

CHALLENGES IN CROSS-CULTURAL PHD SUPERVISION: MAPPING TO FACILITATE DIALOGUE

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Abstract. This research used concept mapping and interview techniques to track changes in knowledge and understanding amongst students and their supervisors in the course of full-time research towards a PhD. The work measures *both* cognitive change in the specific subjects that are the topic for research *and* in the understanding of the process of PhD level research and supervision. The data shows the challenges for students and supervisors from different ethnic, cultural and academic backgrounds and traditions with a focus on how this impacts the PhD research process and development. Working cross-culturally, and often in a setting different from either the student or the supervisor's background and training, can lead to a lack of common language and understanding for the development of a pedagogically-oriented supervisory relationship. Documenting change in knowledge and understanding among PhD students and their supervisors is key to understanding what the joint processes of research and of supervision entail (Brew, 2003), and here we focus on the challenges of working across cultural, ethnic and diverse academic backgrounds, for both supervisors and students. The approach comprises detailed longitudinal case study analysis rather than any broad inferential comparison.

1 Background

Curzon-Hobson (2002) develops and defends a notion of trust in higher learning, and examines the pedagogical challenges of its pursuit within the sphere of higher education. It is argued that the experience of trust between teachers and students is a necessary foundation for a critical, dialogical learning environment, yet it is an endeavour that can be endangered by poor communication and misunderstanding, common when working in cross-cultural environments. Little research explores how cultural differences impact the research project and supervision process, despite the importance of communication and collaboration skills in PhD education (Phillips & Pugh, 2005).

Much research on PhD supervision is decontextualised and universalises the supervision process—across types of enquiry, disciplines, countries and individual characteristics. There is a notion that supervision can be analysed separately from the rest of the PhD. Rather, we see supervision as inherently part of the thesis development and completing a PhD, and managing the supervisor and student relationship, with the associated aspects of identity that arise. However, this can be particularly challenging when supervisors and students come from different cultural backgrounds, particularly in regards to national origin, educational background and training and language differences. In this paper we use concept mapping to explore the role that these differences play in the intellectual approach to and conceptual understanding of a PhD. We further argue that concept mapping allows for visualisation of complex notions of what a PhD is about and what it is for, providing opportunities for communication, discussion and learning within the supervisory relationship.

2 Internationalisation

Globally there is focus on competition within the internationalisation agenda, (Marginson, 2006), although there are critiques of the marketisation of internationalisation (De Vita & Case, 2003; Kehm & Teichler, 2007; Mok, 2003). Alternative perspectives on internationalisation identify how it can be used as a vehicle to support diversity, access and equity for all learners. To this end, the lenses of interculturalism and inclusion help to identify a precise tension between internationalisation being part of a global capitalist agenda, or being a means to move towards “global understanding” (Teichler, 2004).

Within the dynamic landscape of higher education, internationalisation is often used to gesture to diversity. However, this diversity is itself maintained within strict discursive limits. As the ‘international student’ emerges as an increasingly familiar archetype within UK Higher Education (and beyond), there is a concern that, at an apparent moment of recognition, significant swathes of an international student population are occluded. However, internationalisation can be used to recognise wider indices of diversity (Banks, 2002) and learning and development opportunities for both staff and students.

3 Mutual learning

Conceptual change is an approach in which prior conceptions of teaching and learning are modified and changed to a notion of facilitating student learning that is required before specific student-centred strategies can be eventually adopted (Ho, Watkins & Kelly, 2001). Lecturers are often hesitant to embrace and adopt new teaching practices (Gibbs, 1995; Trigwell, 1995), although the conceptual change approach is developed for both teachers and students (Biggs, 1989; Gow & Kember, 1993; Ramsden, 1992). This approach requires opening conversational dialogue between students and supervisors in the context of the PhD.

Baker, Jensen and Kolb (2005) define conversational learning as “a process whereby learners construct new meaning and transform their collective experiences into knowledge through their conversations” (p. 412). Conversational learning suggests that learners are constructing meaning among themselves as well as within themselves and that learners transform their collective experiences—both tacit and explicit—into knowledge.

Academic staff must believe in the pedagogical process to safely encourage students to join the new approach to learning. Success and failure for a teacher in this course depend on one’s own ability to create and hold safe dialogical space for students, to create a sense of dignity in their learning process, and to nudge students when they demonstrate curiosity or an emerging interest in topics. Cunliffe (2002) recommends reconstructing learning as a reflective/reflexive dialogue in which participants connect tacit knowing and explicit knowledge. An in-depth picture of the patterns that are evident in the ways multiple forms of identity of PhD students and their supervisors and how they work together over time increases our understanding of PhD supervision. This study uses theoretical frameworks from intersectionality and methodological approaches from concept mapping to analyse conceptual change amongst PhD students and their supervisors.

4 Theoretical approach

By drawing on intersectionality research (Berger & Guidroz, 2009; Jones, 2009) which considers multiple forms of identity, a broader conceptualisation of international students and staff becomes available. This reflects the university as a highly complex locus of multiple and intersecting spheres of ‘difference’. An intersectionality-based research design engages with a more nuanced conceptualisation of identity and experience to recognise: race/ethnicity, gender, sexual orientation, socio-economic status, nationality, ethnic group, dis/ability, religion, and geographic region (Banks, 2002; Tatum, 2003). This speaks to the need to diversify the research on internationalisation (Renn, 2010) and doctoral education and explores the complexity that arises when multiple dimensions of social life and categories of analysis are included.

This more inclusive approach to identity is not common in postgraduate education, particularly for students and staff, whose unique identities raise challenges in the context of learning. Indices of identity are constantly shifting, but this dynamism is relevant particularly in the intimate supervisory relationship, requiring a sophisticated response that can be hard to maintain in the face of market-led educational policy where competitiveness, completion rates and measurable outcomes present significant challenges.

Practically, many staff and students are concerned about misconceptions and stereotyping, but find these issues difficult to discuss because of their political, personal and sensitive nature. This can lead to tensions in the teaching, learning and research environment and can negatively impact on the student learning experience. This speaks to gaps in our knowledge of how universities frame their understanding of identity, how academics construct/co-construct meanings of inclusive practice and the conditions that actually make a difference for diverse groups of staff and students. Issues of identity are pertinent in the close relationship of a PhD, particularly how such issues impact on approaches to communication, learning and understanding.

5 Methodology

The identification of mutual conceptual development and understanding requires a research design that enables the lived experience of the supervisory process to be explored over time. The method chosen also needs to be congruent with our epistemological position, which relates to the legitimacy of generating data about how PhD students and their supervisors work together by talking interactively with them. The approach most suited to this position is qualitative, utilising what Charmaz (2001) calls “multiple sequential interviews”; this type of interviewing “charts a person’s path through a process” and creates the opportunity for a “nuanced understanding of that process” (p. 682).

Concept mapping (*sensu* Novak, 2010) is a method of graphic organisation. Its considerable utility stems from its origins within the human constructivist epistemology and it is now widely reported in the literature for use in the sharing of individual knowledge and understanding. The concept mapping work of Novak and others has been used in studies of learning (Kinchin, 2001); measurement of learning quality (Hay, 2007); assessment (Edmondson, 2000); cognitive typology (Hay & Kinchin, 2006; Kinchin *et al*, 2000); and learning style (Kinchin, 2004; 2011).

5.1 Study design

In this study interviews were conducted with students and supervisors separately so that the research did not interfere with the supervisory process. In-depth, semi-structured interviews were done with the students at four-monthly intervals utilising a grounded theory approach. Interview transcripts and interviewee-constructed concept maps provided structure for the data: facilitating analysis within cases and across cases. This also helps to identify a route through the developing narrative. Data collection and analysis occurred at each stage, and enabled each interview to draw upon the experiences of the participant to inform theory generation relating to changes in content and processes over time (see Figure 1). Participants were briefed on concept mapping techniques, and the maps below reflect those created. The interviews explored two complementary lines of enquiry:

1. Topic – looking at the content of the academic area under investigation within the PhD.
2. Process – looking at the conceptions held of the research process and of the PhD as an entity.

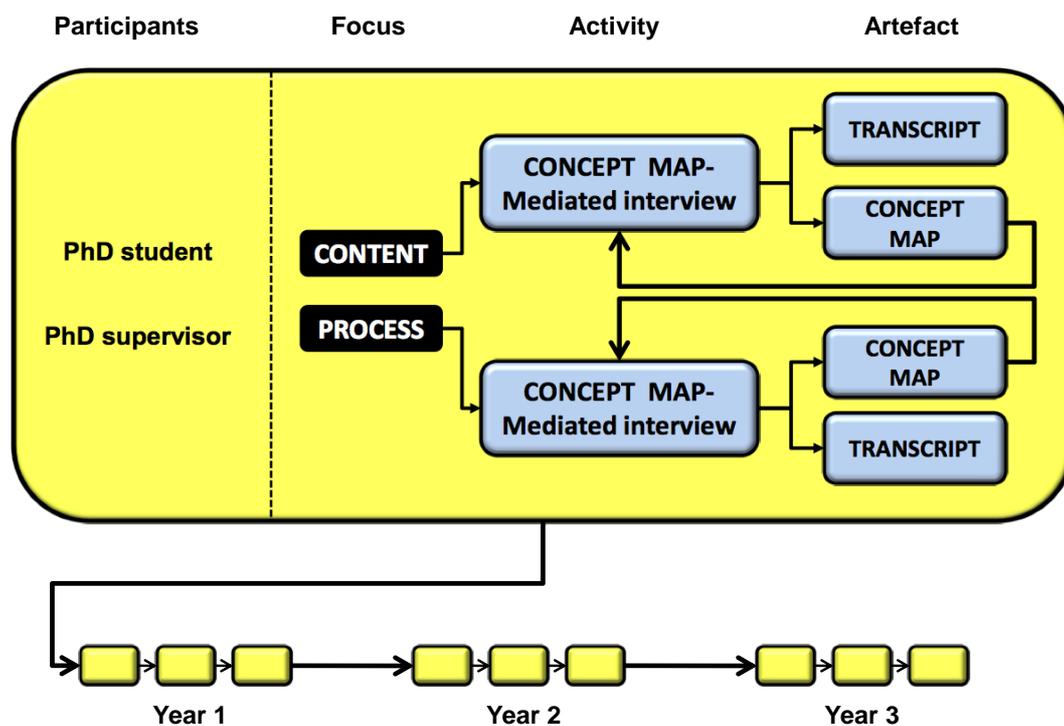


Figure 1. Concept map of the study design.

5.2 Participants

This process has generated a large volume of data that is drawn upon to inform the discussions here, although space permits the representation of only four concept maps from the total of 123 unique maps, collected over 88 interviews during the four years of the study. The pairs come from biological science, clinical science fields, and humanities. All are from a research university in the UK. However eight out of eleven participants in this study were from overseas and had previously studied or worked outside the UK. In all of the pairs, there were differing countries of national origin and academic training, cultural background and first language. There were further differences that arose in regards to gender, religion, relationship status and international visa status.

Rather than focus on specific issues that arose, this study explores the role that cross-cultural differences played in the mutual learning, conceptual development and progress in the PhD between supervisors and students.

6 Findings

The maps that are shown are from two different pairs of students and supervisors. These maps were selected as they are generally representative of themes that emerged from the study. The first set of maps (see Figure 2) covers the topic of the PhD, from supervisor and student Pair 'A', in biological sciences. As the map on the left shows, the supervisor has a much broader conception of the PhD, focusing more on the process rather than the end-product (Kandiko & Kinchin, 2012). The supervisor map places the student's project in the wider research area and details numerous experiments and techniques to explore the topic. The student map, on the right, shows a much more linear, and functional, conception of the PhD (Kinchin & Kandiko, 2012).

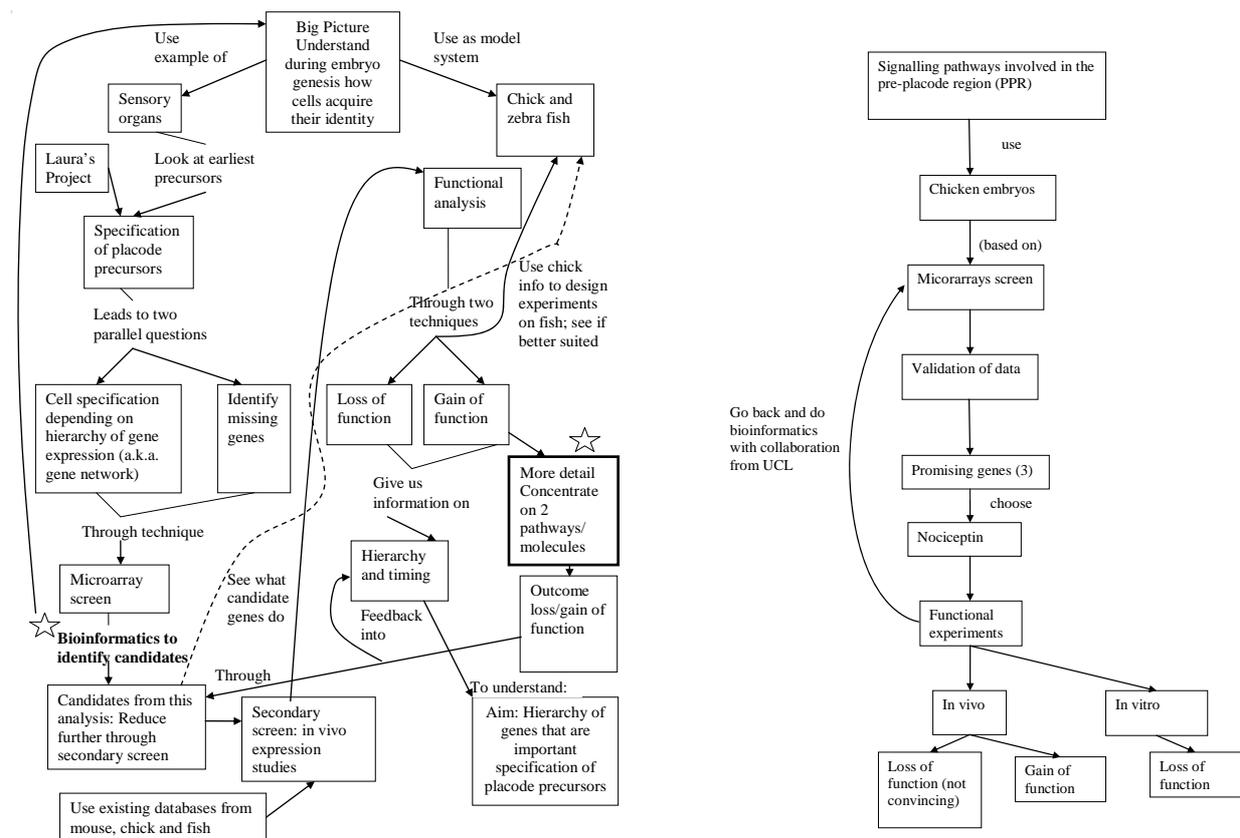


Figure 2. Pair A on the PhD topic, with the supervisor map on the left and the student map on the right.

The student and supervisor had different cultural and educational backgrounds compared to the other, and neither was from nor with prior education in the UK. As noted in the interview data, the student and supervisor's discussions often focused on the day-to-day work the student needed to complete. The supervisor's wider conception of the PhD was not clearly articulated to the student. Rather, the student had more of a 'checklist approach' to what needed to get done to complete the thesis. It seemed that when the supervisor attempted to discuss the research area more broadly, the student felt that time was being taken away from the work she needed to complete. Opportunities to work on other projects in the lab were seen by the supervisor as developmental and the student as time-consuming and doing other researchers and students' work.

Further communication challenges arose when the supervisor asked the student about how the student was doing, as an opening to discussion about the student's progress and direction, which the student interpreted as the supervisor 'wanting to be her friend'. This gap seemed to be related to different cultural approaches to how a PhD student enters the 'community of colleagues' that operates within the lab setting. As this is often a tacit process, it is difficult to manage in any supervisory relationship, but is particularly challenging when students

and supervisors have different backgrounds and assumptions about a PhD and the relations between academics and students.

The next two maps, from a different supervisor and student, Pair 'B', are about the PhD as a process. The supervisor's map (see Figure 3) covers what he termed an 'aspirational PhD', noting that many students would not 'reach the furthest levels' and develop into star scientists and academics, but would still complete a PhD. Most of the concepts in the supervisor's map relate to learning and personal academic development. There are outputs on the map, but they are positioned as outcomes of the process of learning and discovery. The supervisor only made one map of the PhD-as-process, stating that over the course of his career, what he put down is what he thinks a PhD should be, and he works to get the students to develop as much as they can. Over four years he felt the map adequately represented his notion of the process of a PhD.

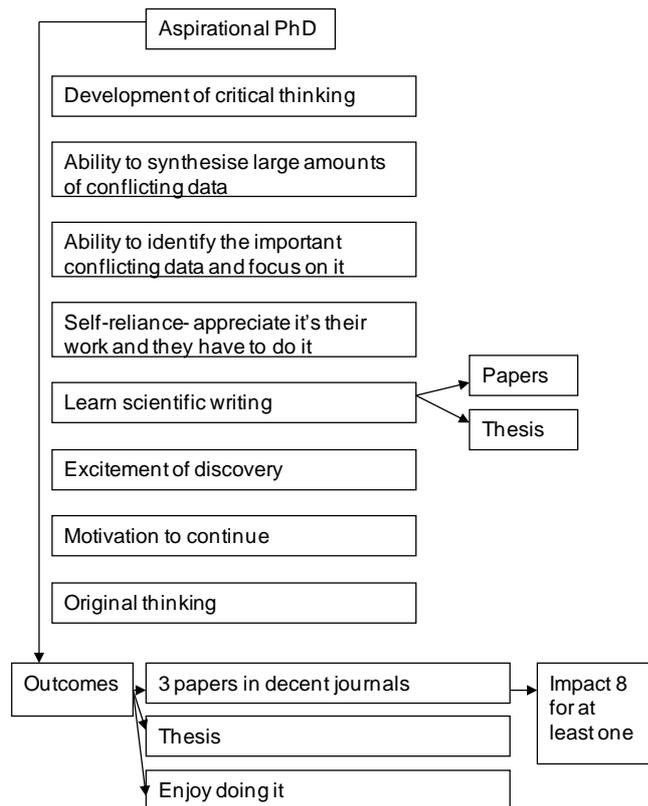


Figure 3. Pair B, supervisor map on the PhD process.

The student's map of the PhD process (see Figure 4), like the student map in Figure 2, takes a functional approach. In fact, as the student developed the map over time, she would tick off the boxes of activities she had completed. Whereas the supervisor map in Figure 3 concentrates on learning, the student map focuses on 'doing'. The student often remarked that she did not know why she doing certain tasks, or how different lab tasks were helping her PhD progress. There was more of an 'individualistic' approach to the PhD, which is in particular contrast to the group-orientation of most major academic research-oriented laboratories.

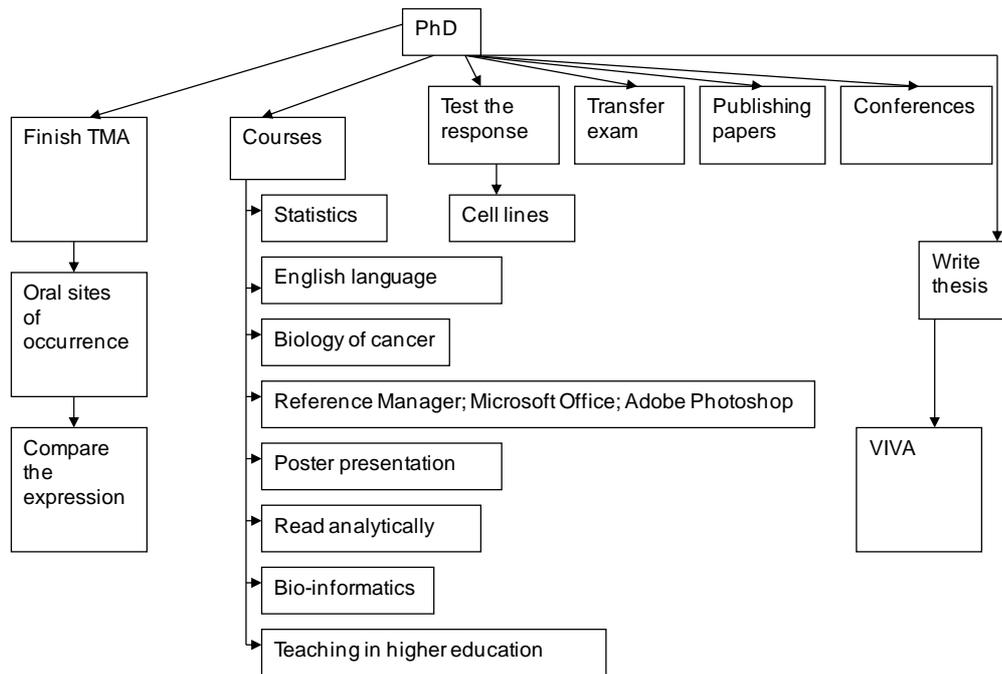


Figure 4. Pair B, student map on the PhD process.

7 Discussion

The student and supervisor are in constant dialogue, although the case studies in this research indicate that a great deal of misinterpretation occurs in this process. The challenges of supervision in a cross-cultural environment emerge in three main ways: the understanding of topic, the understanding of process and the role of the thesis. A longitudinal study allows for a deep insight into the supervisory process over time and how these challenges impact and affect both students and supervisors.

The lack of shared communication and understanding seemed to cause tension in the relationship of both reported pairs of students and supervisors. With a different supervisory pair in the study, the supervisor and student chose to share their maps with each other after each interview. They did not do this to make the maps the same, but each of their maps functioned as a point of departure for conversation about progress and development in the PhD, and each of their roles in the development of the research. That pair had a much more open communication pattern, and both described the maps as useful for synthesising complex notions about the PhD, which were difficult to describe when coming from different educational and cultural backgrounds.

Concept mapping during the PhD supervision process can be used as a tool, amongst many, which facilitates communication, dialogue and understanding. In an environment which is very diverse, in terms of both students and supervisors, concept mapping can provide a platform for initiating conversation about the purpose, process and product of the PhD. As Chang and Astin (1997) noted, a diversity-sensitive curriculum can lead to both academic achievement and growth of the students' personalities.

As seen in the Figures above, several of the maps stray from the traditional rules of concept mapping. This may reflect the developing nature of the ideas and the lack of a finished mental image of the PhD. We chose to report on the maps as the interviewees constructed them, as this more accurately reflects their understanding of the PhD. In other research, academics were able to construct formal concept maps reflecting back on a finished PhD, which may indicate the difficulty in mapping a work-in-progress compared to a finished product.

8 Summary

This study positions concept mapping as a pedagogical tool for diverse students, which can function as a framework for greater understanding and inclusion. Such frameworks can also link in with wider student support services, and with staff development opportunities. This approach also provides students, researchers and supervisors with capabilities and skills necessary in the modern global workforce.

9 References

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