are characterised by three key dimensions: structural, cognitive and relational (Lee et al., 2019). These dimensions, although separate in nature, do have similar descriptions that are interdependent and interrelate with each other.

Structural: This dimension explores the communication, roles, rules and procedures within the organisation (Claridge, 2018). It focuses on the interactions and relationships among individuals within the network (Nahapiet & Ghoshal, 1997, 1998; Lee et al., 2019). In the IPE context, this encompasses the tools, knowledge and skills available within IPE activities (Wheeler et al., 2019).

Cognitive: This dimension is centred on the formation of shared goals, values and beliefs and is linked to the enablement of shared understandings and the reduction of misunderstandings (Nahapiet & Ghoshal, 1997, 1998; Lee et al., 2019). Within an IPE context, this involves norms and rules (unspoken values) and expectations for faculty to prepare and engage in IPE.

Relational: This dimension is shaped by trust and reliability, influenced by the trustworthiness and reliability of individuals (Lee et al., 2019; Nahapiet & Ghoshal, 1997, 1998). A sense of trust is developed when faculty feel they are part of an IPE community that has shared goals (Hean et al., 2003). Trust builds between faculty through their interactions and underpins the willingness of network members to engage and assist others and the expectation that individual efforts will be reciprocated (Wasko & Faraj, 2005).

Methods

Study context

This study took place at The University of Sydney, Faculty of Medicine and Health (FMH), Australia. Although IPE activities have been implemented since the late 1990s, in 2017, the FMH IPE strategy was developed and an IPE leadership team formed, as outlined below.

IPE strategy: The long-term aim of the strategy is to scaffold IPE activities and assessments for all health professional students in each year of their degree program and to graduate health professional students capable of delivering high-quality, collaborative, patient-centred care.

IPE leadership: Current funding provides one part-time (0.2) academic and one full-time administrative coordinator. Overseen by the associate dean, education, FMH, this team is responsible for the delivery, curriculum development, faculty development and maintenance of student records for IPE across FMH. Two key groups are involved in decision making about interprofessional learning within the faculty. The “advisory group”, with representation from heads of school, is responsible for the strategic oversight of IPE and the “community of practice”, with membership open across university schools and local health districts. A representative from each FMH school is encouraged to attend and act as a liaison with the schools.

IPE faculty: All FMH faculty are welcome to participate in IPE activities. Approximately one to two representatives from each school attend the once monthly IPE meetings. Training in general IPE facilitation is provided once a semester, and activity-specific training is offered 2 weeks prior to each activity. Unit of study coordinators are responsible for embedding IPE activities within their unit of study coursework.

IPE activities: Each year, approximately 5,000 healthcare students engage in IPE activities organised by the IPE team. Students are from across six schools (Medicine, Dentistry, Nursing, Health Sciences, Pharmacy and Medical Sciences) and 13 disciplines (medicine,

dentistry, oral health, nursing, pharmacy, physiotherapy, medical imaging, medical sciences, speech pathology, dietetics, occupational therapy, exercise physiology and applied sciences). Most IPE activities are large scale, involving between 650 to 2,500 students. Examples of key activities are presented in Table 1. All activities implemented by the IPE team are accredited to an “IPE ePassport” system that is longitudinal, spanning each student’s degree. The IPE ePassport acts as a comprehensive learner record (CLR), allowing students to capture, collate and communicate their interprofessional achievements.

Data collection and analysis

In October 2021, key faculty (n = 24) from each discipline across the FMH involved in the delivery and facilitation of two or more IPE activities were selected and invited to attend individual interviews. A semi-structured interview guide was used. Interviews were conducted at the end of the academic year, with questions providing the opportunity for faculty to reflect on the implementation of IPE curricula activities and faculty engagement. The individual interviews were conducted by the first author, who is an experienced educationalist and researcher trained in the facilitation of interviews. Interview questions centred on current perceptions of past and current IPE curricula activities, approaches to implementation and the support provided, the benefits of IPE activities for staff and students, and ideas of what could further assist in improving the current IPE model.

Framework analysis was undertaken using a 6-step model (Gale et al., 2013):

- 1) Using verbatim transcripts of the interviews, the researchers familiarised themselves with the data.
- 2) Initial codes were developed.
- 3) A working analytical framework was generated by the researchers using the pre-determined themes of social capital theory (Lee et al., 2019), which included sub-themes developed in Phase 2.
- 4) Data were re-analysed, with the removal of irrelevant sub-themes and agreement of sub-themes from the researchers.
- 5) Theme and sub-theme definitions were written, agreed and recorded.
- 6) Data were charted into the framework matrix by the first author and reviewed by all researchers.

Ethics approval was gained from The University of Sydney Human Research Ethics Committee (approval project number: 2018/830). Written consent was provided by each research participant. The study was performed in accordance with the Declaration of Helsinki.

Table 1*IPE Activities at the Time of the Study (2021), Implemented on an Annual Basis by the IPE Team*

Name of Activity	Activity Outcomes	Year of Students	Disciplines Involved	Number of Students	Format/Description and Faculty Involvement
IPE introductory workshop	<p>At the end of this workshop, students will be able to:</p> <ul style="list-style-type: none"> describe the characteristics of an effective team reflect on the challenges of establishing an effective team understand the role of interprofessional teamwork for collaborative healthcare demonstrate an awareness of how to communicate effectively in a healthcare environment demonstrate an awareness of the different roles of team members in healthcare. 	Year 1	Diagnostic radiography, occupational therapy, physiotherapy, speech pathology, exercise physiology, pharmacy, medicine, dentistry, oral health, dietetics, health sciences	2,547	<p>Students work in interprofessional teams of 5–6 students online via three workstations to develop students' understanding of role identification, effective communication and teamwork. The activities were purposely developed to promote collaborative practice from an early stage in a student's degree.</p> <p>Faculty</p> <p>Academic team of five lead the activity. Facilitator training is provided (1 hour). Facilitator guide and running sheet are provided. Approximately 60 facilitators are involved in hosting workshops.</p>
Health collaboration challenge (HCC)	<p>At the end of this activity, students will be able to:</p> <ul style="list-style-type: none"> understand the contribution of a range of different health professions to meet complex patient care needs integrate and prioritise key contributions from different health professions into a patient management plan apply a collaborative approach to problem solving with different health professions for a challenging creative task. 	Years 2 & 3	Nursing, medicine, pharmacy, diagnostic radiography, dietetics, occupational therapy, speech pathology, physiotherapy, exercise physiology, dentistry, oral health, medical sciences	1,697	<p>Students are allocated to interprofessional teams of 5–6 students and collaborate to develop a 7-minute video and one page written management plan based on a complex patient case. Students then peer review two video submissions and complete an intra-team peer review on their peers' contribution and effort.</p> <p>Faculty</p> <p>Academic team of two leads the project, which is reviewed at committee level. Facilitator marking guide is provided with no formal training. Approximately 15 staff are involved in grading assignments.</p>

Name of Activity	Activity Outcomes	Year of Students	Disciplines Involved	Number of Students	Format/Description and Faculty Involvement
Medication safety workshop	<p>At the end of these activities, students from medicine, pharmacy and nursing should be able to:</p> <ul style="list-style-type: none"> • demonstrate an understanding of the contribution of effective interprofessional teamwork for patient medication safety • construct an understanding of the roles of the different health disciplines in the context of the medication safety • apply effective communication skills within the interprofessional team to work collaboratively • record individual and shared decision making regarding medications using a simulated electronic medical record (e.g., discussion board) • develop a safe and effective prescription as an interprofessional team. 	Medicine and nursing (Year 2), pharmacy (Year 4)	Medicine, nursing, pharmacy	654	<p>This activity is delivered asynchronously and recapitulates the system-based approach used by medical practitioners, pharmacists and nurses. Students work through each of the steps within the medication management cycle when prescribing medicines to patients.</p> <p>Faculty</p> <p>Academic team of six leads the project.</p> <p>Facilitator training and meetings are provided (approximately 3 hours).</p> <p>Facilitator guide and running sheet are provided.</p> <p>Approximately 8 facilitators are involved in hosting workshops.</p>
Interprofessional communication education (ICE) workshop	<p>The workshop included five learning objectives as outlined below:</p> <ul style="list-style-type: none"> • Demonstrate an understanding of the contribution of effective interprofessional teamwork for patient safety. • Develop a comprehensive interprofessional transition of care team plan. • Apply effective communication skills within the interprofessional team to work collaboratively. • Identify patient safety priorities within the context of the transition of care. • Construct an understanding of the roles of the different health disciplines in the context of the transition of care. 	Year 1	Pharmacy, medicine and nursing	736	<p>A two-part workshop that focuses on communication and the development of a joint transition of care plan.</p> <p>Faculty</p> <p>Academic team of six leads the project.</p> <p>Facilitator training is provided (approximately 1 hour).</p> <p>Facilitator guide and running sheet are provided.</p> <p>Approximately 15 facilitators are involved in hosting workshops.</p>

Name of Activity	Activity Outcomes	Year of Students	Disciplines Involved	Number of Students	Format/Description and Faculty Involvement
Patient safety workshop: Understanding and learning from errors	By the end of the workshop, students will be able to: <ul style="list-style-type: none"> • understand the nature of error within healthcare • understand the ways to learn from error to improve patient safety • explain the terms error, violation, near miss and hindsight bias • demonstrate the use of “graded assertiveness”. 	Senior students	Medicine, nursing, pharmacy, oral health, dentistry	751	The content of the patient safety workshop is based the World Health Organisation Patient Safety Curriculum Guide Multi-Professional Edition. A team-based learning format is used. Both online only and blended learning formats have been used. Large classes of 150 students, with small group activities in groups of 5 to 6. Faculty Academic team of three leads the project. Facilitator training is provided (approximately 1 hour). Facilitator guide and running sheet are provided. Approximately 12 facilitators are involved in hosting workshops.
Peer teacher training program	This program provides students with the opportunity to: <ul style="list-style-type: none"> • develop the teaching and assessment skills required for health professional students to participate in teaching and assessment programs • develop the skills required of health professional students to provide effective feedback to peers and future colleagues • recognise opportunities for teaching and learning within clinical settings and contribute to the knowledge and skill development of others • participate in interprofessional learning and team collaboration that can be applied to professional practice. 	Senior students	All health disciplines	March: 74 July: 42 Total: 116	The peer teacher training program is designed to provide health professional students with opportunities to develop skills in teaching, assessment and feedback. Both online only and blended-learning formats have been used. Participants are provided with theoretical background and opportunities to apply new knowledge and concepts. Delivered asynchronously and synchronously to large classes of 50–100, with small group activities of 4 to 6 students. Faculty One academic leads the project. Facilitator training is provided (approximately 10 minutes). Facilitator guides, marking rubrics and running sheets are provided. Approximately 8 facilitators are involved in hosting workshops.

Results

In total, 11/24 (46%) of invited FMH faculty attended an individual interview. Of those interviewed, two were male and nine were female. They were from the disciplines of nursing (n = 1), medical imaging (n = 2), pharmacy (n = 1), oral health (n = 1), dentistry (n = 1), applied science (n = 1), health science (n = 1), dietetics (n = 1), medical science (n = 1) and occupational therapy (n = 1). Interview data from the interviews are presented within three tables using the conceptual framework of social capital theory focused on the structural, cognitive and relational dimensions.

Structural dimension

The theme of “structural” dimension is illustrated in Table 2. Faculty appreciated the central coordination of IPE in allowing growth and connection between departments. There was also a reduced feeling in being “siloeed” within disciplines. Faculty reported the need for showcasing and promoting IPE to encourage participation. They also expressed a desire to engage with junior staff and encourage further faculty development in IPE. One faculty member commented, “Staff are starting to get interested. We’ve had some more junior staff come on board and wanted to do the training, but then you know, we do send out ... voluntary [registration]” (Participant 2).

Table 2

*Faculty (Interviewee) Perceptions That Relate to the “Structural” Dimension**

Sub-theme	Comments
The centralised coordination of IPE has supported growth and connection	<p><i>We are improving ... it's driven centrally by the Faculty of Medicine and Health, and I think it has connected ... (previously holding) a one-off event. ... Students were finding it hard to understand where it fits in (Participant 2).</i></p> <p><i>I believe that the university have [sic] done a really good job in mapping out now a process of IPL across curricula (Participant 3).</i></p> <p><i>I think the ... communication and working with the staff seem to be very well organised and, you know, everyone seems to know where they needed to be at any stage of the process (Participant 9).</i></p>
A reduced feeling of being “siloeed” in schools	<p><i>We've been very siloeed and on merging of [the] faculty ... we have ... really good opportunities to make that much more seamless so that the students get to really work with others (Participant 4).</i></p> <p><i>I think there is scope. I tried this year, but I got to know who's who in the faculty, and I look forward to more interdisciplinary interaction among staff as well (Participant 7).</i></p>
IPE needs to be showcased and promoted to encourage participation	<p><i>I haven't seen anything this year about showcasing these amazing interprofessional projects. And I think, ... promoting [it] gets the staff really enthused about the whole process. We do have some really enthusiastic staff. We could do it across more disciplines and with more involvement (Participant 8).</i></p> <p><i>More marketing. Bring it out there, so that staff are aware. Yes, so that we can encourage more involvement, I guess, yeah (Participant 7).</i></p>

Sub-theme	Comments
Faculty development in IPE is needed, with engagement of junior staff	<i>We should be providing staff with options for doing workshops ... lectures or a seminar series or things like that, where we can actually learn from each other (Participant 5).</i> <i>Staff that are starting to get interested, we've had some more junior staff come on board and wanted to do the training, but then you know we do send out ... voluntary [registration] (Participant 2).</i>

* The "structural" dimension explores the communication, roles, rules and procedures within the organisation (Claridge, 2018) whilst also focusing on trust and expectations through network interactions (Lee et al., 2019).

Cognitive dimension

The theme of "cognitive" dimension is illustrated in Table 3. Faculty demonstrated an appreciation for the scaffolded curriculum and viewed this as beneficial to staff and students. Some participants did not understand that IPE was embedded within the various health professional education curricula. Timetabling was acknowledged as a concern due to the number of students, and there was a perception that increased forward planning would improve this. Faculty also reported they were starting to feel fatigued and wanted to "spread the load". One member of faculty commented, "You know, [you ask for] assistance and sometimes you don't get a great response in people coming on board, so as with anything you have champions, who do a lot of the work" (Participant 4).

Table 3

*Faculty (Interviewee) Perceptions That Relate to the "Cognitive" Dimension**

Sub-theme	Comments
A scaffolded approach was seen as beneficial to embed IPE in curriculum and to build on students' knowledge	<i>[We have] used scaffolding to do that through first, second, third and fourth year of students, in both postgraduate and undergraduate courses. ... The scaffolded activities is [sic] a great way of embedding interprofessional learning into the curriculum (Participant 4).</i> <i>We're looking at a more scaffolded approach, where we start from first semester, then build on in second semester. So having a really big activity in first semester for health students is really important, starts to get them thinking (Participant 2).</i>
Faculty involved in IPE are starting to feel fatigued, feel they would ideally "spread the load"	<i>It's the same staff, so I think there needs to be ways to engage the wider university for interprofessional activities. For interdisciplinary education to occur, you need greater involvement of staff, and ... people don't even realise the possibilities of interprofessional collaboration and how that could occur (Participant 4).</i> <i>I felt a bit of fatigue at the last meeting I attended, ... it's just the same people again and again and, ... I thought we could spread the load. ... It is a small, small group of the usual suspects (Participant 6).</i>
It was perceived by some faculty that IPE is not embedded in the curricula but rather as an "add on"	<i>It might say something in the curriculum, but it's not actually embedded and then the study coordinators aren't all on board with it, and I think that that can be very difficult (Participant 10).</i> <i>I really felt it was a bolt on. You know it's ... not embedded in the curricula. There's investment in it ... but ... it's done as an add on (Participant 1).</i>

Sub-theme	Comments
Continued concerns about timetabling difficulties and feel forward planning would assist in resolving issues	<i>We need to collaborate on our timetabling; so you know, pharmacy are about to start a new curriculum, but the first thing we should do is to embed or print into that that cannot be sort of moved (Participant 3).</i> <i>To timetable students ... if you want a number of different disciplines in a particular activity ... [with] 600 students, it makes it very difficult to timetable (Participant 2).</i>

* The “cognitive” dimension centres on the formation of shared goals and values, enabling shared understanding of the knowledge and tools available to individuals (Lee et al., 2019).

Relational dimension

The theme of “relational” dimension is presented in Table 4. Faculty appreciated the contributions that IPE “champions” from each discipline made in ensuring the continuity of disciplinary involvement. IPE was perceived as causing increased workload for unit of study coordinators. Faculty felt that IPE should be seen as “everybody’s business”. To support involvement of individuals, they would like the added workload of IPE acknowledged. Faculty also noted that a dedicated team of professional and academic staff are needed to ensure sustainability of IPE. One faculty member commented, “There needs to be more staff in there, supporting the activities. I think one person alone is not enough, especially when we’re doing large scale activities” (Participant 2).

Table 4

*Faculty (Interviewee) Perceptions That Relate to the “Relational” Dimension**

Sub-theme	Comments
Appreciation for the role that disciplinary representatives play in maintaining disciplinary involvement in IPE through the community of practice	<i>What I’m saying is the people making it happen, made it happen! Because you know [name] is our IPL person, like, I often I assume he has it all under control, so I will liaise with him as well, making sure things are happening (Participant 3).</i> <i>The champions of interprofessional education in the disciplines have been able to connect them [students and faculty] together and certainly we’re starting to see some growth” (Participant 2).</i>
More staff should be involved in IPE, and it should be seen as “everybody’s business”	<i>I’d like to, to actually see ... more staff working interprofessionally. Everybody should be involved in much more (Participant 5).</i> <i>I think there’s a core group of people who are really passionate to keep it going, but it’s not being seen as everybody’s business (Participant 11).</i>
There is a continued need for dedicated IPE professional and academic staff to support the implementation of IPE	<i>There needs to be more staff in there, supporting the activities. I think one person alone is not enough, especially when we’re doing large scale activities (Participant 2).</i> <i>You really need champions to make this happen, like it’s not something that you can just leave 100% up to a unit of study coordinator. Like it sort of needs to be above that position because they change, but you really need the IPL team (Participant 3).</i>

Sub-theme	Comments
IPE is seen as additional work by unit of study coordinators, so may not be the appropriate target audience for engagement	<p><i>Sometimes IPL is seen as a nice add on but not always integral. The unit of study coordinators ... look at it and go, 'Oh, this is too much work. I've got enough work on my plate. I don't want to know anything about it', and I think we do deal with that (Participant 11).</i></p> <p><i>Some unit of study coordinators that say yes, it can go into my unit, but they won't put their hand up to support the sessions ... That's a problem for us moving forward, because we need to get more people on board and seeing the relevance of it (Participant 2).</i></p>
<p>There is a recognition of the need for acknowledgement of workload hours for developing, teaching and participating in IPE activities</p> <p>Relational: recognition of group members accomplishments.</p>	<p><i>As far as I can see, you don't have allocated workload to it [IPE]. So there's ... not going to get [allocated] teaching hours in there, which means you're basically operating off goodwill, which is one of those structural barriers (Participant 1).</i></p> <p><i>I think that there should be an allocation of time. ... It takes a lot of time for development and coordination. I think that we need to acknowledge the academic staff that are involved. You know, it is, it is a big commitment for them, and there's also a lot of advisory meetings and team meetings (Participant 4).</i></p>

* The "relational" dimension focuses on the trustworthiness and reliability of individuals. This theme examines the leadership, opportunities for participation and recognition of accomplishments (Lee et al., 2019).

Discussion

Using social capital theory as a conceptual lens (Lee et al., 2019), we sought to explore faculty perceptions of IPE curricula, strategies and implementation, including the enablers and barriers. A number of positive elements were identified, including a sense that IPE activities and engagement were expanding, utilisation of a scaffolded approach that could be integrated into existing coursework, growing interest of early career health professional academics in IPE and a range of engaging activities built around relevant patient cases. However, a number of challenges were also identified, such as timetabling across disciplines with large student numbers, structural barriers in course design and the equity of workload distribution among faculty. Additionally, faculty demonstrated a lack of understanding regarding the extent to which IPE activities have been embedded in the curriculum and scaffolded throughout student degrees. Due to the interlinked nature of the three dimensions of social capital theory, key findings have been discussed as topics of exploration rather than dimensional themes.

Social relationships and interactions that occur between network members assist in the development of trust, communication and setting of expectations (George et al., 2014; Mohaupt et al., 2012; Nahapiet & Ghoshal, 1997). Within the context of IPE, network members are reliant on each other to contribute to the planning, preparation, implementation, facilitation, assessment and evaluation of various large-scale IPE activities. Encouragingly, our results suggest an increased awareness of the relevance of IPE, with faculty reporting that the centralised coordination from the dedicated IPE staff and structures provided clearer communication and a sense of connectedness. Faculty reported a reduced feeling of being siloed within their own discipline and looked forward to more interdisciplinary interaction between staff. Lee et al. (2019) report that

frequent opportunities to socialise and discuss IPE and common interests enable shared understanding and values, strengthening the structural dimension.

A recent review of Australia's health workforce identified experiences of isolation and disconnection from large educator groups involved with IPE at national, local and university level (COAG Health Council, 2017). As noted by Lee and colleagues (2019), engaging suitable community members in IPE is critical to success. Encouraging participation from all career levels assists growth, innovation and sustainability (Buja et al., 2013; Cooke et al., 2003; Irby et al., 2004; LaMantia et al., 2010; Searle et al., 2010). Furthermore, building strong networks and interprofessional collaborations will reduce competition for resources between projects and enable the sharing of best practice.

Within our study, many educators were unaware of how colleagues in different disciplines were engaged in IPE activities. This may have a profound impact on any potential for network formation (COAG Health Council, 2017), as networks are characterised by a shared understanding of common goals and values, with efforts to minimise misunderstandings (Lee et al., 2019; Nahapiet & Ghoshal, 1998). As evidenced by our findings, it cannot always be assumed that all faculty are aware of all IPE activities and the various contexts in which they are offered. Some faculty perceived IPE as existing as "one-off" activities rather than integrated as regular activities embedded within curricula, highlighting the need for faculty development and training in IPE.

Training in IPE facilitation through both formal and informal learning and engagement has previously been identified as essential to success (Li, 2007; Steven et al., 2017). This may entail workshops, seminar series, courses and development workshops and involvement in meetings (Li, 2007; Steven et al., 2017). Likewise, there are associated benefits of showcasing IPE innovations and achievements. This could be in the form of faculty newsletters, conferences, webinars or faculty events.

Shared resources, such as knowledge, skills, equipment and time, contribute to the success of networks (Hean et al., 2012; Lee et al., 2019). This is of particular importance in IPE, since activities are often large-scale, involving multiple courses and disciplines (Burgess & McGregor, 2022). Encouragingly, faculty felt that IPE activities were starting to build on each other. However, timetabling was reported as being an area of concern for unit of study coordinators, with it often being difficult to timetable for such large student numbers. Staff felt forward planning through the development of new school curricula would be beneficial in overcoming this obstacle. Indeed, the complexities of IPE mean that decisions around timetabling in large-scale IPE activities are often determined by pragmatic and logistical demands rather than pedagogical reasoning (Reeves et al., 2017).

There is a lack of any national approach to the governance of IPE and often a lack of local governance (Thistlethwaite et al., 2019). Implications of this include fragmentation in practice, poor structures and frameworks, and reduced capacity for IPE implementation (Thistlethwaite et al., 2019). As noted by faculty, a challenge of IPE is ensuring equal

input from all faculty and from different disciplines, including the acknowledgement of the additional workload associated with implementing and teaching in IPE programs. This becomes particularly important for large-scale IPE activities involving up to 2,500 students, which require multiple facilitators.

Faculty appreciated the role that disciplinary representatives played at advisory group and community of practice meetings, as they worked collaboratively and helped to make IPE “happen”. There was a strong feeling that IPE was not seen as “everybody’s business”, with a limited number of core IPE “champions” leading the way. This is not uncommon in universities, with a deficit of IPE champions acknowledged as a key challenge in engaging faculty in IPE (Khalili et al., 2022). However, participants noted that a greater number of dedicated IPE staff should be involved in the planning of IPE activities and that additional administrative support is needed. A recent systematic review of IPE activities highlighted the excessive administrative time required for planning and implementation (Burgess & McGregor, 2022). Challenges include the equal distribution of students from various disciplines, additional cost burdens, alignment of training level and development of patient cases that engage all disciplines (Burgess & McGregor, 2022; Chan et al., 2017). A willingness of individuals to assist each other during teamwork activities is required for IPE to flourish (Hean et al., 2003).

By participating in IPE, faculty learn to build their own social capital by investing in the network and associated activities. The quality of social capital is influenced by the quality of the relationships formed by those undertaking the activity (Hean et al., 2012). It is possible that a negative bias towards IPE has been created by the burden of workload, hence, limiting the associated benefits. Building an equal distribution of workload and a reward system (for example, as part of performance appraisal) will encourage teamwork practice among faculty, which may be transferrable to future collaborations across disciplines in the workplace.

Limitations and future research

The small sample size of faculty interviewed is not representative of all disciplines involved in IPE at the University and can, therefore, not be generalised to other disciplines. Findings of this study may not be generalisable to other university settings. Future research would be valuable in exploring how relational and structural networks contribute to faculty perceptions of IPE and its implementation. This would provide a more comprehensive understanding of social capital dynamics at play within the IPE context.

Conclusion

Using social capital theory as a theoretical framework, we have explored faculty perceptions of a newly established interprofessional learning curriculum at The University of Sydney. We identified a number of enablers and barriers to the successful implementation of IPE. There is a responsibility for excellence in IPE framework

development and implementation within university education to better prepare students for their graduate roles that will involve shared learning and interprofessional teams (Hammick et al., 2009). Social capital theory provided a useful framework to consider the perceived enablers and barriers to IPE and how organisational advantages may be created. Although faculty felt positively about implementing the IPE curriculum, they found inequities in IPE workload distribution. Additionally, many did not have a clear understanding of the extent to which IPE was scaffolded throughout degrees, indicating a need for additional faculty development opportunities specific to IPE. It will be important to cultivate social capital to strengthen and highlight the importance of interprofessional teamwork and faculty engagement in the development and endorsement of a shared IPE curricula.

Conflicts of interest and funding

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