



Staff perceptions on implementing interprofessional education for undergraduate students in health, social work and education

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Abstract

Pedagogic approaches which promote collaboration and communication across undergraduate student groups are important for nursing, medical, social care, and education programmes. However, academics' perceptions of developing these events and examples of how to plan and implement learning opportunities of this nature remain infrequent within the existing literature. To address this gap, the current paper provides an analysis of academics' reflections on designing, developing and delivering an innovative simulation-based interprofessional education (IPE) event organised across two universities. Academics involved in either the design and/or facilitation of the interprofessional event were invited to complete a reflective account of their experience. Eight academic members of staff completed a reflective account from which three themes emerged. Themes included communication, valuing others and organisation. These accounts suggest that simulation-based IPE can be a useful teaching and learning strategy. However, resourcing and organisational factors should be carefully considered when planning IPE events.

Introduction

Collaboration across students and academic groups within health, social care and education disciplines is important for professional growth, sharing practice and building confidence (Kitchen et al., 2019). Such learning has been demonstrated in interprofessional workshops involving the use of case studies which resulted in improvements in students' self-rating of their understanding of roles, collaboration and communication (Bridgman et al., 2020). In addition, simulation-based educational events are an effective way to promote interprofessional teamwork opportunities for purposeful and rich learning opportunities for students within a safe environment (INACSL, 2021). Therefore, bringing together interprofessional education (IPE) and simulated learning improves communication and collaboration across professional groups when used both independently and as a joint initiative (Zhang et al., 2011). Further support from a systematic literature review by Granheim et al. (2018) concludes that combining interprofessional learning and simulation "is a sound strategy to improve teamwork and collaboration" (p. 125). Therefore, interprofessional simulation-based education provides opportunities to learn about, with, and from students from other disciplines (CAIPE, 2023; Almendingen et al., 2022).

Research in the fields of social work (Meredith et al., 2021) and health (Platt et al., 2021) suggests that using simulation supports the development of professional and theoretical knowledge. More recently, innovations to include a wider array of professionals, such as teachers and students studying to work in early childhood education, has started to gather impetus (McMillan et al., 2020; McGarr, 2021; Mulholland et al., 2022). This is supported by growing recognition that children who have identified health needs require wider involvement from professionals outside of healthcare including educational providers (Department for Education, 2013). Furthermore, the argument that interprofessional education (IPE) should be extended beyond health education is recommended within the international literature (Garnweidner-Holme & Almendingen, 2022). Therefore, to improve future interprofessional working, students from across a range of disciplines should foster the opportunity to learn together to understand each other's roles, identities, professional terminology and theoretical frameworks. Working together to solve problems enables students to build and develop skills in collaboration and cooperation, to support safe and effective outcomes for the child, through sharing knowledge, experiences, competencies, and an understanding of how looking at problems through different lenses provides more effective care (Garnweidner-Holme & Almendingen, 2022).

Evidence on the design, development and delivery of interprofessional education

There is limited but emerging research on the design and impact of simulation across education, health and social care. The literature discussed below highlights a number of benefits of interprofessional collaborations during simulation-based education on students' attitudes, understanding of roles and confidence in communicating

with other professionals. Tuominen et al. (2022) completed a systematic review identifying two studies using online delivery that incorporated all three disciplines. However, the interprofessional education was arranged by health and social care and thus potentially lacked parity across the subject areas, in relation to the teaching aims and organisation of the events. Pirani et al. (2022) reported that interprofessional simulation across health and education improved students' ability with communication, conflict resolution, and collaboration to increase students' confidence to work in partnerships. Almendingen et al. (2022) further support the benefit of IPE across health, social care and education identifying as previously acknowledged that students were able to learn with, from, and about each other. However, the research projects used digital online platforms and, therefore, further research is needed to compare if on-campus delivery impacts the learning achieved.

Evidence on the perspectives of staff involved in the design, development and delivery of interprofessional simulation

Implementing interprofessional simulation is challenging given the timetabling difficulties and human resourcing requirements needed for large numbers of students across different academic schools (Granheim et al., 2018). These challenges can be further exacerbated by difficulties incurred through the need to align curricula, the learning outcomes for part of the course students are undertaking, academic compatibility of the learners, and funding, as well as scheduling learning activities to fall outside of placement hours (Kumar et al., 2018).

To overcome some of these obstacles, it is advisable that the focus for any IPE activity is mutually agreed with all academics involved from the respective professional groups. It is important that the focus is on enhancing interprofessional knowledge of each other's roles, knowledge, and behaviours through clear communication (Boet et al., 2014).

Facilitators of interprofessional learning are fundamental to the success of the learning events (Reeves et al., 2016). Facilitators need to encourage collaboration, as well as share their own experience within the field, to highlight benefits and examples of interprofessional working within the practice environments. However, many academics feel unprepared for facilitating IPE and, so co-facilitation and additional training may be required to support readiness for IPE events (Derbyshire et al., 2015; Milot et al., 2017).

The design and development of the resources used within simulation-based IPE

The simulation-based IPE involved staff and students from children's nursing, medicine, primary education, social work and learning disability nursing. Within the UK, learning disability nurses support and care for people with intellectual or developmental disabilities across their lifespan to optimise their health and well-being. Medical students and social workers also work across the lifespan whilst education providers and children's nurses focus on

the child and family, the professions involved all support people with intellectual disabilities as the need arises. The learning disability nurses, and medical students were in their first year and the remaining professions were all in their second year of study. The students involved had experience of working in practice areas and the medical students had experience of learning using a simulated patient.

Simulations provide students with the opportunity to engage in authentic situations in a safe place for learning while promoting skills for collaboration and problem-solving or shared decision-making. Therefore, they offer students an opportunity to rehearse professional skills and bridge gaps between theoretical knowledge and professional practice in a safe space (Mulholland et al., 2023). Following simulation, learners need to understand how the theoretical knowledge gained can be applied to professional practice. Hence, Almendingen et al. (2022) point out that the success of IPE is dependent on students' perspectives regarding the relevance and realism of the topics. Therefore, it is important for the session to be designed and tailored to support the needs of all the students in attendance at the event, this was completed by the professional disciplines who organised the event by structuring the aims, learning outcomes and designing bespoke resources to meet the students' learning needs. More specifically, to ensure that the learning was authentic and relevant to the different professions the leads who developed the materials for the event also co-designed the scenario together. Furthermore, within the simulation the resources aimed to build authenticity through reflecting documentation within their own professional practice, which they then shared and discussed with peers from other professional programmes. The overall teaching aim was to enhance all students' preparedness, confidence, and competence and therefore, future employability.

The scenario that was developed detailed a fictional family including a mother, her new partner, her three children, and their father. The children were aged 2, 5 and 11 with the oldest child diagnosed with foetal alcohol spectrum disorder (FASD) and the youngest child with cerebral palsy, who had a feeding tube and had recently been admitted to hospital with a chest infection. Safe and effective management of children with FASD and complex health needs require cooperation across healthcare, social services and education (British Medical Association, 2018), therefore, offering an appropriate simulated patient within IPE.

During a home visit, the nurse offers to make the mum a cup of tea and observes that there is minimal food in the cupboards and fridge. The home is noted to be cold, and the washing machine is no longer working. The learning focus within the seminars included:

- record keeping and understanding different types of records held across professions
- the importance of sharing information and escalating concerns
- the importance of multi-agency working
- support for parents and carers in challenging circumstances

- social constructions of particular groups.

The scenario encouraged students to review the documentation used within their field and then feedback on the important points to peers from other disciplines. The students were then able to discuss perceived issues, how they would find out additional information or clarifications, which services to make referrals to and what would be their role supporting the family going forward. Finally, students were given the opportunity to come back to the main group setting, in order to complete a debrief.

Aims

To evaluate staff perceptions of a simulation involving professional programmes including education, social work, medical and nursing students. Including consideration of what is the impact of collaboration on professional learning of staff involved in interprofessional simulation-based education.

Method

Ethical approval

The study has been approved by the Faculty Research Ethics Committee at the University where the interprofessional education was designed and delivered. Reflections were gathered using JISC online survey software, which also included the participant information sheet, information about consent and a debrief. No names or identifiers (including professional discipline) were requested due to the small sample size making it likely that participants could be identified by the research team on the basis of the participants' professional background.

Design

We used a qualitative descriptive study design that made use of an online data collection method that enabled staff to participate at a time and place convenient for them.

Sample

Twenty-three academic members of staff were invited to complete the reflective account. Representing learning disability nursing (n=2), children's nursing (n=5), medical science (n=2), social work (n=2) and education (n=12). All academic staff were based at one university in the north of England or an affiliated university with staff and students currently in the same geographical region.

Data collection

Academic staff involved in the development or facilitation of the interprofessional education seminars were asked to complete a reflective account about their involvement and

their perceptions of the impact of IPE. The reflective accounts were collected after the simulation-based IPE seminar via one open-ended question on an online JISC survey.

Data analysis

Qualitative data analysis was completed using Miles et al.'s (2019) pragmatic approach. Using a realist pragmatic approach supports a wide use of approaches to enable the generation of first and second-cycle codes to identify themes. This condensed data is displayed in the analysis section, which includes written text and supporting visuals to draw and verify conclusions. The data analysis was completed by the lead researcher. Themes from the data analysis were reviewed by the second author, who is from a different professional background, and this was discussed until agreement was reached between the reviewers. The themes were then validated with members of the research team who are from alternate disciplines and were involved in the design, development, and delivery of the IPE simulation to ensure the credibility of the findings.

Results

Eight staff completed a reflective account. A number of codes were identified and related to communication, documentation, teamwork, value, professionalism, learning and teaching, organisation, logistics, workload, timing, and challenges. The codes were then classified into emerging themes and sub-themes, specifically: communication (verbal and written), the value of working together, (learning, and professionalism), and organisational factors (spatial, time and resources). Within each of the themes benefits and challenges of simulation-based IPE are reported and discussed.

Communication

Seven out of eight reflective accounts mentioned verbal and written communication during the organisation or facilitation of the IPE seminar.

Verbal communication

Participants' comments regarding the discussion in the IPE seminar predominantly related to how students engaged with each other. Facilitators reported that they were impressed by the student engagement and detailed how they encouraged students to communicate and learn with each other. It was acknowledged that although some students initially looked uncomfortable due to their limited experience of working with the other disciplines, they were able to learn and share knowledge and support each other through the process. This has been highlighted in the quotes below.

I was really struck by how engaged the students were – there was a real buzz when they first went into their groups - very different to more typical sessions, even when simulation-style materials are used (P7).

I encouraged them to engage with it as they would in practice, which meant my role was limited. It was fascinating to see them overcome issues with the data and share their expertise and knowledge with each other (P3).

I was surprised that although some initially looked uncomfortable in presenting what they knew, they all engaged and added points and were supporting each other... The students then discussed and shared knowledge, and it was nice to see that there was no expectation for me to teach as they wanted to share and teach each other and for others to learn from what they know (P5).

This commentary shows how students engaged in a professional manner with each other and how the pedagogy supported interprofessional interactions found in practice. Further commentary was provided about staff-to-staff engagement, as well as staff-to-student engagement. This highlighted mutual respect across the disciplines involved and supported clarity during the delivery of the IPE seminar. Participants acknowledged that it was important for staff and students to have clear guidance during the initial brief and throughout the day to promote good communication and clear expectations for all involved.

Finally, commentary highlighting student feedback and interactions with staff showed that students considered the importance of clear and accurate communication.

Debrief at the end was also good to hear some of the challenges and also have students voice how important good communication is and the impact this can have (P2).

Providing students with the time to inform staff about what they had learnt and challenges that they faced was therefore important for the academics to understand if they achieved their learning objectives and how to improve the IPE-sim in the future. The debrief also enabled all students to come back as one group to discuss and embed what they had learnt from the scenario and from the opportunity to work interprofessionally.

Written communication

Participants acknowledged that the documentation used for the simulation-based IPE had both strengths and weaknesses. One of the strengths was the use of documents that mirrored what the students would use in practice to make it more authentic. A second strength was how students only initially had documents that they would complete in practice and therefore, had missing information which other professionals were able to share with them. The students were able to see how the pieces all came together like a jigsaw to support decision-making and how missing or limited information could impact the holistic view of the family and, thus, the outcomes for the family. The benefit of this has been captured within one member of staff's reflective account.

I really liked the learning outcomes from this session. We wanted the students to really understand the importance of record keeping and information sharing and to recognise that professionals within each individual discipline hold only one small part of the jigsaw when it comes to the information that is held about individuals and families (P8).

Weaknesses within the documentation included some unintended discrepancies between the information about the family presented by individual disciplines. This was seen as a limitation by many academics and has been explained as a result of sickness and workloads meaning some of the documents were prepared late. This meant that the final check of documents could not be completed prior to printing. However, it was acknowledged by academics that this can be corrected in future runs of the simulation-based IPE and that within practice documents errors do occur, and it is therefore important for students to consider how they would clarify inaccuracies. Furthermore, academics reflected on how to improve the simulation-based IPE and wider organisations in the future.

It was fascinating to see them overcome issues with the data and share their expertise and knowledge with each other. ...in the future, I feel it would be helpful to have the paperwork made clearer about which discipline it belonged to and which students belonged to which. That could be just a simple colour coordination of materials and badges (P3).

I also learned something. For example, how in education they record on a universal system - health could learn from this (P2).

This shows how IPE-sim can benefit future working practices by engaging the future workforce in learning about the working practices of other disciplines. In addition, within the clinical and educational setting there is a benefit to being able to easily identify names and professions, which promotes communication, a sense of belonging and the provision of safe and effective care (Ban et al., 2021; van Dalen et al., 2022).

The value of working together

Six out of eight participants' reflective accounts considered how it was valuable to work with other professions; this could be for the advantage of students, or their own personal benefit. Research on interprofessional education typically assesses how two or more disciplines learning with, from, and about each other impacts students and consequently service user outcomes. The willingness of students to teach others was apparent in the reflections and feedback received, but moreover, reflective accounts also indicated that students across disciplines who did not know each other previously were supportive of one another. Within health, social care and education, professionals need to support colleagues due to high stress, complexities and difficult or unexpected situations that they may face. This is particularly important when working in multi-professional teams who

may perceive things according to their own professional lens. In addition to working in a supportive manner, other professional attributes such as inclusion, organisational skills, respect for their own and others' fields of practice and interest in other perspectives were also highlighted as depicted in the quotes below.

I really enjoyed facilitating this. I was incredibly impressed by the professionalism of the students from across the professions whilst working in the smaller, multi-agency groups. They were insightful and knowledgeable, and seemed really interested to work with and learn from each other! I tried to sit back a little when it came to organising the feedback our group would return to the whole cohort – it was great to see them self-organising and running the feedback, making sure that students from all disciplines were included (P8).

I felt as though they had a real sense of pride and commitment to their chosen discipline (P7).

The feedback from students was that they had learned a great deal about each other's perceptions of the family and the multi-faceted elements of the various roles (P3).

This professionalism and value for each other's profession was also mirrored in the commentary about staff who reported personal benefits of working across disciplines, including enjoyment, learning about other fields of practice and sharing responsibility for the development and delivery of the task. Participant Five also details the benefit of role modelling to students.

For me one of the benefits of the day was that staff felt comfortable to say that they were also learning about other fields of practice. So that students could also acknowledge that they can learn more as well. I think that the staff role modelling that they respect other professionals is one of the most important things, and it was clear that all professionals in the room were given a valued status (P5).

The above quotes highlight the benefits of interprofessional collaboration. However, at times, this can be challenging, particularly when professionals have not worked together previously, causing them to be unaware of how they can best support each other as individuals. Furthermore, this is challenging when students are not clear on each other's roles and scope of practice, leaving academics potentially feeling that they are not valued and supported within conflicts.

The value attributed to the method of teaching or pedagogy used was also prominent within reflective accounts. Academics reported that they perceived simulation-based IPE as an effective teaching and learning strategy to meet the identified aims. This has been summarised in Figure 1 and supported by direct quotes from participants.

Definitely a good teaching and learning strategy (P2).

I do feel that we need more interprofessional learning opportunities for students but acknowledge that the logistics can be problematic (P5).

To illustrate the points made on the value of working together, figure one has been included. This shows how academics acknowledged that working collaboratively to design, develop and deliver a simulation to students across different disciplines showed the importance of and enabled academics and students to value their profession and other professions. Furthermore, academics also perceived value in the pedagogy (including the process of teaching others and methods used) and valued the professional groups within the team. Finally, academics reflected on the value of inspiring students to value colleagues from other professions as individuals who need a caring and cooperative culture in which to work and learn. This final quote above also shows a commitment to, and perceived value of, simulation-based IPE and leads to the third theme of organisation.

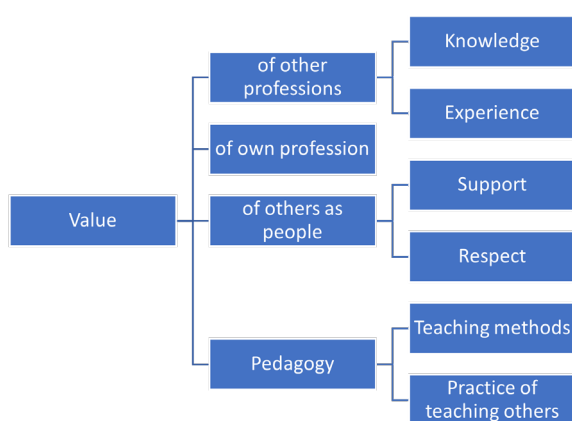


Figure 1: Academic staff perceptions of ‘value’ in simulation-based IPE.

The direct quotes and the visual representation above show how participants felt that IPE-sim is a more effective strategy than transmissive lectures to enable students to learn skills, values and behaviours needed for practice. However, the organisation of IPE-sim is more complex and labour-intensive.

Organisational factors

Organising interprofessional education can pose many problems for the team to work, such as issues with workload, planning and stress.

Environment

Generally, academics felt that the event was well-organised and that the environment selected for the event was appropriate. The logistics of organising smaller student groups for discussions was problematic due to the unequal numbers across the different professions. However, all groups had a minimum of three different professions in the room, with the facilitator being able to share a summary from any professions that were not present. The importance of considering the space used is highlighted in the quote

below and ensured additional space for students to go if they felt upset or overwhelmed by any of the content discussed.

A really good choice of venue - a lot of opportunity for breakout spaces and it was good for the students to be in an unfamiliar, yet ‘official’ environment as it added to the authenticity of the simulation (P7).

The advantage of having breakout rooms meant that there were reduced distractions from other groups of students and felt official due to the spaces selected enabling students to consider the confidentiality of the characters. Furthermore, the breakout spaces provided an area that accommodated the number of professionals often found in multi-disciplinary meetings in clinical settings in addition to the authenticity.

Timing

Students across professional courses undertaking placements on different days and in different weeks meant that agreement on the date of the IPE event and rooms were booked early. However, for some students, this meant that the event occurred in their last teaching week prior to their assessment weeks. This was noted by some staff as potentially contributing to student attendance and staff workload.

This was a carefully planned and well-organised event. Managing the workload can be challenging, and the timing of this event is close to marking deadlines (P1).

The date was set prior to the exam week/assignment submission week, which may have explained why the student attendance was not as good as I would have liked (P5).

Therefore, the timing of the event needs to consider where students are in their academic journey, including placement, teaching, and assessment requirements, alongside consideration of staff workloads. Consequently, agreeing on a date to run IPE-sim can be problematic given the different curriculum designs used for managing when students are allocated to attend academic and placement settings. However, selecting the most suitable date and negotiating time for staff is important for engagement with IPE-sim and the perceived success of learning events. Therefore, it requires deliberation across the academic teams involved.

Resourcing (workload and materials)

As already suggested, workload was noted as a significant issue within some of the reflective accounts. This had implications for the creation of documentation as well as the number of facilitators that were available in each breakout room. Co-facilitating across professions would have been the ideal option but this was countered by having small groups to enable students to feel comfortable to present their information, discuss the scenario and what their role would be. A lack of agreement is evident within and across participants’ accounts, with some feeling that

more facilitators would be helpful and acknowledging the possible benefits of sharing work across a large team, and others seeing this as a potential hindrance.

The event felt well-organised and appeared to run smoothly... If we had numbers, perhaps the facilitation could have also had a member of staff from each discipline? (P3).

I found the organisation of this event really stressful!... Finding a time to meet was challenging across so many disciplines and staff members. We didn't know each other well, and that made it more difficult to follow up on documents when things were missing or meetings were missed... [This] meant that we couldn't do the cross-checking of documents that we wanted to (P8).

One of the benefits of having a larger team to draw upon for this project was also that 'many hands make light work'. One person organised room booking, and another did the Blackboard Organisation and so it was great that I could then concentrate on other aspects of the work (P8).

From the quotes above it can be hypothesised that there is no ideal size of a planning and steering group for IPE-sim events and that the number of staff involved depends on the tasks to be completed, the number of professions and students involved, availability of staff and logistical complexities of the event.

Discussion and conclusion

The teaching innovation allowed academics from learning disability nursing, children's nursing, primary education, social work and medical students who had not previously worked together to create an interprofessional learning opportunity for their respective student groups. This is supported by the university strategy, the Centre for Advancement of Interprofessional Education and the World Health Organisation. The latter states that renewing, revising and updating curricula is part of an effective mechanism for interprofessional education and collaboration (World Health Organisation, 2010). The research aimed to evaluate staff perceptions of a simulation and consider the impact of the collaboration on the professional learning of the staff involved. This used reflective accounts of academic staff engaged in the design, development and delivery of the simulation-based IPE.

Reflective accounts of staff were in agreement with the areas of best practice for simulation-based IPE within the International Nursing Association of Clinical and Simulation Learning standards (INACSL, 2021). More specifically, academics positively appraised the opportunity to design, develop and deliver IPE with representatives from the targeted interprofessional learners. INACSL (2021) go on to point out the importance of authentic scenarios, mutual goals and learning objectives reviewed by experts within the professions and team-based pre-briefing and debriefing, which were also reflected within academic accounts In

addition, the wider literature supports the use of authentic simulations which aim to bridge the theory-practice gap to increase student competence (Levin et al., 2023; Weeks et al., 2019) and secondly, a shared depth of knowledge across facilitators regarding the shared learning outcomes (Diggele et al., 2020).

The ascribed value of simulation-based education was evident within the academics' reflective accounts. Academics noted that it was a beneficial learning opportunity for students across health, social care, and education. Simulation-based education provided students with the opportunity to learn about each other and to practice essential professional requirements such as information sharing, working collaboratively and supporting colleagues. From the benefits and challenges discussed within reflective accounts, it is evident that there are a number of important factors to consider when designing simulation-based IPE, which have been illustrated in Figure 2. This shows the importance of ensuring that any documentation and materials used reflect different professions' practices, including through careful review for authenticity as well as cross-referencing to reduce inconsistencies. Attention should also be given to the physical space used, including the importance of having space to enable smaller group discussions as well as to potentially accommodate large numbers of students involved for whole group pre-briefing and debriefing. One influential factor described was the academic staff's commitment to developing materials and facilitating the educational event, which takes time. The increased workload means that staff need to perceive the value of IPE and be able to recruit others within their profession to also support the innovation. This has been reported with previous studies and literature base, which shows the need to ensure simulation space, materials and equipment, support for staff and staffing resources are reviewed to allow sustainability given the resource intensiveness of simulation-based IPE (INACSL, 2021; Abu-Rish et al., 2012).

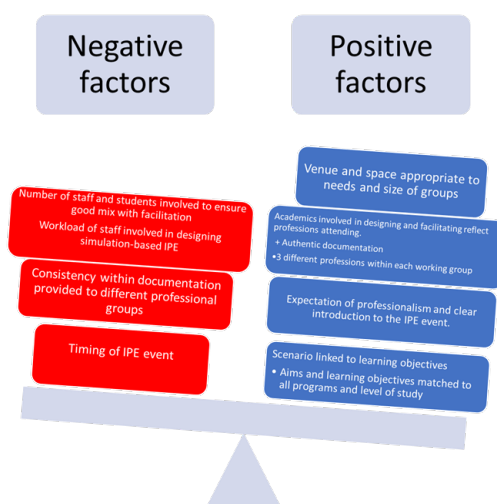


Figure 2: Factors felt to have had an impact on the success of simulation-based IPE.

Following the design, delivery and building of relationships across academic teams, the sustainability of running the event in the future should be considered (Kumar et al., 2018; Lawlis et al., 2014). Participants in the study expressed

that they would like to repeat the learning experience for future cohorts. Furthermore, academics acknowledged that the creation of the resources would make this a less time-consuming task and allow for inaccuracies to be addressed and improvements to be made.

The research completed had both strengths and limitations. The innovative practice of using simulation-based IPE to include health, social care and education has been scarcely researched and this project highlights the benefit of including professional groups outside of health and social care. Furthermore, the majority of research on inter-professional education looks at evaluating the perceived benefit from the stance of attendees at IPE events. However, a wider understanding has been achieved by looking at the perspectives of academics involved in the design and development of the event. Reflective accounts of staff also enable academics to express their thoughts and feelings at a time and place where they feel comfortable without fear of upsetting colleagues. However, this approach may have lacked some of the depth that could have been achieved through face-to-face interviews or focus groups (Guest et al., 2020) and achieved a low response rate.

Although this was a small study, we would recommend that academics embarking on IPE should consider organisational factors, including time and resources that are available to support them with the venture. From a practical perspective, this research and the wider literature point to the benefits of early planning to ensure appropriate staffing, rooms, timing and development of materials on both staff and student satisfaction and learning. Furthermore, we would advocate for the use of IPE-sim that utilises authentic documentation and shared aims that include the goals of increasing collaboration, effective communication across professional groups, and respecting others. Finally, to advance IPE-sim, further research and sharing of innovations to improve teaching practice and pedagogy is needed. More specifically, we encourage longitudinal research on the impacts of IPE-sim and multiple site engagement and collaboration to enhance the development and dissemination of IPE-sim.

In conclusion, simulation-based IPE can be a powerful learning tool for students across a range of professional programmes. These interprofessional educational events can provide students with the opportunity to practice communication and collaboration with other professionals, as well as practice their professional skills relating to providing a supportive culture, teaching others, and valuing and respecting diversity. Furthermore, it allows students the opportunity to learn from peers and understand the different ways of working and alternate lenses through which other professionals perceive the world.

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