

Problem-based learning students' perceptions of knowledge and professional identity: occupational therapists as 'knowers'

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Key words:

Knowledge, 'knowers', identity, dispositions, problem-based learning.

Purpose: The future of occupational therapy is dependent on profession-specific knowledge to underpin its practice. This research explored occupational therapy students' perceptions of knowledge and their professional identity from one problem-based learning programme.

Procedure: A qualitative methodology using in-depth interviews gathered data from 20 occupational therapy students in their final year of an undergraduate programme. The data were analysed thematically and in relation to theoretical constructs derived from the sociologists of education, Basil Bernstein and Karl Maton.

Findings: The students viewed occupational therapists as 'knowers' rather than as 'knowledgeable' therapists. This distinction is embedded in a professional identity grounded in the dispositions of the occupational therapist and the philosophical constructs that support occupational therapy, but not in the specialist knowledge of occupation.

Conclusion: The students' experiences suggest that the problem-based learning programme provides the transferable skills and philosophical constructs that allow them to practise in a diverse range of contemporary occupational therapy settings. However, simply mirroring current practice restricts professional advancement. The identity of the occupational therapist needs to embrace both a philosophical discourse and the specialist knowledge of occupation.

Introduction

The possession of specialist knowledge has traditionally been regarded as a characteristic trait of a health profession (Etzioni 1969). However, in the United Kingdom (UK) since the late 20th century, successive health reforms have prompted more pluralistic forms of service delivery, which require health and social care professionals to share specialist knowledge (Clouston and Whitcombe 2008). For Hoyle and John (1995, p122), this sharing of knowledge amounts to a new concept of what constitutes professional status, which they term as 'professionalism'. Here a profession is not defined by expert knowledge but through the ability to demonstrate advanced professional skills, such as team working, as well as the capability to carry out sound and reasoned judgements.

According to Mackey (2007), occupational therapists should take advantage of this new professional order by adopting a reflexive approach that celebrates the diversity of practice. Historically, occupational therapy professional identity was based upon a set of beliefs, for example client-centredness and holism, rather than on expert knowledge, but over the last 30 years occupational therapy has begun to define its distinct knowledge base. With reference to the philosophy of Foucault, Mackey (2007) argued that occupational therapists should seek to negotiate individual professional identities that reflect a fluctuating practice context.

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Reference: Whitcombe SW (2013) Problem-based learning students' perceptions of knowledge and professional identity: occupational therapists as 'knowers'. *British Journal of Occupational Therapy*, 76(1), 37-42.

DOI: 10.4276/030802213X13576469254739

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Submitted: 26 August 2011.

Accepted: 14 May 2012.

This article acknowledges that what constitutes a profession and professional identity is shaped by history and social forces, but maintains that the future of occupational therapy depends on the ability to articulate a knowledge base of its own. Against a background of multidisciplinary team working, performativity and skill mix, health and social care professionals are still required (perhaps more than ever) to evidence their interventions and differentiate their practice from each other. As Lawson-Porter (2009) and Turner (2011) suggested, the critical application of occupational science provides the means for occupational therapists to show their unique contribution. Occupational science considers why people engage in occupations and provides an understanding of how occupations are organised, including the analysis of the skills needed to undertake different occupations (Wilcock 2001). It takes account of occupation in its wider context to study the effects of occupational engagement or disengagement and the potential role of occupation in the prevention of ill-health (Molineux 2004).

Many occupational therapists develop a relationship with occupational science during their pre-registration education. Occupational therapy educators in the UK have a responsibility to make students aware of theories and research into the nature of occupation (College of Occupational Therapists 2008) and one way of doing this is through problem-based learning (PBL). There is no single definition of PBL, but there are common principles that govern its implementation (Halliwell 2008). These include the use of a problem, or case triggers, as an impetus for students' learning. PBL tutors facilitate this through the use of small groups and students work together to address the problem. PBL is underpinned by andragogical learning theory (Knowles et al 2005), which asserts that adults learn best when they take responsibility for their own learning. It is also influenced by constructivist approaches to learning that stress the context-bound nature of knowledge and by the personal meanings that individuals generate from learning experiences (Hendry et al 1999). Therefore, in PBL, students make decisions about what they need to know to tackle problem scenarios, and this poses an interesting question about how they determine what knowledge they need.

Students' experiences of problem-based learning and knowledge

Previous investigations of the experiences of PBL have concentrated on students' approaches to learning and learning styles. For example, Newble and Entwistle (1986) found that medical students were more likely to adopt 'deep approaches' to learning (an orientation to seek meanings and relate ideas together) rather than 'surface approaches' to learning (the memorising of facts to complete task requirements). Similar results were found with students on problem-based occupational therapy and physiotherapy courses (Sadlo 1997, Richardson et al 2007). Downing et al (2011) suggested that PBL enhanced students' ability to problem solve and to reason clinically, and Reeves et al (2004) maintained that metacognitive skills (like clinical reasoning), which

occupational therapy students acquire through participating in PBL, mirror the skills needed for professional practice. Barrett (2010) and Rubin et al (2011) focused on students' involvement in PBL group work and the creative approaches used by students to address problem-based scenarios.

Much of the qualitative research into students' experiences of PBL has been conducted through the same constructivist lens (Barrett 2010) that provides ideological weight for the use of PBL as an educational approach. Constructivist research methodologies adhere to an 'undifferentiated' view of knowledge (Young 2008), where the relevance of all knowledge depends on the situation for which it is required. In contrast, a realist approach sees knowledge as an objective reality that can be dislocated from the 'knower' (Wheelahlan 2010). Therefore, for researchers of a constructivist persuasion, how PBL students differentiate knowledge has seldom been of interest. Savin-Baden's (2000, p56) longitudinal study of PBL did take account of students' views of knowledge in a broader framework, which she termed the 'dimensions of learner experience'. Her findings produced some rich insights into students' views of knowledge, but her focus was on their transitions of learning as a response to their experiences of PBL rather than on how the pedagogy of PBL shapes their views of knowledge.

The present study explored students' perceptions of knowledge, how PBL shapes that perception and whether this influences students' view of professional identity. The research was analysed with reference to theoretical tools from the sociologists of education Bernstein (2000) and Maton (2010), which was concordant with an ontological orientation towards a realist rather than a constructivist research position.

The research questions were:

- How do students on a PBL programme determine what knowledge is necessary for occupational therapy practice? Who or what influences this decision?
- Does the experience of learning through PBL fashion a particular occupational therapy professional identity?

Method

A PBL (occupational therapy) tutor in one university in the UK conducted the study. All participants were recruited from a 3-year, pre-registration, full-time occupational therapy programme. It was fully problem based and from the outset the tutors provided the students with problem-based scenarios (case studies) designed to 'trigger' students' learning. Academic subjects such as sociology, anatomy and psychology were not taught separately; consequently, when addressing problem-based scenarios, the tutors expected students to integrate knowledge from these subjects with their life experiences and their knowledge of occupational therapy.

The theoretical framework

For this study, knowledge was classified according to Bernstein's (2000) notions of horizontal and vertical dis-course. Through seeing knowledge as something that can

be separated from 'the learner', Bernstein's (2000) exegesis allows the categorisation of knowledge in different ways. Horizontal discourse comprises local, often oral, practice-specific knowledge that is 'contradictory across but not within contexts' (Bernstein 2000, p157). Fundamentally, horizontal discourse is highly dependent on the social situation. In contrast, vertical discourse takes the form of scholarly knowledge, the relevance of which is not dependent on the social setting.

Although Bernstein's classification makes it possible to explore different forms of knowledge, Maton's (2010) concepts of a 'knowledge code' and a 'knower code' were useful when trying to understand the types of knowledge that students prioritise. Maton (2010) is interested in the relationships between the objects of study and the practitioners of academic disciplines or professions. A knowledge code is symbolised by a strong 'epistemic relation' to knowledge, where the importance of knowledge (the subject) is given priority over the characteristics of those who claim to hold knowledge. Alternatively, a 'knower code' is symbolised by a strong 'social relation to knowledge', where the characteristics of those claiming to 'know' are given precedence over the knowledge itself.

Data collection

The choice of the research design reflected the nature of the research questions and, since the interest lay in interpreting students' perception of knowledge and identity, a qualitative design was deemed appropriate. Researching in a familiar setting can affect the level of trust between the participants and the investigator. To create some distance between the researcher and the participants, a student sample was chosen for whom the researcher had no direct relationship or teaching responsibilities. Selecting students who were essentially 'unknown' can reduce the power imbalance between the investigator and the participants (Ferguson et al 2004). However, it was possible to encounter what Miller and Glassner (2004, p132) referred to as 'political resistance' from students who were reluctant to talk about their views of PBL with an occupational therapy tutor. Nevertheless, when gathering the data, the students gave very candid accounts and did not avoid uncomfortable experiences.

The data were gathered by in-depth, semi-structured interviews with third year occupational therapy students. They were selected because this permitted retrospective accounts of their experiences over the 3 years of the PBL programme. The interview questions were largely explorative and focused on different aspects of the programme; for example, the students' experiences of group work and practice placement and how they viewed knowledge. Clarifying questions checked in-situ understanding of students' responses.

Approval for the study was obtained from a university ethics committee. All third year students were given a participant information sheet, which outlined the purpose of the study. Pseudonyms were used to protect the identity of the students. Electronic and hard copies of the interview transcripts were stored securely.

Procedure

Of the 43 students who expressed an interest in the study, 20 randomly selected students were invited to participate. They signed a consent form to verify that they volunteered for the study and that they understood the purpose of the research. Each participant was interviewed on one occasion for a period of between one and one and half hours. All the interviews were recorded on a digital dictaphone and transcribed verbatim.

Analysis

The theoretical constructs of Bernstein (2000) and Maton (2010) were used heuristically to investigate the findings. The general approach to data exposition followed a process of abductive reasoning that starts with the particular (that is, the examination of the students' interviews), from which conceptual ideas are developed, refined and then broadened out to theory (Coffey and Atkinson 1996). The detailed analysis of each interview transcript led to data reduction and data complication. Descriptive 'tags' were attached to each transcript to summarise segments of data or sections of each interview transaction. Second level coding involved generating superordinate categories that linked data together to form new conceptual ideas. The concepts produced from each transcript were then displayed visually to compare and contrast between individuals. The final stage of analysis led to data verification (Miles and Huberman 1994), drawing conclusions from the findings and developing themes from the data that were then linked with theory.

Trustworthiness

Students verified aspects of interview data that at the point of transcription needed some clarification. This added rigour to the credibility and trustworthiness of the findings. Trustworthiness was also addressed through the use of interview excerpts to support and illustrate the interpretations. A reflexive approach to the research process was adopted: memos were used to question and challenge preconceived ideas about the subject of investigation and the researcher's understanding of PBL.

Findings

Eighteen women and two men participated. Their ages ranged from 20 to 38 years; the median age was 21 years. The findings are presented under three themes: Knowing how: PBL skills; knowing what: knowledge as a social relation; and a dispositional, professional identity.

Knowing how: PBL skills

Through practice placement the students learned that much of the occupational therapist's working day comprised the knowing of *how* to carry out the processes of decision making and problem solving that frame their interventions:

As an OT you need to problem solve every day (David).

In the course of an OT's role they always have to find things out and make their own decisions (Rebecca).

Decision making and problem solving 'lie at the heart of professional work', but the skill of knowing how to access information was central to occupational therapy:

For me, occupational therapy is about having the skill of researching things. You can't know everything, and anyway your knowledge can get out of date (Kate).

The ability to access 'new knowledge' was perceived to prepare the students for being 'life-long' learners of occupational therapy:

A skill that that you need to develop throughout your working life, regardless of the occupational therapy setting that you work in (Rebecca).

Practice placement provided the students with opportunity to learn:

Things that you can never learn in college like how to order equipment; the practical day to day working of the system like how are you going to be able to deliver the best OT services to your clients (Karen).

Here, these examples refer to the everyday, localised knowledge of practice: the horizontal discourse (Bernstein 2000) that authenticates the reality of occupational therapy ways of working. However, the 'knowing how' of practice was not singularly acquired through the students' placement experiences; occupational therapy skills were forged through the interaction of placement with the pedagogy of PBL:

PBL gives you the skills to work as an OT, like how to manage caseloads and how to work with people. I think it [PBL] will make me a better practitioner (Fay).

Knowing what: knowledge as a social relation

For the participants, 'knowing what' amounted to understanding the philosophical beliefs (for example, client-centredness, holistic practice) that characterised occupational therapy rather than esoteric subject knowledge. This can be represented by a social relation to knowledge, that is, a 'knower code' (Maton 2010), where 'what matters is not what you know, but who you are' (Maton 2006, p50):

It's hard to say what an OT is really. I think it is a belief in helping people to be independent. It is about seeing people as unique individuals (Anna).

As an OT, you need to be client-centred and think about all the things that affect a person's life how their occupations are affected by their illness. This is learned through the course [the PBL programme] it is just something that is embedded in you it is something that is expected of you (Joanne).

Occupational therapy insight is inculcated through education, through engaging in the PBL programme. This is not to say that occupational therapy is knowledge-free, or that the students did not appreciate the importance of occupation to their role, but the knowledge of occupation *per se* is not what specialises occupational therapy:

We haven't any particular knowledge because I find we take our knowledge from different places (Susan).

I would say your knowledge of OT comes from practice (Bronwyn).

An understanding of knowledge in its relation to practice was something that was learned through being a PBL student, as shown by the following, rather illuminating example:

In the first year [of the PBL programme], some people including myself went to a staff member and said 'we want to learn this, or we want to learn that'. And the staff member said, 'why?' They said if you can justify why you need to know it then we will include it into the OT course. None of us bothered to suggest anything again (Gareth).

Here the staff member is not being obstructive, but is trying to stay 'true' to the department's interpretation of PBL. The value of vertical discourse (Bernstein 2000), that is, knowledge that is context-independent, is less obvious:

I've never heard of occupational science (Carla).

Occupational science is an example of a vertical discourse not transparent through the transmission of the PBL. It may be that the case studies used to 'trigger' the students' learning did not overtly address the need to explore occupational science literature. For students like Paulette, her knowledge of occupation stemmed from the serendipitous nature of her research project and not through her interaction with the PBL programme:

I'm not particularly confident in talking about this and don't even know whether I should ... if it was important we would have done more on it. It has come from my own reading, the occupational therapy textbooks and articles usually have something to say about the nature of occupation and I kind of got it from there really (Paulette).

Given the importance of occupational science as a knowledge base, there is a need for this to be made explicit through the programme curricula and delivery.

A dispositional professional identity

Since the participants stated that the collective belief systems and intersubjective attributes specialised occupational therapy practice, it was through these that their identity was realised:

Nurses and doctors I think are more biologically based than OTs. They are interested in medication and things like that. OTs are more concerned with looking at the whole person and not just one part of their illness (Fay).

I'm grounded in the philosophies of practice that make you an occupational therapist ... that sets us apart from everyone else (Louise).

Through their experiences of practice placement, some students were confronted with the challenge of a dispositional professional identity:

What makes us different from other professions ... is our need to take into account what is meaningful for the client and to consider others in their life like their family or carers. I've noticed though, that we are not the only profession that thinks about issues like holistic practice (Harriet).

In modern health and social care, values such as holism and client-centredness are shared among health care professionals and play a significant role in the design and development of innovative services:

My last placement was in a role emerging setting. This was a service for the homeless; it was community based and very multi-disciplinary ... But because everyone was working to the same idea, with similar beliefs, it was difficult to isolate the OT's role. Everyone seemed to focus on similar issues (Mary).

This is one example of how the profession is trying to expand its work beyond the customary areas of practice. However, in services where there is a collective ethos, differentiating the role of the occupational therapist simply on the grounds of practice beliefs and occupational therapy 'ways of knowing' is problematic.

Discussion

These findings support Downing et al (2011), who suggested that PBL offers students the opportunities to develop skills such as problem solving and clinical reasoning, and Reeves et al (2004) who found that PBL seems to equip students with the skill of how to access knowledge. The strength of PBL lies with the nurturing of students' professional skills, appealing to a sense of 'professionalism' (Hoyle and John 1995, p122), but in this study PBL inhibited the acquisition of a body of knowledge that is not directly relevant to practice context.

In Bernstein's (2000) terms, the PBL programme legitimises the horizontal discourse that is specific to the occupational therapy workplace. It should also be acknowledged that the importance that students gave to horizontal discourse may have also mirrored their experiences of practice placement. Krusen (2011) illustrated how various, interconnected social processes, for example, the influence of team working roles at a departmental level or the specification of an occupational therapist's role at an organisational level, are influential when trying to make sense of the culture of practice. Through their immersion in these social processes and their observations of experienced occupational therapists, students learn 'what they need to know' to practise as occupational therapists. However, this type of knowledge is localised, sometimes contradictory and not transferable to other settings.

Alternatively, the acquisition of a body of knowledge (a vertical discourse, Bernstein 2000), such as occupational science, is important because it provides students with access to an in-depth understanding of the subject that is not always accessible through direct experience (Wheelan 2010). Occupational science is the medium through which occupational therapists are able to share theoretical ideas and become a community of specialists. By inhibiting vertical discourse of this kind, knowledge is reduced to the perspective of the 'knower' (Maton 2010) and this has consequences for professional identity.

Occupational therapy identity was represented through dispositional membership criteria, such as empathy and a belief in holism and client-centred practice. It could be argued that such a descriptor reflects the complexity of practice (Creek 2003) and the difficulty of articulating the unique properties of the profession. Nonetheless, an identity based solely on the characteristics of the 'knower' does not provide an identity by which occupational therapy can claim to be different.

As Wilding and Whiteford (2009) pointed out, occupational therapists have an ethical duty to draw on their knowledge of occupation as this offers a different perspective to others and can meet different service users' needs. Specialist knowledge gives occupational therapy a stable identity, without which the profession will succumb to the generic procedures and practices that are not specific to any individual occupation or professional field. It is only through developing a strong epistemic relation (Maton 2010) to knowledge that the profession's survival will be secured. Without this, occupational therapy will always be operating in response to health or social care initiatives rather than leading them. An identity bolstered by core specialist knowledge enables occupational therapists to think strategically about who their potential service users are (Pollard et al 2010) and not only to survive but also to think collectively and imagine new futures.

Limitations

By locating the study in one university with a small sample of 20 students, the findings are particular to the specific nuances and design of that PBL programme. Nevertheless, they reflect the broad notion that the structure and delivery of educational curricula influence students' learning experiences and their understanding of knowledge.

Conclusion

The critical application of occupational science provides occupational therapy with foundational knowledge and an identity that is different from that of other professionals. Problem-based curricula are designed to encourage students to relate knowledge to specific cases and practice settings. Although this is a laudable and necessary aim in an ever-changing practice arena, occupational therapy students also require an understanding of the knowledge that separates them from others. Reduced perceptions of the importance of applying occupational science knowledge to occupational therapy can occur if PBL programme tutors do not design courses where this is explicit and reinforced through PBL tutorials.

Acknowledgements

I wish to thank the students who participated in this research, and Professor Sally Power for her wise counsel in relation to the sociological constructs used in this study.

Conflict of interest: None declared.

Key findings

- Knowledge was judged to be pertinent to occupational therapy if it could be applied to the current practice context.
- Occupational therapy identity was characterised by the philosophical constructs that underpin the profession and not the knowledge of occupation or occupational science.

What the study has added

This research offers a valuable insight into how occupational therapy students on a problem-based learning programme viewed occupational therapy knowledge and professional identity.

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