Interprofessional education: the growing edge of teaching and learning in medicine

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Abstract

The aim of interprofessional education is to improve interprofessional practice. The Universities of Southampton and Portsmouth have been offering a combined programme of interprofessional education to all healthcare students since 1999. This article describes some of the main features of this course, and considers our experiences in its implementation in the context of the wider literature on the subject. The potential roles of educational theory, research, student leadership and assessment are explored.

Key Words: *Interprofessional healthcare education, University of Southampton*

Interprofessional education is a concept that has been around for many years. In 1988, a study group of the World Health Organization (WHO) met in Geneva; their report brought together the experiences of many individuals already working in the field [1]. Since then, it has become established as an important component of many curricula in medicine and the health sciences [2, 3], and this article will explore some of the issues involved in implementing interprofessional education. It will draw on our experiences at Southampton.

What is it, and why?

Interprofessional education involves students of different disciplines learning collaboratively. It has been defined thus [2]:

"Interprofessional education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care."

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As such, interprofessional education needs to be distinguished from the situation where students of different disciplines learn alongside each other (e.g. by attending the same lecture), but not from each other [4]. This may be called "learning in common" to differentiate it from "interprofessional education" [5]. Learning in common has a valid place in the curriculum by delivering learning outcomes that are shared by different disciplines, but it is not interprofessional education because the students are not learning from one another.

The rationale underpinning interprofessional education is the hypothesis that it will lead to improved interprofessional practice, which will lead to improved health outcomes [6]. This principle was summed up as long ago as 1988 by the WHO [1]:

"Multiprofessional education is not an end in itself but a means of ensuring that different types of health personnel can work together to meet the health needs of the people."

In the United Kingdom, the idea that health care workers of different disciplines need to work together better was given impetus by high profile examples of perceived failures in collaboration between professional groups. In particular, the Kennedy Report into paediatric heart surgery in Bristol [7] and the Laming Report into the care of a child who was abused and murdered [8] both identified

dysfunctional interprofessional relationships as a significant problem: individuals who possessed important parts of the jigsaw, so to speak, did not put them together so the overall picture could become clear. Proponents of interprofessional education believe it has a role in preventing such tragedies.

Interprofessional education can occur at any stage in the career of a healthcare worker, from the earliest days of the pre-registration course, through the training grades, to life as a senior independent practitioner. Although this article concentrates on undergraduate teaching, many of the principles apply equally to interprofessional learning by postgraduates.

An example of interprofessional education: The New Generation Project

At Southampton, we collaborate with the University of Portsmouth in providing interprofessional education to approximately 1500 students per year [5]. This activity is called the New Generation Project and has been in place since 1999.

All healthcare students at the Universities of Southampton and Portsmouth are involved. The disciplines are: audiology, medicine, midwifery, nursing, occupational therapy, paramedics, pharmacy, physiotherapy, podiatry, radiography, and social work. It comprises 8 weeks of full-time study divided into three units (Table 1). In each unit, the students are allocated to multidisciplinary groups of 8 to 10 students each (Figure 1). A facilitator is assigned to each group.

The theoretical frameworks underpinning the units are those of social and experiential learning [9]; there is evidence that experiential learning in particular is valued by students in this context [10]. The learning is structured around collaboration and reflection. The first unit occurs on campus, but the other two take place in the practice setting where the students are based at the time; this draws on the concept of situated learning, and the "authenticity of practice" maximises the relevance of the learning activities [2, 4, 11].

Table 1. The units of study in the New Generation Project.

Unit 1: 1st year, 2 weeks.	Students reflect on the nature of teamwork, consider a clinical scenario, and research the role of different professions in the care of the patient.
Unit 2: 2nd year, 2 weeks.	Students perform an audit into an aspect of patient care or public health.
Unit 3: Final year, 4 weeks.	Students identify an area of service need and develop a case for change and its implementation.

Figure 1. A New Generation Project group at Southampton

Participation is compulsory for all students (unlike the elective courses at other institutions [3]). All three units are summatively assessed, and all of them must be passed if the student is to progress to the next phase of the course. Techniques include group presentations and reflective accounts. We believe assessment is vital to demonstrate the value placed by faculty on the aims of interprofessional education.

In our experience, the quality of facilitation is a key component in making interprofessional learning a success. As others have noted [10], modelling of appropriate behaviours and attitudes by the facilitator is essential. Faculty development may be required to allow facilitators to work through their own prejudices and social biases [6, 12]. Facilitators need to be able to cope with dysfunctional groups; disagreements and difficulties can be learning opportunities if properly facilitated [2].

The unit structure of the New Generation Project is a two-edged sword. From an administrative point of view, it is convenient. It also allows students to concentrate on the learning activities without competing distractions from other curricular events. However, its temporal separation from other components of the course may promote the view among students and staff that it is an "optional extra" rather than a vital, integrated part of the overall learning experience. Ideally, interprofessional education should run as a continuous theme throughout the course, seamlessly linked to all other components [6].

Finally, evaluation of the course is considered essential. Not only is it the key to quality improvement, it is also the way to demonstrate the value of interprofessional learning to funding bodies and to potentially sceptical colleagues.

Other models of interprofessional education

There is great diversity in the pedagogy of interprofessional education as reported in the literature [3, 6, 11, 13]. Common techniques include problem-based learning, experiential learning and simulations. They may occur in the classroom, the clinical skills laboratory or clinical placements.

Student training wards have been notably successful [13-15]. Authentic patients are admitted to training wards run by health care students, typically in their final year of training. The team of students is responsible for patient care and management under the guidance and supervision

of qualified professionals. Interestingly, there is evidence that patients are more satisfied with their care on training wards than non-training wards [15].

Barriers to successful implementation

The introduction of interprofessional learning needs to overcome significant barriers [3, 6]. The first is resistance from staff. Some qualified healthcare professionals have negative attitudes towards interprofessional education and express scepticism about its value [2, 3, 12]. Not only does this cynicism, which can be seen in all healthcare disciplines, translate into resistance towards interprofessional education, it can also influence students as a powerful part of the "hidden" or "informal" curriculum [16]. As discussed later in this article, an important way of countering this attitude is to provide good evidence that interprofessional education is of value, and so more well-designed research is required [4, 6, 17]. Until this research is published, there will be continuing criticism from some quarters that interprofessional education lacks an evidence base to support it. This criticism may be the result of unjustified prejudice, since there are many other areas in medical education in which the evidence is somewhat flimsy, and interprofessional education has at least as much evidence to support it as some more widely adopted educational methods.

Second, resources need to be considered. Recruiting sufficient facilitators and finding enough physical space for the learning activities can be problematic. Our experience with 1500 students a year shows that finding enough rooms for the groups of students to use is never straightforward. Another required resource is appropriate funding – the different universities, faculties and schools need to agree how funding is to be sourced and allocated [3].

Third, space must be found in the timetable [6]. When interprofessional learning was introduced at Southampton, the curricula were already full. Therefore, implementation required significant changes to the existing curricula. These changes can meet with significant resistance from sceptical faculty.

Fourth, there is the issue of social status within the groups of learners [3]. Gender, class and professional identity may combine to create power dynamics within the group. These dynamics are based largely on the stereotypes that interprofessional education is designed to address. Therefore, good facilitation can use this as a positive learning experience, but with poor facilitation there is a risk that negative attitudes and working practices could become entrenched.

What is the evidence?

Although the benefits of interprofessional education may seem obvious to its proponents, we should consider the evidence that it delivers the desired learning outcomes. Unfortunately, much of the literature on interprofessional education is descriptive and anecdotal [9, 17] and there is a need for more rigorous research in this area [4, 6]. Nevertheless, there is an increasing body of evidence that learners value interprofessional education and appreciate its benefits [4, 10, 18-20].

There is also evidence that attitudinal change can occur – negative stereotyping of other professionals can be reduced [14]. However, Barnes et al described a program of interprofessional education in which there was no change in negative attitudes to other professions as a result of participation [21]. Analysing this finding in terms of All port's contact hypothesis, the authors concluded that possible causes were insufficient opportunities for successful joint work in small groups, a lack of exploration the differences as well as the similarities between professional groups, and a perception that the other participants were not typical of their profession as a whole [21, 22]. The last was possible because the participants chose to take the course; thus a positive experience of another individual may not be extrapolated to the profession as a whole (e.g. "only nice doctors take this course"). If participation is compulsory there is less scope for seeing other participants as atypical. Another feature of the contact hypothesis is that positive prior expectations by the group members are important in delivering desired changes in attitudes [22]. At Southampton, many students have negative prior expectations of interprofessional learning, which could inhibit a re-evaluation of their prejudices in this context. A negative stance from faculty can reinforce these attitudes [2, 3, 12].

Our experience at Southampton is that student evaluations of interprofessional learning modules are generally positive, although we often find that evaluations performed several months after a module are lower than those per-

formed immediately at the end of the module (Lueddeke G 2009, personal communication); the significance of this phenomenon is unclear.

Improving quality

There are a number of ways in which we could help interprofessional education to grow. I would like to highlight four:
• research,
• theory,
• student leadership,
• assessment.

The need for more research has been mentioned previously. Good research will point to ways in which our educational interventions can be improved. Furthermore, the best ammunition that a champion of interprofessional education can use in justification is rigorous evidence.

There are a number of ways in which educational theory can guide the development of teaching and learning [9]. It can help clarify concepts, specify learning objectives, suggest appropriate roles for learners and faculty, and provide a framework for measuring impacts and outcomes. However, the interprofessional education literature does not often address underlying theory, and there is a need for workers in this field to be more aware of the theoretical basis of their work [9, 17, 22].

In general, it is rare for undergraduates to be involved in the design of the courses they study. However, there is evidence that undergraduates are able to engage successfully in curriculum development [23]. Relinquishing power to students in this way may go against the instincts of many (perhaps most) teachers, but there is no reason why intelligent and motivated adult learners should not be able to develop a course, especially if they have good educational guidance from faculty. It seems likely that students would be more highly motivated in a course they had developed themselves, and this might be a way of reducing the level of scepticism with which some students approach interprofessional education. It might also be that such a course would address the needs of students more directly. Properly researched and evaluated, student leadership could provide significant educational benefits.

As mentioned previously, at Southampton we believe appropriate assessment of the students is essential. However, a systematic review found that only a minority of interventions in this area were summatively assessed [17]. On the principle that assessment drives learning [24], assessments and desired outcomes should be properly aligned. Without such assessment, it may be difficult to convince students that the outcomes are important, and the desired learning may not occur.

Conclusion

The aim of interprofessional learning is to improve the performance of multidisciplinary healthcare teams. The growing literature on the subject describes a wide variety of exciting and innovative techniques, and there is increasing attention to the educational theory underpinning them. Although more research is required, there is evidence of the benefits of this type of learning. Our experience at Southampton is that it is well worth rising to the challenge of implementing interprofessional education.

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