



What's in a name? Defining interdisciplinary learning within and outside the medical realm

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Received: 30-JUL-2021

Accepted: 31-MAR-2022

Published: 11-JUN-2022

Abstract

Interdisciplinary learning facilitates communication and collaboration with disciplines from outside the medical realm, as is needed in an increasingly complex healthcare system. However, the term 'interdisciplinary learning' is often used imprecisely and is often mistaken for interprofessional learning, resulting in terminological and educational confusion. When aware of the definition of both interdisciplinary and interprofessional learning, it is possible to strengthen the potential of both forms of learning. First, the authors propose to reach consensus on the definition of a discipline. When defining the medical discipline without making subdisciplines, it implies that interprofessional learning in healthcare is not necessarily interdisciplinary. Second, the authors elaborate on the specific learning outcomes of interdisciplinary learning. Both interdisciplinary and interprofessional learning focus on 'boundary crossing' as a potential key learning outcome. The boundaries crossed however are different. Interdisciplinary learning requires boundary crossing at the level of epistemics and 'academic cultures', more so than interprofessional learning.

Keywords: Interdisciplinary learning; Interdisciplinary placement; Interprofessional education; Education, medical, undergraduate; Models, education; Boundary crossing

Introduction

The increasing number of healthcare problems of a complex nature creates a growing urgency to collaborate within and outside the medical realm. Collaboration within the medical discipline has improved in recent years as a result of interprofessional education.[1] However, collaboration with

professionals outside the medical discipline is still lagging behind. It is possible to facilitate this broader collaboration through education: interdisciplinary learning can facilitate cooperation with disciplines from outside the medical realm.[2] Unfortunately, the term 'interdisciplinary learning' is often used imprecisely, which causes

Cite this article as: Oudenampsen J, Das E, van de Pol M. What's in a name? Defining interdisciplinary learning within and outside the medical realm. RHIME. 2022;9:27-30.

terminological and educational confusion, and entangles different learning outcomes.[3] Existing confusion can in part be explained by the divergent use of the word 'discipline' in different academic environments. In addition, interdisciplinary learning is often mistaken for interprofessional learning.[3] To fully employ the potential of both interdisciplinary and interprofessional learning, we need to be explicit about what is meant by it and to elaborate on the distinctive learning outcomes.

What Defines Interdisciplinary Learning?

Reaching consensus on the definition of a discipline is important to properly understand interdisciplinarity. Academic disciplines are characterized by various aspects, resulting in the definition of a discipline by the Commission on Higher Education (CHED) as "An area of study constituted by defined academic research methods and objects of study, frames of reference, methodological approaches, topics, theoretical canons, and technologies".[4] A 'field of study' is defined as a recognized area of specialization within a discipline.[4] Correspondingly, widely used classification schemes such as the Universal Decimal Classification (UDC), distinguish different disciplines without further differentiating fields of expertise within each discipline.[5] In contrast, in healthcare there is a distinction made within the discipline, by referring to medical specializations as different disciplines. This divergent use of the word discipline inevitably leads to confusion.

To prevent confusing interdisciplinary learning with interprofessional learning, we therefore propose to define a discipline as it is most commonly defined in academia, thus as described by the CHED and UDC. Consequently, we define the medical discipline without making subdisciplines, thus referring to a neurologist and an internist as professionals from the same discipline, with a different field of study.

Since 1970, the term interdisciplinarity is

used to describe integrative curricula. There is, however, no universal definition of interdisciplinarity.[4,6] Even so, where the definition of interdisciplinarity is discussed at length by different researchers,[4,7-10] there are clear overarching characteristics of interdisciplinarity that can be identified.

Repko et. al., in 2014, described an integrated definition that is often referred to by researchers: 'Interdisciplinary studies is a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline, and draws on the disciplines with the goal of integrating their insights to construct a more comprehensive understanding'.[10] A relevant example of interdisciplinary learning is the collaboration between the Humanities and Medicine.

As with interdisciplinarity, the definition of interprofessional learning is often discussed. A review of the literature shows that the common definition is the one described by the World Health Organization: 'Occasions when two or more professions learn from and with each other to enable effective collaboration and improve healthcare outcomes'.[1]

Furthermore, it is proposed that interprofessional learning involves students from regulated professions in healthcare such as nursing, social work and doctors.[1] Therefore, interprofessional learning should be regarded as education that involves different professionals within the discipline. This implies that interprofessional learning in healthcare is not necessarily interdisciplinary.

Boundary Crossing

Both interdisciplinary and interprofessional learning focus on 'boundary crossing' as a potential key learning outcome.[11,12] However, the boundaries crossed are different. Focusing on the right definitions elucidates that assumptions about learning outcomes may be labeled the same, but

differ greatly with regard to 'boundary crossing'.

Crossing boundaries involves encountering differences, entering unfamiliar territory, and stepping outside of one's comfort zone of acquired professional knowledge and skills. [11] Boundaries for knowledge transition can be divided into different layers: epistemic boundaries, professional boundaries, and organizational boundaries.[12]

As reviewed by Akkerman et al, 2011, the healthcare sector is predominantly represented in studies that focus on boundaries within work (i.e. interprofessional). [11] Boundaries can be expected between the professionals because of a high degree of specialization and interpersonal differences. Students in interprofessional learning acquire new perspectives by discussing how individuals with different expertise collaborate during work within the discipline.

In contrast, interdisciplinary learning typically involves epistemic boundary crossing. Disciplines differ from each other not only with regard to subjects of study but also in their conceptualizations of knowledge. Furthermore there are many systematic differences between disciplines in terms of language, ideologies, and (implicit) beliefs about what constitutes good education and research. Disciplines thus differ greatly in what is considered as interesting and valuable, and as such represent different cultures.[4] The differences between disciplines are typically deeply ingrained in one's 'group-identity'. Such implicit differences between disciplines impede communication and collaboration since they function as a lens through which individuals perceive social reality.

As described by various empirical studies,[6-8] students in interdisciplinary learning notice a broadening of perspectives, new insights out of their own discipline, insights into epistemological distances between

disciplinary approaches and a rising sense of their own identity and way of thinking. Students made substantial gains in connecting their own discipline with other scientific problems, and came to understand how the same concepts may be applied in different contexts. This understanding is necessary to develop skills which can increase the much needed exchange of ideas, collaboration and innovation.

Conclusion

Collaboration between disciplines and professions can stimulate creative solutions for the increasing complexity of healthcare and improve healthcare outcomes. To prepare medical students for future collaboration exceeding the boundaries of the medical realm, integrating the knowledge and skills of different disciplines by interdisciplinary learning is necessary. Interdisciplinary learning requires boundary crossing on the level of epistemics and 'academic cultures', more so than interprofessional learning does.

Since interdisciplinary learning is often mistaken for interprofessional learning, it is important to be explicit about what is meant by it. When aware of the definition of both interdisciplinarity and interprofessionality, it is possible to employ specific learning outcomes and the potential of both forms of learning.

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