Joining the dots: Curriculum mapping to increase student engagement in an interdisciplinary Health Sciences program

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Abstract

Students enrolled in topics (units or subjects) taught by the Social Health Sciences Unit (SHSU) at Flinders University often struggle to see the relevance of interdisciplinary teaching that explores the social, behavioural, legal and ethical domains of health. These topics aim to build transferrable and competency based skills for a large and complex cohort of students across 19 different health related pathways. Levels of student disengagement are compounded by the fact that the majority of students are enrolled in a pathway that was not their first preference. This presentation reports on a project that is developing an online, interactive curriculum mapping tool for student use. We draw on Scott's concept of being 'work ready plus' to argue that development of such a tool is a critical step in supporting all students to join the dots between their learning, future employment, and general life skills regardless of their intended profession.

Background

Equipping Higher Education (HE) students with adaptable skills and knowledge for 'tomorrow's needs' (Fadeeva, Galkute, Mader, & Scott, 2014, p. 9) implies that teaching must move beyond the individual topic level when considering the capabilities and competencies of students. Biggs and Tang (2011) argue that students' declarative knowledge of topics, that which can be recalled, is not enough for them to be adequately skilled for a variety of situations beyond graduation. At Flinders University, in South Australia, the Social Health Sciences Unit (SHSU) teaching team engages with a large and complex cohort of students studying in the Bachelor of Health Sciences (BHS), accredited allied health professional programs, and a number of other combined and double degrees. In total the SHSU teaches into 19 different pathways that are built around our nine core topics. The pathways for which most of these topics are core include 11 different BHS major variations, three double degree BHS and Bachelor of Nursing options, the Bachelor of Paramedic Science, and four combined degree options (with Education, Environmental Health, Occupational Therapy and Physiotherapy). In addition, student surveys have shown that up to 75 per cent of students enrolled in the BHS are taking it as a second choice having not gained entry into a preferred professional program of study, and/or they are using the BHS degree purely as a stepping stone with the hope of gaining competitive entry into professional programs in the future. Hence the issue is twofold: we are teaching into a diverse range of pathways, and many students are experiencing what has been termed as 'second choice syndrome' (Taylor & Harrison 2015). This complexity requires a high level of curriculum management and clear communication to students about how and why the content builds

logically and is applicable to their own individual pathway and career goals.

Topics taught by the SHSU have been designed to address a number of core competencies in the social, behavioural, legal and ethical domains for specific accredited professional qualifications, as well as preparing students more broadly for roles in the health sector by providing them with transferrable skills to respond to a rapidly changing sector. It is thus important that teaching content is carefully considered in order to deliver both of these outcomes successfully. Student feedback has shown that students enrolled in SHSU topics often feel a sense of disengagement if they are not able to see the future value of their learning, and especially if the content is seen as not applied to their intended or preferred vocation. Thus, our challenge is to support all students to join the dots between their learning, future employment, and general life skills regardless of which pathway they are enrolled in. This means developing a curriculum mapping tool that can be equally useful for students seeking specific skills necessary for an intended profession as well as those within the broader cohort that require transferrable skills equipping them for roles that are not yet known. This presentation reports on an ongoing project that the SHSU is undertaking to map curriculum in this challenging context. We argue that in such a setting it is essential for student retention and success that the value of learning activities is clearly communicated and justified to all students in order to maximise their learning potential.

Current innovations in HE around 'assurance of learning' (Lawson et al., 2014) and 'constructive alignment' (Biggs, 1996; Biggs & Tang, 2011; Shuell, 1986) provide the framework for this presentation whereby the principles of assessment *for* learning, not assessment *of* learning (Boud & Falchikov, 2006) are central. This responsive approach supports students to focus on areas where there are perceived deficits in knowledge or skills across a program of study. Similarly, assurance of learning is a large scale 'whole of program' approach that seeks to map how learning objectives build over a series or combination of topics (Lawson et al., 2014, p. 4). In addition, we draw on Scott's (2015) notion of being 'work ready plus' to suggest that joining the dots through curriculum mapping can provide a way for students to understand how their engagement in HE is building social responsibility and citizenship beyond the boundaries of their future employment.

The reality of teaching into a large number of pathways that include topics from other disciplines, and teaching into multiple combined or professional degree programs means that our core topics create a set of broad curriculum objectives as well as providing students with a longitudinally coherent set of skills. The project enables both students and academic staff to identify how individual topics, activities, and assessment items contribute to building a portfolio of transferrable knowledge and skills over the three years of their degree program. This is in keeping with the notion of constructive alignment (Biggs & Tang, 2011; Shuell, 1986), where intended learning outcomes and professional competencies drive the design of teaching and assessment practices. Hence, a central goal of the project is for students and staff to be able to identify how teaching activities and assessment are being used to support and meet the relevance of learning outcomes.

For students to effectively and actively engage with learning activities it is essential that they understand the broader applicability of what they are learning or have learnt (Fink, 2003). This is particularly important as many of the enrolled students will graduate into an unknown and ever-changing employment market (Barber, Donnelly, & Rizvi, 2013). Those studying a BHS degree also need assurance that their skills will equip them for a wide range of as-yet-

unknown roles. In addition, even for those studying towards accredited qualifications, there will likely be unprecedented competition for employment in their desired roles and so the same assurance of transferability is important. In order to address these issues, it is essential that activities and assessment are constructively aligned with learning outcomes. As Biggs and Tang state appropriate alignment between intended learning outcomes and how they are taught will more effectively facilitate the development of functioning knowledge (2011, p. 83). This, we argue, is essential for student understanding of the relevance of learning activities for their lives beyond university (Kift, 2009; Scott, 2015; Wilson & Fowler, 2005).

Project overview

The Social Health Sciences Unit (SHSU) is a multi-disciplinary unit within the School of Health Sciences dedicated to providing high quality teaching in the Bachelor of Health Sciences (BHS) and for associated degrees. The teaching portfolio of this Unit is unique as it provides a broad range of foundational health sciences majors at the same time as addressing essential competencies of professionally accredited programs. Competencies such as 'academic skills', interpersonal communication', reflective practice', 'research and evidence-based practice' and 'careers and workplace transition' have been identified as transferrable skills for this project. Topics are semester long units of study and there are currently nine topics taught by the SHSU that are core across the 19 different pathways mentioned above. These topics are coded as 'HLTH' topics to identify them as being taught by the SHSU. A significant strength of the multi-disciplinary teaching team is that, through well-planned curriculum and pedagogy, they role-model the importance of tackling complex contemporaneous health issues using a combination of social, behavioural, legal, ethical, and biomedical approaches. However, currently there is no consistent mechanism for identifying and communicating the core capabilities and competencies that can be tracked across the curriculum to students. Based on observation and student feedback, students are not evaluating their broader capabilities in readiness for their future employment (Boud & Falchikov, 2006).

The key aims of the project are to:
- Map learning outcomes at a program level across the core topics taught by the SHSU;
- Develop a user-friendly online resource for students and staff involved in core topics in order to identify where and how transferrable skills are being addressed within the curriculum framework;
- Identify the transferrable skills that are built across the core BHS curriculum; and
- Identify the ways in which core topics meet professional competencies for allied health programs, for which custom teaching is provided.

The significance of the project is to:
- Directly respond to feedback that has shown uncertainty among students undertaking core topics about the purpose and relevance of some teaching content;
- Demonstrate how the BHS curriculum framework builds transferrable skills across the core topics;
- Identify how the HLTH topics provide core competencies (in relation to the social, behavioural, legal and ethical aspects of health) for other professionally accredited degree programs; and
- Map how curriculum can both meet the competencies of related professional accreditation agencies and provide students with transferrable, critical skills that make them flexible in a highly competitive employment market.

Curriculum mapping is part of core business for many HE programs. However, this project is innovative in that it specifically aims to improve student retention and achievement by communicating how our topics prepare graduates to be 'work ready plus' (Scott, 2015), by having the necessary practical and recall abilities combined with transferrable, critical, problem solving skills. This, we suggest, will encourage students to see beyond the pursuit of professional accreditation, which is essential in an ever-shifting health care sector. We hope that it will encourage students both in the professional programs and the general health sciences program to have more confidence in their abilities to tackle a world of uncertainty and change upon graduation.

Discussion

Feedback from the 2014 Flinders University Experience Survey showed that some students did not see the relevance of some SHSU topic content to their program of study or desired future profession. Although individual topics seek to deliver specific in-depth knowledge and address detailed topic-level learning outcomes, recent scholarship has suggested that there needs to be a pedagogical focus in how this builds students' preparedness to be active citizens in the world beyond graduation (Scott, 2015). Whilst quality is a contested term in HE literature, it can be argued that teaching needs to consider how students' learning experiences prepare them to be citizens of the world and able to tackle the complexities of 'tomorrow's needs' (Fadeeva et al., 2014, p. 9). This, Fadeeva et al state, means developing functional knowledge where students are able to draw on declarative knowledge and skills and use or apply this in a diverse range of situations. Biggs and Tang (2011, pp. 81-82) argue that many university topics provide declarative knowledge, which is simply knowledge of a subject that can be recalled. They argue 'students often see [declarative knowledge] as irrelevant and hence worthy of only a surface approach to learning' (Biggs & Tang, 2011, p. 83). Hence, we suggest that many students studying in our topics see declarative knowledge as dots to be accumulated but do not necessarily see the significance of how those dots relate to employability beyond graduation. This project, therefore, aims to support students to join the dots by mapping an appropriate blend of declarative and functioning knowledge to inform problem solving and health professional practice in a variety of contexts.

We wish to build on the work of Taylor and Harrison (2015) who outlined how retention is particularly an issue for students who hoped to study in accredited health professional programs but end up in more general, foundational health based degrees. We recognise that students progressing through their second or non-preferred option for study may have difficulty seeing the relevance of some topic content in a foundational degree. In addition, we know that students in professional programs often have difficulty seeing the relevance of content that is not directly teaching clinical skills. However, transferrable skills such as 'academic skills', 'interpersonal communication', 'reflective practice', 'research and evidence-based practice' and 'careers and workplace transition' are indeed valuable in an ever-changing employment environment. Students can then understand that functioning knowledge, through the process of naming the dots, in the first instance, and joining the dots, in the second instance, adds value to their program of study.

Questions for audience discussion

1. How do we define and explain to students the 'plus' in Scott's concept of *work-ready plus*?

2. How do we get students in professional programs to think beyond working in their chosen profession?

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