Threshold Concepts and Teaching Psychiatry: Key to the Kingdom or Emperor's New Clothes?

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Abstract

Psychiatry, more than most medical specialties, must engage with undergraduate medical education to prevent the further marginalisation of mental health within medicine. There is an urgency to the need for psychiatrists and educationalists to communicate, and for psychiatrists to be aware of developments in educational theory. The idea of 'threshold concepts' is currently widely discussed by educationalists. Threshold concepts are described as areas of knowledge without which the learner cannot progress, and which, when grasped, lead to a transformation in the learner's perspective and understanding. Threshold concepts have been criticised on conceptual grounds, and there is a lack of clarity as to how to identify them empirically. While they may represent a fruitful approach to the task of engaging medical students in psychiatry teaching, it is suggested that further development of the idea is required before it could be usefully applied. However empirical studies in other disciplines suggest that there may be associated benefits to the teaching of the discipline from trying to identify threshold knowledge.

Key words: Threshold concepts, teaching psychiatry, troublesome knowledge, student engagement, medical education, psychiatry teaching, recruitment of psychiatrists.

Introduction

Eagles *et al* identified the experience of undergraduate psychiatry teaching as one of the two key factors in determining interest or otherwise among medical graduates in psychiatry as a career (the other is the negative or otherwise view of psychiatry amongst other medical practitioners).[1] Much research has identified negative attitudes amongst medical students to mental illness in general and to psychiatry as a career option.[2] Both from the point of view of recruiting and retaining medical graduates into psychiatry, and of ensuring that all medical graduates are adequately grounded in the speciality, engaging medical students in undergraduate psychiatry teaching is a crucial task for psychiatry.

Indeed, engaging students in higher education is a topic of consuming interest for educationalists across all disciplines. Post-secondary education has, in developed countries, become the norm rather than the exception. Student drop-out rates are a major concern given both the fiscal cost of higher education and the fact that dropping out acts as a risk marker for various adverse outcomes.[3] The student body is increasingly diverse not only demographically but in terms of previous educational experiences. The introduction to a particular discipline, and in particular the 'acculturation' into disciplinary discourse and ways of thinking, is seen as crucial in ensuring successful completion of a course of learning.[4] Psychiatry is generally taught later in undergraduate medical education, by which time the acculturation process into medical school is well advanced; as a discipline, it has its own particular issues regarding engagement, with studies reporting a perception among medical students see that it is a a less dynamic and 'unscientific' field compared with other specialties.[5]

It follows from the above that psychiatry as a specialty must have a particular interest in medical education. To avoid the fate of being a 'Cinderella' in the medical school, psychiatry must take a lead in critically engaging with new concepts and theoretical approaches in education.[6]

Optimising the student experience of psychiatric teaching and ensuring that the acculturation of medical students does not lead to the further marginalisation of mental health issues are vital tasks for the specialty. This paper is intended to bring awareness of a recently emergent theory of education – that of threshold concepts – to a readership of psychiatrists. It does not suggest that this is a magic solution to the problems of psychiatric education; it is intended as a small element in a bridge between psychiatric and educational practices

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Threshold concepts

The threshold concept is a currently influential idea in higher education. It can be understood "as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress."[7] There are two components to this threshold concept – it is a *sine qua non* for further learning, and comprehension leads to an internal transformation that enables this further learning.

While there seems to be common ground with Mezirow's 'transformational learning' concept, defined by Mezirow as a process of "becoming critically aware of one's own tacit assumptions and expectations and those of others and assessing their relevance for making an interpretation"[8], the focus is less on overcoming personal assumptions and the influence of others, but on the approach to a body of knowledge itself.

Meyer and Land relate threshold knowledge to troublesome knowledge, i.e. knowledge which does not seem to cohere with the learner's existing understanding. This is knowledge "that is 'alien', or counter-intuitive or even intellectually absurd at face value – or, alternatively, may lead to an awareness of troublesome

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knowledge." They conclude that "a threshold concept can of itself inherently represent troublesome knowledge"[9] although not all threshold knowledge is troublesome and not all troublesome knowledge is threshold.

Threshold concepts have become influential among educationalists across many disciplines. For Clouder, the threshold concept in health care education is the transformation from student to carer.[10] On meeting patients in practice, learners can experience conflicts between their previous role as 'academic' learners (which usually persists in parallel to clinical teaching), their own everyday understanding of 'caring', biomedical models of health, illness and therapy, and moral and ethical dilemmas. These conflicts can constitute troublesome knowledge, and in Clouder's view also create threshold knowledge.

Critiques of threshold concepts

Campbell and Johnson describe (and decry) the popularity of educational fashions, and their effect on medical education.[11] They argue that a lack of conceptual clarity bedevils the application of educational theories in medical education, and that medical teachers should be more aware of this tendency, and therefore more critical of these theories. This acts as a salutary warning against the blind, uncritical adoption of whatever the latest educational notion may be.

Rowbottom offers a deep critique of threshold concepts on philosophical grounds.[12] He notes that Mayer and Land's definition of threshold concepts does not allow, even in principle, for them to be empirically identified. This is because there are three major philosophical approaches to the term 'concept', the first – dominant in philosophy of mind – posits concepts as mental representations. Another reduces concepts to a series of intellectual abilities. A third sees concepts as objects of thought associated with names, neither mental nor spatiotemporal. Given these contending understandings of a 'concept', it is difficult to see how to arrive at a consistent, reliable way of defining a 'threshold concept.'

Indeed, Rowbottom goes on to argue that as 'threshold' is an extrinsic property, what is threshold for one learner will not be so for another. Mayer and Land give as an example of a threshold concept contrasted with a non-threshold concept in physics is gravity (threshold) vs centre of gravity (non-threshold). For Rowbottom, this distinction is spurious – why is centre of gravity less 'threshold' than 'gravity'?

Of course, the same point could be made about contending definitions of terms like 'foundation knowledge', 'core competencies', 'professional attitudes', 'reflective practice' and other terms used in educational discourse. This does not prevent teaching and learning from happening. Even if there are grounds for philosophical debate on the precise meaning of a particular term, it may still have a useful role in curricular design and implementation.

Role transitions such those described by Clouder can be seen as more affective and attitudinal than conceptual, and what is being described as 'troublesome knowledge' is really a collection of troubling thoughts, feelings and adjustments of roles. Rather than an approach based on threshold concepts, reflective practice may be more suited for the exploration and resolution of these conflicts associated with role transitions.[13]

Threshold concepts and psychiatry

With these caveats about threshold knowledge and concepts in mind, it does seem a potentially fruitful approach to considering how to engage medical students in psychiatric teaching. That psychiatry is replete with 'troublesome knowledge' seems clear. It would appear to be intuitive that an undergraduate medical student who has had teaching in pharmacology, pathology and some clinical medicine will find the concepts of psychopharmacological treatment of mental illness less challenging than the concepts of psychotherapeutic approaches. Similarly, the definition of mental illness is a more challenging concept than that of physical illnesses, one which continues to be the subject of debate. An emphasis on collaborative management of lifelong mental health may seem foreign to students used to the prescriptive, curative approach of most medical practice. Other examples of how psychiatry may be seen as radically different from the rest of medicine by medical students will no doubt spring to mind.

Of course, this is speculative, and empirical research into what medical students find difficult and possibly may experience as 'threshold' knowledge about psychiatry may turn up surprising results. Furthermore, as Rowbottom reminds us, the definition of threshold concept can be left so vague that identifying them is impossible.

Meyer and Land write that 'threshold concepts would seem to be more readily identified within disciplinary contexts where there is a relatively greater degree of consensus on what constitutes a body of knowledge' (for example, *Mathematics, Physics, Medicine,* Pace Meyer and Land); there is perhaps less of a consensus on 'what constitutes a body of knowledge' within medicine in general and psychiatry in particular than it may appear from outside these disciplines.

Meyer and Land, in their discussion of threshold concepts, do not specify just how they are to be identified. Teachers in a range of disciplines are cited as giving examples of counter-intuitive knowledge in their disciplines – for instance, opportunity cost in economics, or the total abolition of the high culture/low culture distinction in cultural studies – but they do not suggest a methodology for arriving at threshold knowledge.

Potential practical approaches are suggested by Irvine and Carmichael.[14] They describe how, over eight disciplines, teaching staff in higher education were introduced to the idea of threshold concepts. They were then invited to identify potential threshold concepts in their own disciplines via small-scale research projects. Some participants worked with students near the end of their studies, or with recent graduates, to identify threshold concepts; others worked with students from throughout their teaching spectrum.

Irvine and Carmichael focus on three disciplines – sports science, English, and engineering, and describe the process of identifying

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threshold knowledge, and the participants' reflective comments on this, in detail. They describe differing conceptualisations of threshold knowledge across the disciplines, "with varying stress laid on their transformative, integrative, troublesome, irreversible or bounded aspects." Therefore there was considerable variety and a lack of strict conceptual consistency about threshold concepts from these practitioners. Despite this, participants did not question the utility of the threshold knowledge concept, and the authors also reported that the experience was fruitful in engaging the participants in thinking about their teaching and what makes their discipline distinctive.[15]

The conceptual difficulties pointed out by Rowbottom are far from satisfactorily resolved. Assuming that all students will find the same ideas either threshold concepts or troublesome knowledge is misleading. However, notwithstanding these objections, the threshold knowledge concept may offer promise for conceptualising approaches to teaching in psychiatry for both undergraduates and postgraduates. Just as teachers need to allow for the wide range of learning styles that exist in any group, accepting that a range of concepts could be considered threshold amongst a group of learners is important.

The distinction between core and threshold knowledge is a difficult one to make. It may simply be a question of contending metaphors of learning. 'Core' or 'foundation' knowledge implies a metaphor of learning as the construction of a solid structure or object. 'Threshold' knowledge implies a journey, a process of discovery with new vistas opening up along the way. Empirical research on this topic, and judicious application of the fruits of this research, may help medical students manage threshold and troublesome knowledge within psychiatry and become more fully engaged in the subject.

Bridging the gap between educational theory and the reality of medical practice is no small task. It is recognised that medical educationalists must begin to define clinical outcomes for their innovations in teaching and curricular design.[16] As well as a need for educationalists to engage with clinical reality, clinicians need to engage with the educational process. This includes a critical awareness of trends and developments in educational theory and practice.

Among the benefits that Irvine and Carmichael report from the process of identifying threshold knowledge is a greater conceptual clarity about the nature of the discipline. Thinking about what distinguishes a particular subject from others can be concentrated by trying to identify what is threshold knowledge for that subject. The process of trying to attempt to identify threshold knowledge may be of benefit to psychiatry as a discipline in ways beyond teaching of medical students.

Conflict of interest

None.

References

1. Eagles J M, Wilson, S, Murdoch, JM. Brown T. What impact do undergraduate experiences have upon recruitment into psychiatry? *Psychiatric Bulletin*, 31: 70-72, 2007
2. Scott I.M. (2009) Whether or wither some specialties: a survey of Canadian medical student career interest. *BMC Medical Education*, 9:57
3. Tinto, V. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago: The University of Chicago Press. 1987.
4. Braxton, J.M. (2000) Reworking the student departure puzzle. Vanderbilt University Press, Nashville.
5. Feifel D, *et al*. Attitudes Toward Psychiatry as a Prospective Career Among Students Entering Medical School. *American Journal of Psychiatry* 1999; 156:1397–402
6. Guerandel, A., Mac Suibhne S, Malone K. Best evidence medical education and psychiatry in Ireland: a three step framework for change. *Irish Journal of Psychological Medicine* 25(4): 120-122
7. Meyer J H F Land R (2003) "Threshold Concepts and Troublesome Knowledge – Linkages to Ways of Thinking and Practising" in Improving Student Learning – Ten Years On. C.Rust (Ed), *OCSLD*, Oxford.
8. Mezirow, J. (2000). Learning as Transformation: Critical Perspectives on a Theory in Progress. Jossey Bass, San Francisco
9. Perkins, D.. (1999) The many faces of constructivism. Educational Leadership, 57 (3), 1999.
10. Clouder L (2005). Caring as a 'threshold concept': Transforming students in higher education into health (care) professionals. Teaching in Higher Education,10(4), 505-517, 2005
11. Campbell, J.K, Johnson, C. (1999) Trend spotting: fashions in medical education. *British Medical Journal*, 318: 1272-1275.
12. Rowbottom DP . (2007) "Demystifying threshold concepts." *Journal of Philosophy of Education*, 41(2), 263-270
13. Raw, J. Brigden D. Gupta R. Reflective diaries in medical practice *Reflective Practice*, Vol 6. No. 1, pp 165-9, 2005
14. Irvine N, Carmichael, P. Threshold Concepts: A point of focus for practitioner research., *Active Learning in Higher Education*, Vol. 10, No. 2, 103-119, 2009
15. Ibid.
16. Chen FM, Burstin, H. and Huntington, J. (2005), The importance of clinical outcomes in medical education research. *Medical Education*, 39(4), 350-1

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