Method in Action Case Studies:

Title

"It's the way I tell 'em!" It is not what we teach but how we do it: using focus group discussions to research student perspectives on threshold concepts in health

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Keywords

Qualitative research, student perspectives, focus group discussions, threshold concepts, student learning

Disciplines

Health and education

Methods Used

Focus groups, purposive sampling

Academic level

Intermediate undergraduate

Contributor Biographies

Louise Warwick-Booth

Louise is a sociologist with specific interests in health policy and social policy. She is located in the centre for health promotion research, which she has co-directed since 2013 alongside Dr James Woodall. Louise joined the University in September 2005 and has taught on a wide range of modules including sociology, health policy, research, community and global policy and health care. She also manages a range of research projects and a team of 6 research staff.

Louise's PhD explored lay research conducted within a community development setting. Louise has a numerous research interests including community development, community research, social inclusion and gender. Louise's research projects are diverse and include a commissioned evaluation of the Way Forward Programme, a project to develop resilience in vulnerable young women with unmet need, the evaluation of a Department of Health Eatwell and Livewell Project to tackle malnutrition amongst the elderly, and the project management of the Sunderland Health Champion Programme.

Louise has published several text-books such as Social Inequality (2013), and Contemporary Health Studies: An Introduction (2012 with colleagues). Louise is also the author of the book Researching with Communities (2009) based upon her PhD, as well as numerous journal articles.

Diane Lowcock

Diane Lowcock is a Senior Lecturer with interests in health inequalities, evaluation, research methods and pedagogy in practice. She joined the university in 2005 and teaches on a range of provision in the UK, Zambia and Ghana, delivering research methods and health promotion education to a wide variety of student groups. Diane has been involved in a variety

of research projects within the Centre for Health Promotion Research and is currently supporting some organisations to develop evaluation tools and approaches.

In her previous role as a public health specialist, she worked in primary care teams developed health promotion in practice. Her research interests focus upon the nature of evidence and how it is used in practice to make decisions. Diane has worked on a variety of research projects within the Centre for Health Promotion Research, including evaluations of health trainers and self-care in primary care.

Diane is a co-author of Contemporary Health Studies: An Introduction (2012) and also contributed to the Health Promotion, Global Principles and Practice (Eds, 2013) book chapter on practicing health promotion.

Abstract

This case study will introduce the reader to threshold concepts outlining what they are and how they are defined, before moving on to discuss a qualitative research project with undergraduate students to explore perceptions of threshold concepts within health. The study aimed to establish if threshold concepts within health are identifiable from a student perspective and to explore the teaching and learning processes by which students master such concepts. Focus groups were conducted with students at level 6 of an undergraduate health related degree (health studies), and this case study will outline the data collection processes undertaken within this research.

This case study provides an account of the research process, taking the reader through the methods that were used describing focus group discussions with students as a data collection mechanism to both explore and try to gain understanding of the ways in which they learn. The case sheds light upon the challenges of conducting research with students that are being

taught by staff who are also researching them, as well as highlighting the findings which show how students learn using the conceptual tool of thresholds as a way to explore processes of learning from the perspective of the student.

Learning Outcomes

By the end of the case you should:

> Have a better understanding of the methodological challenges involved in conducting research related to student learning;
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> Understand the methodology of focus group discussions in exploring threshold concepts in relation to student learning;
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> Be able to examine the advantages of using focus groups when conducting educational research related to health;
>
> Be able to assess the pros and cons of the theory of threshold concepts as a tool to understand student learning.

Project introduction

Threshold concepts were developed by Meyer and Land (2003, pg. 1), and have been described as

> "…akin to a portal, opening up a new and previously inaccessible way of thinking about something…(they) represent a transformed way of understanding, interpreting, or viewing something without which the learner cannot progress. As a consequence of comprehending a threshold concept there may thus be a transformed internal view of subject matter, subject landscape, or even world view. Such a transformed view or

landscape may represent how people 'think' in a particular discipline (or more

generally".

Threshold concepts have thus been described as important for learning but also troublesome because they are conceptually difficult, they may be complex and they may be tacit within disciplinary contexts. At the time that we conducted this research in 2009 the notion of threshold concepts had been applied mainly in the fields of economics and engineering. Since then further research about threshold concepts in relation to some areas of health education has been conducted and reported in the broader literature, however there is little reporting of research related to health studies. Furthermore, whilst threshold concepts have become a growing area of research, there remain complexities in relation to identifying what they look like within several disciplinary boundaries (Barradell 2013).

Discussion within the wider literature indicates that grappling with a threshold concept is central to student learning and once mastered is transformative allowing students to see and 'feel' the subject and the world through new eyes. Very little research has been done in relation to threshold concepts within health, and their implications for pedagogical development hence this case study will detail a qualitative small scale exploration of threshold concepts within health studies/health promotion discussing how the research was done, the management of power dynamics between staff and students and the importance of pedagogical research for curriculum development. This small-scale project adopted a qualitative approach, using focus group discussions with students at Leeds Beckett University (Leeds Metropolitan University at the time) to interrogate teaching and learning processes from the students point of view.

Project overview

This project aims to explore the nature of the threshold concepts associated with the subject

area of health, and teaching and learning processes by which students master such concepts. At the beginning of this research we felt that any identified threshold concepts may cut across several undergraduate programme areas such as health degrees, public health nutrition and environmental health and that the notion of threshold concepts might be able to provide a vehicle to galvanise course teams and refresh health-related curriculums. We were also interested in examining why learners struggle with key concepts throughout their studies.

What are threshold concepts?

The term threshold concept describes the idea that within academic disciplines there are concepts which students find difficult to grasp. Several commentators within the literature argue that if students do not get to grips with threshold concepts, then they can never progress within their discipline of choice and their understandings will always remain limited. In order for students to understand a threshold concept they develop new ways of thinking about the subject, which were previously inaccessible for them (Meyer and Land 2003). Threshold concepts have five features which characterise and ultimately define them (see Cousin 2006). These are outlined and explained in table 1.

Table 1: Defining Features of Threshold Concepts

Characteristic	Description
1.Transformative	A new and transformed way of thinking about the subject.
2. Irreversible	The learner will not forget their new

	perspectives and understandings.
3. Integrative	Learners are suddenly able to identify previously unseen connections across subject matter.
4. Bounded	They can be specific disciplinary property.
5. Troublesome	New subject matter may feel difficult, challenging and foreign.

There may also be an emotional component to threshold concepts, in that student emotions can be tied to these troublesome aspects of knowledge (Cousin 2006).

Despite the clear definition, there are issues with measuring threshold concepts. Rowbottom (2007) argues that as threshold concepts are understood in different ways and are unidentifiable in principle then they cannot be measured empirically. Quinlan et al (2013) further argue that despite lots of papers and conference presentations about threshold concepts, there is not a clear fully fledged methodology related to researching them, and that additionally there isn't a strong critical discourse about methodology. Hence, there is the need for researchers working in higher education to be clearer and more explicit about the ways in which they collect data related to threshold concepts. This case study therefore contributes to this area of methodological discussion.

Context

This project was inspired by a session delivered by Glynis Cousin at the launch of the Centre for Higher Education Research within Leeds Beckett University (Leeds Metropolitan at the time) in June 2007. Thus a staff development opportunity lead to interest, enthusiasm and research related to pedagogy within a university context. Two staff members developed a piece of research to explore threshold concepts with students within the context of a health studies degree. The Bsc (Hons) Public Health-Health Studies degree was being delivered by both staff members at the time of the research. One (LWB) was course leader, and both were involved within large amounts of module delivery across the three year programme of curriculum. The course aimed to provide a progressive and cohesive route of learning, to enable students to develop a broad and holistic view of the determinants of health in both individuals and communities, and to gain understanding of strategies for health improvement. The overall course learning outcomes were that upon completion of the three year programme of study students would be expected to be able to;

1.   Describe the main principles, theories and concepts of each of the contributory disciplines to the programme;

2.   Discuss the relative importance of the contribution of each of these disciplines to an understanding of current issues in Public Health;

3.   Demonstrate the ability to integrate the knowledge base from different disciplines to promote innovative solutions to problems and dilemmas in the study of Public Health;

4.   Critically evaluate research and proposals in the Public Health field for their contribution to increasing the knowledge base;

5.   Demonstrate the ability to add to the knowledge base in Public Health by the formulation of research questions and the development and implementation of appropriate research strategies;

6.   Demonstrate by appropriate means the acquisition of a wide range of personal, interpersonal and transferable skills that show the capacity to be a life-long learner.

These outcomes were delivered in practice through a range of modules in topics such as sociology, psychology, environmental health, social policy, epidemiology and health promotion.

Research practicalities

The research was carried out in March 2009, with level 6 students, who were in the second semester of their final year of the degree programme; therefore almost at the end of their undergraduate degree programme of study. The research used a qualitative approach in which two focus groups, were conducted with the students.

Methods

This project aimed to explore the nature of the threshold concepts associated with the subject area of health, and teaching and learning processes by which students master such concepts, using the following objectives:

1. To identify threshold concepts within the subject area of health studies at Leeds Beckett (formerly Leeds Metropolitan University)

2. To explore the processes of teaching and learning associated with three of these threshold concepts

3. To design assessment, teaching and learning activities that enhance and progress mastery of these threshold concepts.

Research design

To answer the research questions within this study a qualitative methodological stance was adopted. A qualitative research approach is appropriate for capturing people's views, feelings and practice as well as their experience and the kind of atmosphere and context in which they act and respond (Wisker 2001). Qualitative research is able to capture and reflect individual experiences, understandings and meanings of the world (Hills and Mullet 2000), hence was suited to this study as the researchers were capturing student views and experiences about learning.

This research used a qualitative case study design. Detailed case studies are useful for exploration and for researchers searching for explanatory laws (Stake 2000). In general, case studies are the preferred strategy when 'how' or 'why' questions are posed, when the investigator has little control over events and when the focus is on contemporary phenomena with some real life context (Yin 1994). This qualitative approach to data collection was driven by the understanding that 'The methods of qualitative inquiry now stand on their own as reasonable ways to find out what is happening in programmes and other human settings' Patton (2002, pg. 137). This was an appropriate choice of methodology as the aim of the research was to explore and understand how students identified and perceived threshold concepts and what was important from their point of view.

Focus groups in educational research with students:

Focus group discussions were conducted with students as the data collection method in this

project. Focus Groups are also advantageous in research where there is limited knowledge about the research topic, as they provide in-depth information (Doody, Slevin and Taggart 2013). Furthermore, in using focus group discussions to gather data, we believed that this method was a good mechanism to promote discussion and enable students to cross-fertilise their ideas within a group setting (Stewart et al 1990). The focus groups were designed to be interactive and engaging as well as offering a chance for students to explore and discuss their learning experiences with each other.

Given the background of a lack of research related to threshold concepts, we designed the data collection methods in an open way in order to explore if students themselves could define and determine their own threshold concepts. The focus group design provided the opportunity for group discussion and enabled participants to share experiences. Open-ended questions were used as a mechanism to probe the student's ideas in order to elicit a better understanding of their perspectives. The focus group schedule was developed based upon our own ideas, our knowledge of the literature and the study aims. As a starting point for the focus group discussion, students were asked to work in pairs and to consider what they would identify as health-specific subject concepts and then to map the ideas/concepts/models that they had been taught across modules during the previous two years of their course. Following these opening activities, students were then asked about their learning using the following questions:

- What particular ideas did you find troublesome to understand?
- What particular ideas do you feel have enabled you to see the subject area in a new way?
- What particular ideas do you feel have helped you understand the whole subject of health not just a single module?

- What ideas about do you think you would never ever forget?

The focus groups were conducted in a classroom setting within the university as this was in a central, familiar location. This site was thought to be more comfortable to the participants and therefore more conducive to group interaction. Gill et al (2008) argue that the location of focus groups may affect the participants' behaviour therefore researchers should attempt to conduct data collection within an accessible, comfortable, private, and quiet location that is free from distractions. This is what we attempted to do in this instance.

Sampling

Purposive sampling was used within this study, because it is a useful approach when there are a limited number of people who are appropriate for addressing the aims of the study. Purposive sampling involves choosing the participants who are best suited to answer the research question (Parahoo 2006). Thus, the two researchers offered all level 6 students on the health studies degree programme the opportunity to participate.

Ethics

This study was given ethical approval through the university research ethics process in which the research was signed off at a local level by a faculty research ethics co-ordinator. The ethical application noted that the research would be conducted with students but that the topic was not sensitive in nature, and that whilst we as researchers taught the students that the research would be done separately to all teaching activities. We ensured that we safeguarded the students and attempted to allay any concerns about coercion, given the power dynamics at play between ourselves as tutors and the students in the following ways:

- We made a clear distinction between ourselves as researchers and tutors
- We ensured that participation was voluntary

- Participants were reassured of their anonymity once in writing in the participant information sheet and once again orally in the introduction of the focus group.

- We made it very clear that non-participation would not affect the students assessment, learning and teaching in any way

- We stressed that the right to withdraw would not be viewed negatively

Informed consent was obtained from all participants prior to digitally recording all focus groups. There may be potential ethical implications in obtaining consent at the beginning of the data collection process as little is known at that point about how the group discussion and research will develop, hence the importance of the right to withdraw should participants become uncomfortable or simply wish not to continue. Furthermore, confidentiality and anonymity was assured following on from the data collection therefore all quotations used are anonymised as is standard practice in the reporting of qualitative data.

Analysis

All qualitative data was transcribed verbatim and then read and re-read by both of the researchers to ensure familiarity with the content of the transcripts. Initial coding was undertaken in order to develop a coding framework using an inductive approach to identify the full range of emerging themes from the data. The coding framework was then applied to both transcripts, with data subsequently organised into major thematic categories and sub categories. Barbour (2001) suggests that the validation of data analyses can be done by cross checking between researchers, which is the process that was followed in the research project.

Reflexivity

When using qualitative research approaches, it is important to recognise that the researcher is

part of the qualitative research process (Green and Thorogood 2014). Reflexivity is crucial to qualitative research because it explains how the researcher is personally engaged with the topic, their awareness of it and their influences behind it (Dowling 2006). Both researchers maintained self-awareness about our identities as researchers and tutors and used this within the research design to try to ensure that we accounted for power dynamics and conducted an ethically sound piece of research. Furthermore, we have detailed how we became interested in this area earlier on in this case.

Research Findings

The focus groups worked well in terms of allowing students to report their experiences of learning whilst undertaking the undergraduate health studies degree programme. Table 2, provides an overview of the key findings from this study, mapped against some of the key areas described in the literature by Mayer and Land (2003).

Table 2: Summary of research findings

Area described in the literature	Students perceptions
Transformative	Participants were also aware of transformative experiences and transformations within their own knowledge. When asked to identify ideas within the curriculum that had transformed their thinking about health, students tended to conceptualise transformation as affecting the 'self', rather than transformation about an understanding of the subject area, although the result may be the same. For example, when discussing a key concept about health inequity and social class divisions in health status, students reflected on their own lives, their own health and their own values.

"I will always remember that health is determined from birth …..when I have a kid I'll try and make their life as good as possible"

Key transformative concepts were often associated with teaching methods that involved spoken or visual narratives some of which related to events from lecturers and students own lives. This technique appears to be a powerful aid to memory processing, imprinting and enhance recall.

"I always remember that smoking and swimming thing about a woman and her kids, the cost of the bus, the food |

	and the swimming" a participant recalling a spoken narrative from a book. "Some lecturers will say things from their own life so you sit up and listen to them"
Irreversible	Students articulated a number of areas of their learning that they felt they would not forget such as the holistic nature of health, empowerment within communities, economic aspects of health, some particular theorists such as Freud and political influences upon health. Students also reported that their knowledge was changed as a result of being challenged in relation to their own ideas and values. Students also reported that revisiting concepts did not led to disengagement.
Integrative	Because the study of health is inherently a multi-disciplinary process (including sociology, psychology, and health promotion) and ideally should be studied and conceptualised as inter-disciplinary, we wondered if students would be able to link threshold concepts from differing disciplines together or whether the modular structure and individual disciplinary boundaries may limit the element of integration. However the students were very easily and rapidly able to link a great variety of concepts taught across many modules. They demonstrated a relatively complex web of ideas on a flip-chart and evidenced quite a higher ordered level of conceptualisation linking crucial ideas together hence were able to convey connections across the subject matter.

Bounded	Students reported their very broad understandings of health following their learning on the course but did report finding some disciplinary terminology difficult and thus bounded. For example within psychology modules the terminology used by lecturers was seen as problematic and therefore bounded to that particular area. In these instances students reported that when they found areas less interesting, then they simply engaged with them less, possibly affecting their learning in a detrimental way.
Troublesome	Interesting concepts that were identified as 'troublesome' by students appeared to be related more to the teaching, learning and assessment methods that were utilised rather than some intrinsic complexity with the concepts themselves. As health is a multidisciplinary subject area, some disciplines (particularly psychology) were perceived as more theoretical than others, which in turn felt troublesome to students. This is surprising as sociology, another major discipline within our health studies curriculum, is as intellectually and theoretically challenging as psychology, but was perceived by students to be less abstract. In fact students did not label key ideas within sociology as theoretical but had clearly engaged with, and understood complex concepts such as social construction and social determinism of health. Labelling content as theoretical and locating theorist's viewpoints was felt to be

| | irrelevant from students' perspectives. |
| | |

Finally, in relation to the potential emotional component of threshold concepts (see Cousins 2006), our focus group data showed that students described frustration about assessment, learning and teaching methods rather than an emotional reaction to the concept themselves. There was little evidence from our data that students were responding to the subject matter on an emotional level.

Practical lessons learned

When conducting this research, we learned a lot about our students and what they felt was important for their own learning. We outline our learning below:

- **Remain open to what your qualitative research findings may look like**: As lecturers we were surprised at what the students perceived as troublesome concepts and by the students reactions about why they were perceived as troublesome. Pedagogical reinforcement across the curriculum, length of time to internalise concepts and real life application of abstract ideas were all described as being effective in allowing students to unpick and understand key concepts that we as lecturers had ourselves regarded as troublesome. These elements had not been in evidence where concepts had been perceived as troublesome.

- **Create a safe and trusting environment to facilitate data collection:** We were also surprised at how students engaged with this research project and how open they were in talking to us about their own learning experiences whilst on the course. Indeed, the power dynamics that we had been careful to consider and had managed through attention to the ethics involved in the research process did not appear to be an issue from the perspective of the students that participated in the research. Hence, we felt

that we had been able to create a safe environment in which students could share their experiences.

- **Listen to participants and hear what this means for your own practice:** Our research finding taught us that students are able to identify areas of the curriculum that are problematic and difficult for their own understanding easily and they articulated clear preferences for teaching styles and delivery that facilitate better understanding of troublesome aspects of the curriculum. So in summary, this research demonstrated to us that the way we teach is crucial in facilitating better student understanding of troublesome and difficult areas of the curriculum. The implications from this study in relation to pedagogy are represented in table 3.

Table 3: Recommendations for Pedagogical Practice

1. Include real life examples in module content
2. Include stories and narratives within classroom sessions
3. Reinforce key ideas and learning points within the curriculum
4. Use interactive teaching styles
5. Allow students the space for discussion
6. Create assessment opportunities that foster engagement
7. Ensure that the course team are in agreement about the key threshold concepts within the discipline

Conclusions

Qualitative research in the form of focus group discussions with students enabled us to explore how students learned and to gain understanding of what we should do as practitioners to improve our practice and therefore facilitate student learning in relation to areas of the curriculum that can be described as troublesome threshold concepts. The case study described here is written as a transparent description of one piece of pedagogical research. It is not a perfect piece of data collection, but it was a positive experience because it facilitated our understandings of threshold concepts within health studies and gave voice to some of the students that we taught. In the broader literature, questions still remain about what other methods of researching threshold concepts can and should be used to further develop our understanding of this complex but highly interesting area and it is worth noting that translating findings into curriculum and pedagogical practice is not necessarily easy, therefore future research should explore this in more depth.

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Exercises and Questions

1. What do you see as the major strengths of using focus groups when doing educational research? Can you also identify any potential weaknesses?

2. In conducting research with students, how might the goals of the teaching staff as researchers conflict with those being researched?

3. How might the power dynamics between staff and students affect the research process? In what instances might this be particularly problematic? What might this mean for the research findings?

4. If you were conducting educational research related to health, what factors do you think would influence your choice of methods?

5. Finally, consider some of the ways in which you might disseminate educational research findings given that such research has the potential to influence both policy and practice.

Read more:

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