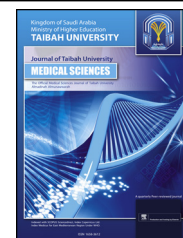




Taibah University
Journal of Taibah University Medical Sciences

www.sciencedirect.com



Educational Article

Important steps for introducing interprofessional education into health professional education

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Received 11 August 2016; revised 14 September 2016; accepted 19 September 2016; Available online ■ ■ ■

المخلص

يسعى التعليم الصحي المتداخل بين التخصصات إلى خلق بيئة يستطيع من خلالها الطلبة من مختلف التخصصات الصحية التعلم مع بعضهم، ومن بعضهم وحول بعضهم البعض لتحسين التعاون وجودة الرعاية المقدمة. تصف هذه المقالة اثنتا عشرة استراتيجية لإدخال التعليم المتداخل بين التخصصات للتسجيل المسبق لتعليم الصحة المهنية أخذة بالحسبان صعوبة تصميم ودمج التعليم المتداخل بين التخصصات في مختلف مناهج التخصصات الصحية. تؤكد المسؤولية الجماعية بين الأكاديميين والشركاء مع الوضوح التام في تحديد الأهداف المعبر عنها في مخرجات التعليم وطرق التعلم. تؤكد هذه المقالة على أهمية إدارة عمل المجموعات الطلابية للتعليم والتعلم المتداخل بين التخصصات متطلعين لتأهيل الأكاديميين والطلبة. وقد أظهرت أيضا الأدلة المؤيدة من الأدبيات أن التعليم المتداخل بين التخصصات لتقييم الطالب وتقييم البرنامج يلعبان أدوارا رئيسية في نجاح أداء مقررات التعليم الصحي المتداخل بين التخصصات.

الكلمات المفتاحية: التعليم المتداخل بين التخصصات؛ التعلم المتداخل بين التخصصات؛ المنهج؛ الرعاية الصحية؛ المرحلة الجامعية

Abstract

Interprofessional education (IPE) engages students from different healthcare professions for learning with, from and about each other to improve collaboration and quality of care. Recognizing the complexity of designing

and integrating IPE into different health curricula, this review describes twelve strategies for introducing IPE into pre-registration health professional education. We emphasize group responsibility among faculty and other stakeholders, clarity and unity of purpose expressed in outcomes informing inputs, and learning methods. This piece of work emphasizes facilitation as the key to effective interprofessional teaching and learning, with implications for the preparation of faculty and students. The supporting evidence from the literature has also shown that interprofessional student assessment and programme evaluation play key roles in the successful functioning of IPE courses.

Keywords: Curriculum; Healthcare; Interprofessional education; Interprofessional learning; Undergraduate

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Introduction

Two seminal documents underscore the increasing importance of interprofessional education (IPE) in the health professions. First, the World Health Organization published the Framework on Interprofessional Education.¹ The principal messages suggest that health and health care are damaged by a lack of communication and collaboration and that IPE in both pre-licensure and post-licensure

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Peer review under responsibility of Taibah University.



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contexts is one of the major strategies for ensuring that collaboration among health care providers improves. Secondly, the Lancet Report (2010) addresses the future of health professional education world-wide. It stresses the imperative changes that need to occur now and in the future, and one of the key areas for change is in the field of collaboration, again underscoring the importance of IPE.²

While many advances in IPE have been made globally, there are still lessons to be learned. IPE is not simply bringing students from different professions together – it is a highly complex teaching field that requires an understanding of different professional cultures, the history of the professions, strategies for creating robust IPE learning experiences that are relevant and meaningful, and appropriate ways of assessing what students have learned in the short term and how this affects their practice in the longer term. This series of steps is designed to focus on 12 key areas of IPE that will enhance the teaching of students and practitioners as they strive to become competent collaborators (Table 1). These steps were prompted by a recent interactive workshop during the First Middle Eastern Conference on Interprofessional Education in December 2015 and are primarily intended for academic faculty involved in, or hoping to be involved in, interprofessional education, and who are keen to incorporate IPE into their programmes. The steps highlighted in this paper are drawn from authors' experiences in Canada, the United Kingdom and Qatar and are informed by international perspectives from the literature and from participants during the conference.

Step 1: get started

While the requirement to integrate IPE into the curricula will vary from one institution to another or even from one programme to another, an effort must be made to bring all key stakeholders together, including a student representative. Why not begin by forming a learning group with colleagues to compare perceptions of interprofessional learning and practice? Contrast key messages from seminal sources^{1–4} and consider some of the ways in which curricula have been remodelled to accommodate IPE.^{5–7} Check arguments against evidence.⁸ Do not shy away from theory.⁹ Well chosen, two or three key perspectives from reliable sources are all that you need to build a robust conceptual

model.^{10–12} Take resources such as these into account in planning faculty development^{13,14} before inviting other stakeholders to embrace IPE in all its complexity.

Step 2: adopt a definition, values and principles

When thinking about introducing IPE, make sure the proposal equates with the meaning of IPE. One of the most widely used definitions comes from the UK Centre of Advancement of Interprofessional Education: 'occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of care'.¹⁵ Try to work within its related core values and principles⁴:

- Focussing on individual, family and community needs;
- Improving care, health outcomes and wellbeing;
- Respecting individuality, difference and diversity among professions;
- Sustaining the identity and expertise of each profession;
- Promoting equality among the professions in the learning environment.

Step 3: formulate outcomes

Agree on learning outcomes early in the process of introducing IPE. Make sure that they are achievable and assessable.¹⁶ Adopt one of the existing capability- or competency-based collaborative frameworks as your base for describing IPE learning outcomes.^{17–20} Activities must be built to match intended outcomes and competencies, while ensuring that each profession contributes to the overall success of any IPE session.²¹ Collaborative care competencies can be shared with the students prior to the session to ensure that all professions are aware of practice expectations that may or may not differ from their usual professional practices.

Step 4: decide who is going to participate – select the students and faculty

By definition, an IPE activity includes students and facilitators from at least two distinct disciplines.¹⁵ Published data reports programmes that have incorporated as many as nine different health professions in a given activity.²² However, those embarking upon IPE need not be that ambitious, and in fact seasoned planners will reassure you that smaller scale designs at the outset of your IPE programme allow appreciation of what an IPE activity entails. First, consider your immediate environment. Which health professions are educated at your university and which ones are geographically co-located? The ease of IPE programme planning and conduct is greatly facilitated by geographic proximity. Second, recruit experienced and self-aware educators from university and practice settings, accustomed to facilitating adult learning and espousing interprofessional values.²³ Start by including professions that are likely to naturally intersect in the practice setting²⁴ (physicians with nurses, audiology with speech pathology, for example), but remember IPE's premise for students to gain greater understanding of one another's contribution

Table 1: Summary of the steps.

Step 1: get started
Step 2: adopt a definition, values and principles
Step 3: formulate outcomes
Step 4: decide who is going to participate and select the students and faculty
Step 5: select themes
Step 6: be collaborative in case and activity design and mix up learning methods
Step 7: determine levels and stages
Step 8: facilitate the learning
Step 9: strive to ensure a positive student experience and raise students' expectations
Step 10: assess and utilize feedback
Step 11: evaluate the intervention
Step 12: share your experience

to patient care. Activities including professions as seemingly diverse as occupational and music therapy should not necessarily be discouraged.²⁵ Finally, support and sustain patients and carers as co-teachers²⁶ and involve students in the planning process.

Step 5: select themes

Within the constraints of time and space for IPE, perhaps start by identifying themes that align with professional as well as interprofessional outcomes with a focus on decision-making, care planning and communication.^{16,27} Themes such as chronic disease management, primary health care, mental health, and care for the elderly may resonate across professions. It is useful, then, to identify specific components to consider where there are overlapping curricular topics appropriate for the intended IPE event and for the professions involved.

Step 6: be collaborative in case and activity design and mix up learning methods

Once all of the logistics are arranged, it is time to start developing the content of the session itself. Case or activity development may be one of the greatest challenges faced by event organizers. We recommend that case/activity planning occur well in advance of the event date. That will allow time for multiple meetings, when necessary, to ensure that all stakeholders from all the participant professions are involved and satisfied with the planned activities. Adopt and adapt as you mix and match learning methods from your professions; methods such as case-based learning, problem-based learning, collaborative inquiry, appreciative inquiry, observation-based learning, experiential learning, reflective learning, simulated learning and continuous quality improvement can all enhance IPE. Be sure to select ones that are interactive, reflective and patient-centred. Enhance learning with technology. Simulation has been widely adopted in IPE, especially to teach patient safety, but do not let it replace practice-based learning.⁴

Step 7: determine levels and stages

Direct the learning to fit appropriately with the students' capacity and stage of learning.²⁸ To allow students to develop a sense of their own professional identity, as well as an understanding of what it means to be a competent collaborator, one can structure the learning experiences into exposure, immersion and mastery as a continuum of IPE.

➤ **Exposure:** Exposure is an introductory phase for IPE. It allows students to come together with students from other health related programmes and to learn more about the other professions, laying the groundwork for future collaboration. This phase reinforces an understanding that there are many health professions with unique and shared bodies of knowledge and skills, but there is no expectation that the students be involved in team exercises. In this phase students learn in parallel. Examples of exposure activities might include:

- Joint orientation sessions for students from several health programs;
 - Small interprofessional group discussions about topics that cross professions such as health care ethics;
 - Students from one profession interviewing students from other professions as part of an assignment related to roles in health care;
 - Social activities such as movie nights, using movies that relate to health care followed by discussion.
- **Immersion:** Immersion requires students to interact with each other to learn collaboratively. Students have a better sense of their own professional contributions and will have already learned about the concept of collaboration. IPE in this phase focuses on learning together through dialogue and interactions, often in the clinical setting. Students leave this stage with a world view that incorporates different perspectives and values them. Examples of immersion activities might include:
- Participation in IP simulation related to cases that require a team approach;
 - Case rounds in the clinical setting;
 - Bedside rounds and team meetings in the clinical setting;
 - Common learning/courses on topics such as communication, conflict management, chronic disease management etc.
- **Mastery:** Mastery requires that students incorporate collaboration in their daily life. This level may apply more to graduate students or to practitioners who are clear in their roles as professionals and who can engage in high-level critical thinking and shared problem-solving in complex situations. Examples of mastery activities are:
- Community recognition of excellence in team-based care;
 - Advanced courses in areas of complex care that require a team approach, such as diabetes, HIV AIDS, spinal cord injury, mental health, etc;
 - Graduate certificates in team-based care.

Step 8: facilitate the learning

Your role as the IPE facilitator will be to assist students to enhance their mutual appreciation, understanding and collaboration. Facilitation helps students to:

- Learn from resources within and beyond the group;
- Synthesize their learning;
- Iron out miscommunication and misunderstanding;
- Resolve rivalry and conflict;
- Translate problems into learning opportunities.

You may well be asked to facilitate. If so, you will become an interprofessional role model, aware of ways in which your attitudes and perceptions can improve or impede relations with and among the students. Invite an experienced colleague to be a critical friend, periodically observing and discussing your role in supporting student groups as you find your interprofessional feet.⁴ Resist pressure to assume a didactic role unless and until the group has exhausted its own learning capacity.

Step 9: strive to ensure a positive student experience and raise students' expectations

Even the most well-planned event will likely not be successful without student buy-in and engagement.²⁹ Capture the essence of IPE in course handbooks and handouts to ensure students are aware of the content beforehand and have the opportunity to begin thinking about session objectives. This could be done by providing students with an initial self-assessment quiz based on session learning points to spark interest in the event itself, or perhaps linking students with interprofessional colleagues in advance of the session to initiate communication and relationship building. Where possible, introduce students to each other from different professions and programmes in advance. Use a well-planned icebreaker when student groups are learning together for the first time, preferably one that exemplifies interprofessional competence, for example, in communication or collaboration. Begin as you intend to go on by encouraging students to enjoy learning together.

Step 10: assess and utilize feedback

Excellent teaching is aligned so that the learning outcomes relate to the learning activities and are assessed appropriately.³⁰ Assessment and feedback are integral to teaching design and development. Educators should start by considering the IPE outcomes in their programme and design an assessment matrix which links with the teaching content and shows how and where feedback and assessment take place.^{17,31} Engage in formative feedback early by posing questions and prompting discussions, including comments on written work, clinical performance or presentations. The 'individual observation and feedback tool' (iTOFT), offers a structure for this.³⁹ Summative assessment should follow. Use observation, multiple sources of feedback, individual examination questions, case-based written work or reports and assessed presentations. Professional portfolios can provide a collective repository of learning across a curriculum.³²

Consider peer and self-assessment methods.³³ Inter-professional Objective Structured Clinical Examinations (iOSCE)³⁴ test individual behaviour in teams using validated instruments such as 'the individual teamwork assessment tool' (iTSTAT), 'the Interprofessional Capability Assessment Tool' (ICAT) and 'the Interprofessional Team Collaboration Scale' (AITCS).^{19,33,35} Educators may find the OTTOWA consensus statements on the assessment of interprofessional education worth accessing for further guidance.³⁶

Step 11: evaluate the intervention

Evaluation serves many masters, from accountability for commissioners to quality assurance for providers to evidence that standards are being met for regulators. There are several helpful theoretical and practical guides for designing an IPE programme evaluation.^{37,38} There are also recent reflections and reviews on best approaches which reflect the lack of long-term evaluations on changed attitudes and behaviours and the impact of IPE on later professional practice.⁴⁰ IPE, perhaps more than any other learning approach during its

formative development, is highly sensitive. Do not be deterred by poor initial outcomes from the evaluation. Progress can take recurrent cycles of analysis and revision to ensure authentic teaching at the right time which is valued by all the participating students.⁷

Step 12: share your experience

IPE events can be resource-intensive and faculty members should be encouraged to maximize scholarly output from such events. However, poor advance planning can threaten opportunities to publish experiences and results. A coordinated strategy, developed at least a few months prior to the event, should include generation of research questions (if any), selection of tools to evaluate intended outcomes or satisfaction, attainment of institutional ethical review board approval for any research component or use of student data, and selection of the investigator team. Opportunities abound via posters and presentations at conferences and websites for students and faculty to share their IPE experience. Chances to publish in peer-reviewed journals are increasing steadily, but the onus still rests on the faculty to identify those interventions breaking new ground and to enlist resources for systematic evaluation and publication.

Concluding remarks

The steps outlined here focus on key issues needed to successfully introduce interprofessional learning into the healthcare curricula. These steps provide readers with the knowledge and skills to initiate an IPE event in their curricula, taking them on a creative thinking journey to develop an IPE activity from idea conception and actualization to evaluation and dissemination. Faculty development, institutional support and buy-in from all key stakeholders are essential factors for success. Integrating IPE into the healthcare curricula is a huge undertaking and should not be underestimated. However, recognizing the complexity of designing and integrating IPE into the different health curricula, we hope these practical steps are useful in assisting you with some of the challenges that you and your colleagues may experience as you devise and develop your IPE initiatives, challenges that will give way to others as you progress. Two CAIPE papers may help especially as you move on,^{4,41} downloaded for free from www.caipe.org.uk. This is but one of many helpful interprofessional websites for national and international networks with bulletins and running workshops and conferences (Table 2). Delegates from these networks gather biennially at the All Together Better Health (ATBH) conference; see www.atbh7.pitt.edu/. There are also many peer-reviewed journals that cover interprofessional topics (Table 2).

Recommendation

We would recommend that those designing and delivering IPE use the steps outlined within the context of their local health and social care provision mindful of how collaborative practice could propel and advance the quality of care. We suggest that IPE be themed across a curriculum and

Table 2: International IPE networks and relevant Journals for IPE publication.

<ul style="list-style-type: none"> • AIHC – the American Interprofessional Health Collaborative – www.aihc-us.org/ • AIPPEN – the Australasian Interprofessional Education and Practice Network – www.aippen.net • CAIPE – the (UK) Centre for the Advancement of Interprofessional Education – www.caipe.org.uk • CIHC – the Canadian Interprofessional Health Collaborative – www.cihc.ca/ EIPEN – the European Interprofessional Network – www.eipen.org • JAIPe – the Japan Association for Interprofessional Education – www.jaipen.jp/ • JIPWEN – the Japan Interprofessional Work and Education Network – jipwen.dept.showa.gunma-u.ac.jp/ • NIPNET – the Nordic Interprofessional Education Network – www.nipnet.org • In-2-Theory – www.facebook.com/groups?IN2THEORY/ • Network TUFH – the Network towards Unity for Health – www.the-networkTUFH.org/ • The National Center for Interprofessional Practice and Education – https://nexusipe.org/ 	<ul style="list-style-type: none"> • Journal of Interprofessional Care – www.informaworld.com/jic • Education for Health – www.educationforhealth.net/ • Journal of the Allied Health Professions – www.asahp.org/journal • Journal of Continuing Education in the Health Professions – www.wiley.com/journal • Journal of Research in Interprofessional Education – www.jripe.org/ • Journal of Interprofessional Education & Practice – http://www.journals.elsevier.com/journal-of-interprofessional-education-and-practice • Medical Education – www.wiley.com/bw/journal • Medical Teacher – www.informahealthcare.com/mte • The Clinical Teacher – http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1743-498X • Focus on Health Professional Education: A Multidisciplinary Journal – www.anzaphpe.org/
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integrated wherever teaching of a clinical condition or social need requires consideration of how care is supported by the range of professions, the voluntary sector and family/carers. In this way, a horizontal element but integrated into a range of learning modules or courses across the professional years integrating the exposure, immersion and mastery approach.

Authors' contributions

AE conceived the concept of this manuscript. AE, KY and KW identified the steps for this manuscript. All authors contributed to drafting the steps. All authors edited the final manuscript.

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Conflict of interest

The authors have no conflicts of interest.

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How to cite this article: El-Awaisi A, Anderson E, Barr H, Wilby KJ, Wilbur K, Bainbridge L. Important steps for introducing interprofessional education into health professional education. *J Taibah Univ Med Sc* **2016**; ■ (■):1–6.