

Part 4

Higher Education & Teacher Education and Training

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The Importance of Being ‘Pulled Up Short’: Can a Transdisciplinary Approach Help Deliver?

Abstract

Whilst the starting point is the impact of the pandemic the overall aim of the paper is to advance the case for the introduction of a transdisciplinary approach to learning. The justification for adopting this radical method is to deliver specific graduate outcomes in line with the 10 job skills for 2025 identified by the World Economic Forum. More specifically to promote creative and critical thinking amongst undergraduates. If the integration of skills is viewed as a key component of higher education the question is how they can be best delivered. A key point is to develop student self awareness of the limitations to their learning to introduce critical reflection. The possibility of students being ‘pulled up short’ and experiencing self-realisation is examined and how this may contribute to the advancement of their studies and the delivery of specific skills. Finally, the paper considers the idea of transdisciplinary teaching and learning and differentiates transdisciplinary ideas from other forms of crossing disciplinary boundaries. It explores the stated advantages, in terms of skills development, for adopting this type of approach noting the challenges it involves for both educators and students. It concludes that although there exist realistic challenges to transdisciplinary learning it is a strategy that promises significant outcomes.

Keywords: transdisciplinarity, graduate outcomes, skills, ‘pulled up short’, post-pandemic, employability, creativity, critical thinking

Introduction

The pandemic disrupted all areas of society forcing change in some and widening existing fault lines in others. In terms of the latter the hospitality sector, which was already facing serious economic pressures from several distinct sources including Brexit, found itself unable to operate. Post pandemic further decline, across the night

time economy, has occurred with serious economic pressures impacting viability. In terms of civil society all sectors of education were major casualties requiring a rethink about delivery and technology. Higher education was already in a state of flux with discussions about how to deliver material and the even more vexed question about 'what material'. This has led to fundamental debates around the very purpose of graduate study and the function of universities as vehicles of 'knowledge exchange'. The relatively simple model of providing students with knowledge of a specific discipline that was assessed using traditional methods has been put under pressure from different quarters. Primarily this was expressed as determining what skills graduates required to function and progress within a modern economy (Ndihokubwayo & Habiyaemye, 2018; Noweski et al., 2012). The pandemic inevitably paused some of these discussions as the immediacy of adopting a new method of delivery and assessment took priority. The key question is what happens now and how the pandemic experience has impacted the issues:

The COVID pandemic provided a significant rationale for technological innovation in the provision of university education, though it is not clear whether this will produce a more restricted and conservative approach to the curriculum and assessment.
(Greenfield, 2022, p. 1)

This paper has three distinct components, and the starting point is the fundamental graduate outcomes that higher education seeks to foster and develop in students. There is greater interest in competency driven education rather than pure knowledge acquisition though much will depend on both the cultural and subject context. Certainly, within UK Legal Education, there has been a significant shift away to embrace skills-based outcomes. The key issues are what are the outcomes sought and how are they best achieved?

The second point the paper explores is the idea of being 'pulled up short' whereby learners experience a moment of transformation in their education. Enabling students to reconsider the application of knowledge is an important tool to help develop reflective, creative, and critical students and indeed researchers. As a concept being 'pulled up short' has been explored within different disciplines and has been the subject of educational research. If the concept has validity, how do we introduce it more widely?

The third construct is the application of a transdisciplinary approach to learning. Going beyond a single discipline has long been seen, in some quarters, as desirable. Beyond the mono discipline, there are several potential variations; multi disciplinary, inter disciplinary, cross disciplinary and it is not always easy to draw distinct lines. A transdisciplinary method, that seeks to gather relevant knowledge and expertise wherever it lies, is an inclusive approach that has been utilised to address complex real world problems. It has not been widely applied to education and this paper argues that it has the inherent capability to provide students with the much sought after transformative sense of being 'pulled up short'. In turn, this supports the advancement of critical and creative graduates. It argues that to develop graduates and researchers with the necessary skills educators should consider how transdisciplinary principles can be incorporated.

Graduate skills and outcomes

A key debate within higher education, over a considerable period, has been the role of Institutions in delivering a range of skills to students alongside traditional

knowledge (Leckey & McGuigan, 1997; Fallows & Steven, 2013). A fundamental theoretical objection to skills teaching has been that it prioritises employment over academic sanctity, As Harvey (2000, p. 3) notes:

To address the relationship between the academy and employment is to risk, at least in some quarters of academia, being seen as an apologist for anti-intellectualism, for the erosion of academic freedom and as proposing that higher education should be about training graduates for jobs rather than improving their minds.

Some skills, such as research and (essay) writing within certain disciplines, are inevitably integrated into scholarly activities and without them, it may not be possible to pass. This doesn't though mean they are specifically taught. The debate is not around those skills intertwined with subjects but the more generic and often people centred competencies. These go beyond the subject based or professional skills taught within more vocational courses such as law. This debate has been keenly played out in law teaching in England and Wales where lawyering skills have been incorporated within some academic law programmes (Knox & Stone, 2019). There is an obvious risk that students develop an instrumentalist approach to their studies, though arguably this has always existed in some form, and that courses become measured through employment statistics. A virtuous circle could be created based on employment skills rather than academic content. The increasing development of technology and latterly artificial intelligence has heightened the discussion about what students should be equipped for post graduation.

The World Economic Forum (WEF, 2020) identified 10 job skills for 2025 under four headings: *Problem-Solving; Self-Management; Working with People; and Technology Use and Development*. The 10 skills listed are *analytical thinking and innovation; active learning and learning strategies; complex problem-solving; critical thinking and analysis; creativity, originality and initiative; leadership and social influence; technology use monitoring and control; technology design and programming; resilience, stress tolerance and flexibility; and reasoning problem-solving and ideation*.

It can be observed that the WEF list contains wide-ranging but generic employability skills though some will be more applicable in certain roles. Those such as active learning and learning strategies have a clear link to higher education studies. There does though need to be clarity around what such skills are and what they consist of. Creativity, for example, may have specific meanings or interpretations within different subjects. Furthermore, it is likely that the list will develop and change over time.

Thus, the debate is a wide ranging one, from what skills (if any) should be taught (and assessed) to whether they can even be taught and if so how. The other half of this equation is what training and support academic staff require to design and deliver relevant material given they may have little or no experience of what is required from their own studies. A key aspect is how to enable students to understand and develop their learning.

Being 'pulled up short'

If Graduate Outcomes, however, defined, become desired and identifiable consequences of a teaching and learning strategy the question is how they can be delivered and the relationship between knowledge and skills. There is a need to build a

framework to coordinate how and where different skills are acquired. One module or year of study cannot deliver all the required outcomes and the incremental building of understanding needs to be planned. This represents a challenge for those designing courses or programmes and there is a danger of becoming over-prescriptive which can stifle the ingenuity and creativity of educators. For example, requiring a common specific 'skill' in each first-year elective to deliver a course outcome may lead to a dysfunctional teaching and learning strategy for a specific module. Assessment needs to be integrated into knowledge and skills rather than 'bolted on' to fulfil an overarching course aim.

The parameters of the knowledge taught will be determined by several different factors, including external bodies in some professional subjects. In non-traditional or 'new' subjects there may be much greater freedom to construct a novel curriculum especially if the module or course is innovative and bridges two or more disciplines. For example, Legal Psychology may cover the interaction between human behaviour and the operation of law. It can consider issues such as stalking encompassing the psychology of such behaviour and how the legal system punishes it. Because the fundamental concepts are broad the topics chosen for analysis can be freely determined. Traditional subjects may have less flexibility.

The crucial development is the teaching and learning strategy that enables the delivery of the material to produce the desired outcomes. How can creativity and critically reflective skills be best developed? Educators can explain how they perceive the differences between descriptive and analytical writing within their subject area, but critical and creative thinking are far less easy to articulate and comprehend.

Kounios and Beeman (2009) explore the emergence of insight, in the context of cognitive neuroscience, what is referred to as the 'Aha! Moment'. They argue that: 'Insights are often the result of the reorganization or restructuring of the elements of a situation or problem, though an insight may occur in the absence of any preexisting interpretation' (Kounios & Beeman, 2009, p. 210). They argue that insight is significant as it can lead not only to successful problem solving but also self-realisation. It is contrasted with the more deliberate planned approach to problem resolution and has a creative dimension through; 'new non-obvious interpretation'. The undertaking then is finding a process whereby students learn to develop and be able to apply 'insight' to the tasks in front of them. The design of activities and their impact on student learning may require patience and constant re-evaluation. The fundamental method is to talk with students and one possibility is to design an activity that contains an integrated evaluation.

The idea of being 'pulled up short' was developed by Kerdeman (2003, p. 294):

I call this dimension of teaching and learning 'being pulled up short', drawing on an idea articulated by Hans-Georg Gadamer. Being pulled up short emphasises, not proficiency and power, but proclivity for self-questioning and doubt.

This suggests the promotion of self-reflection with respect to a better understanding of one's own learning process. This is expanded by Greenhalgh-Spencer et al. (2017, p. 73):

To be 'pulled up short' constitutes a moment where a person suddenly sees things differently, they become aware that what they thought was wrong, misguided, or not a full understanding, and they become more open to learning. The moment of being 'pulled up short' is often the aim of many educational interventions.

Lucas (2008, p. 384) applying the concept to accounting explains that it involves... 'both teachers and students and create moments of surprise and possibility within learning and teaching'. These two 'concepts', (the 'Aha! Moment' and 'being pulled up short') are based on the idea that students will advance their learning or rather understanding of the limitations to their learning by having a point of interruption. The difficulty for educators is how to design these points within their own subject area. With respect to legal study, a starting point is to explore the wider context of a case beyond the judgment and this is a process some judges may use (Greenfield, 2022). It also requires the educator to be prepared to reevaluate their own perspectives as Lucas (2008, p. 398) notes: 'a key issue that arises out of this reflection on my own teaching is that these activities would not have emerged without a willingness on my part to be 'pulled up short''. The question is whether adopting a different pedagogical strategy can more easily promote the acquisition of skills and create moments of change.

Transdisciplinary teaching and learning

Historically disciplines have been ringfenced to an accepted body of knowledge though some subjects are more open to developments than others. Legal study in England and Wales has been characterised by a longstanding central core that originally was required by the professions for validation as a Qualifying Law Degree (QLD). These fundamentals of legal knowledge have though been supplemented by a much wider range of eclectic options reflecting not just new areas of legal practice but also changes in society and academic thinking. Internal expansion, of a subject area, is limited when contrasted with the much greater, though more problematic, opportunities that exist by moving beyond the confines of a single discipline.

Other models, especially newer ones, accentuate historical change and dynamism, with companion images of networks, webs, and systems. They call attention to boundary crossing and blurring, integration and collaboration, cross fertilization, and interdependence in epistemological and social environments characterized increasingly by complexity, nonlinearity, and heterogeneity. The current heterogeneity associated with the growth of knowledge has profound implications for the taxonomy of fields. (Klein, 2006, p. 11)

It is a huge challenge for educators used to working within a set field to rethink the boundaries and move into new areas, this itself can be very daunting even in terms of the language used. One potential method is to explore an 'issue' that requires a broader or contextual approach in order to provide a more comprehensive or nuanced conclusion.

The essence is to first determine the concrete issue or challenge that requires this level of cooperative engagement. It is important to see beyond the disciplinary boundary, so the problem is not solely a legal one. Law or more broadly regulatory issues are one of the issues to be explored. At the outset we may have a prejudiced view about the importance of law privileging it above other subjects. Thinking beyond a discipline is part of the learning process and is a desired goal. (Greenfield, 2022, p. 10)

Thinking beyond a discipline is part of the learning process and is a desired goal. This is allied to identifying what 'knowledge' needs to be acquired and where it is located:

Solutions are devised in collaboration with multiple stakeholders. A practice-oriented approach, transdisciplinarity is not confined to a closed circle of scientific experts,

professional journals and academic departments where knowledge is produced. Ideally, everyone who has something to say about a particular problem and is willing to participate can play a role. (Klein et al., 2001, p. 7)

This is simultaneously a strength and a weakness. It provides a much richer vein of information but that first must be gathered from different sources and then critically assessed. The ability to quickly organise and sift through material become vital skills as does the capacity to identify gaps. It is though possible to develop subject matter that is less open and more contained. Exposure to a variety of stakeholders is, in itself, a positive outcome enabling students to gain a much greater contextual understanding. Work needs to be carefully managed and there may be a need for additional resources, but smaller transdisciplinary projects still have the potential to achieve positive outcomes for all those involved.

Conclusion

It might be considered a burden for educators, coming through the stress of the pandemic, to carry out a major rethink of their teaching and learning strategy. There are also other accumulated pressures notably around supporting students' well-being. The pandemic has though created a natural point to reflect and we encourage and expect students to critically reflect on their learning, reviewing teaching is the other half of the equation. If we are serious about delivering the crucial but ambitious skills agenda the teaching and learning strategy must be fit for purpose. A transdisciplinary approach acknowledges that the world has changed, and that knowledge is no longer naturally solely contained within traditional discipline defined spaces in universities. A move towards 'mutual learning without boundaries' will prove challenging as both an idea and a practice and the parameters need to be realistic and capable of delivery. There is though a lot to be gained from daring to stretch our own educational thinking.

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