NAVIGATING PARADIGMATIC WATERS:
USING CONCEPT MAPPING AS A TOOL FOR PARADIGM DIALOGUE
AMONGST EMERGING QUALITATIVE RESEARCHERS

By

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Abstract

Emerging educational researchers are often faced with significant challenges as they enter into and navigate the expansive qualitative research field. Growing evidence supports the claim that increased focus needs to be placed on paradigm and methodology in order for educational researchers to make informed choices, situate their research, and to justify their methodological choices. On a wider scale, there is a call for a collaborative research culture and paradigm dialogue amongst researchers to strengthen the qualitative inquiry community. As a result, this study reports on the findings of a socio-constructivist, collaborative concept mapping activity that was conducted in a graduate level introduction to qualitative inquiry course as a means of paradigm dialogue. Results of the analysis reveal the significant role of social interaction and storytelling as a lens for understanding qualitative inquiry. The study also addresses limitations and potential of both to face-to-face and online concept mapping applications.
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Chapter 1: Introduction

The impetus for this study was a result of my experience as a graduate student embarking for the first time on the journey of qualitative research. Nearing the end of my course work in the fall of 2013, I had some exposure to and experience with qualitative research methodologies, but felt quite limited in my understanding of the vastness of approaches and how they were related conceptually and theoretically. Wrestling with how to situate myself amongst the many methodological approaches for thesis work left me feeling immobilized. Denzin and Lincoln have pointed out that “an embarrassment of choices now characterizes the field of qualitative research. Researchers have never before had so many paradigms, strategies of inquiry, and methods of analysis to draw upon and utilize” (Cooper & White, 2012 p. 60). Patti Lather (2006) describes the current state as a ‘paradigm proliferation’ and Preissle (2006) goes so far as to describe it as a ‘bramble bush’ of research endeavors. I began to find focus in my Introduction to Qualitative Research Methodologies course. At this time, I had an inclination of my methodological orientation, yet did not feel prepared to make an informed decision until I had better clarity and grasp on what else was out there. I had some previous exposure and interest in constructivist methodology, but was also contemplating other methodologies that would be suitable for my future research pursuits. With exposure to new and emerging methodologies, I became absorbed in an effort to better understand their interrelatedness within qualitative research. In what ways did methodologies converge, diverge and overlap one another? And how does a beginning researcher navigate and make sense of this field to increase their own clarity and understanding? If, as Patti Lather (2006)
advocates, that educational research be taught, “in such a way that students develop an ability to locate themselves in the tensions that characterize fields of knowledge” (p. 47), then what tools are at our disposal to support this process? How does one situate them within the messy, metaphysical map that is the field of qualitative research? I became interested in the parallel journeys of my colleagues, and considered their experiences. Colleagues interviewed for this study were like-minded, recognizing the importance of having a thorough understanding of the field of qualitative research methodologies and their relationships to one another. Colleagues reasoned that having a thorough understanding of the qualitative research field would improve their understanding of current research, it would keep possibilities open to consider new methodological approaches in the future, and would solidify their own justification for methodological choices.

Based on my needs as a learner, one of my early objectives became an effort to locate some form of visual conceptualization or representation that illustrated the field of qualitative research, depicting the characteristics and interrelationships amongst qualitative methodologies. I was also deeply interested to know if such a visual conceptualization could be used as a tool to enhance paradigm dialogue amongst emerging qualitative researchers.

**Statement of Problem**

My early investigations revealed that both beginning and expert researchers have found themselves faced with what Stinson (2009) refers to as a ‘theoretical paradigm quandary’ at some point in their careers. Lincoln and Guba (2000) have reported that, “
new young professionals being mentored in graduate schools are asking serious questions and looking for guidance in qualitatively oriented studies and dissertations” (p. 163).

The question arises; in what ways can an emerging educational researcher enter into and navigate the expansive qualitative research field? And furthermore, how can one enter into the current paradigm dialogue in the research community to clarify their own understandings, and ultimately make methodological choices that will guide their research? Currently, many paradigm tables, charts and maps illustrating the characteristics of qualitative research methodologies exist, and offer the user a helpful summary of methodologies. Yet they are limited in that they are static and compartmentalized, with little opportunity for participatory knowledge building and interaction. Although helpful towards developing understanding of particular methodologies, many of the current configurations are difficult to manipulate and edit, as they are often found on websites or in journal articles as two-dimensional diagrams. Patti Lather acknowledges the limitations of charts when she argues, “linear, structural models reduce and ‘tame the wild profusion of existing things’” (Foucault, quoted in Lather, 2006). If knowledge is considered energy, and constantly changing and evolving (Ahwee et al. 2004), it is not meant to be tamed. And as qualitative research methodologies evolve and new understandings are reached, emerging researchers need to be involved in a continuous reformulation of their own understandings. One possibility lies in concept mapping as a collaborative tool for paradigm dialogue. And as Vygotsky (1978) pointed out years ago, collaboration and social interaction between peers may support and improve learning and overall outcome. Concept mapping has been growing in use across many fields as a qualitative visualization technique used to support learning and
knowledge construction (Eppler, 2006). Prior research reports that concept mapping is also useful as a cognitive scaffold, helping learners understand macro-level structures (Sumner et al., 2005). Carried out together, concept mapping and paradigm dialogue support the co-construction of knowledge in a multi-voiced conversation. As a further consideration, this study raises questions as to whether or not present digital technologies can provide further quality, efficiency and sustainability as compared to a face-to-face mapping activity.

**Guiding Questions**

As a result of the issues and concerns stated, my guiding questions ask:

1. How can a researcher enter into the current paradigm dialogue in the research community to clarify their own understandings, and ultimately make methodological choices that will guide their research?

2. More specifically, to what degree can paradigm dialogue and mapping help students navigate and situate themselves in a way that ultimately leads to better-informed decisions about methodological choices?

3. What are the limitations of face-to-face collaborative concept mapping activities?

Finally, to what extent might there be a need or interest in the use of an online paradigm-mapping tool for a sustained dialogue? If the face-to-face paradigm concept mapping is considered valuable and meets the needs of participants, what is the worth of transitioning to an online tool?
Defining Terms

Before delving further into a paradigm and methodological discussion, it will be helpful to define some of the key terms and how they will be used in this study. The term paradigm is utilized in multiple fields, and in the case of educational research, Guba (1990) finds it advantageous to leave it intentionally vague and open to the possibilities for reshaping our understandings. He uses the generic description: “a set of beliefs that guides action” (p.17). Donmoyer (2008) also adds that research communities shared beliefs and orientations, and this determines how members view and study the phenomena that they are exploring. Together these understandings of paradigm in educational research will be helpful in supporting the arguments for this study. One further concept that necessitates consideration is paradigm dialogue; referred to frequently in this study and in articles relating to the state of qualitative research. The phrase emerged from the paradigm wars in the 1980s, (see Denzin, 2008) after which there was a call amongst the qualitative research community to come to the table to find new ways to cooperate. According to Denzin (2008), we are presently on the edge of the New Paradigm Dialog[ue] amidst the rise in popularity of scientific based and mixed methods research. And finally, qualitative research also deserves to be noted due to its’ ever-evolving and growing state. Preissle (2006) succinctly defines qualitative research as, “a loosely defined category of conceptually informed research designs or models” (p.686) and notes that the ever expanding forms of descriptive narratives that utilize such data as: field notes, interviews, photos, written records, audio and video; all of which can be elicited from the senses.
Thesis Preview

This study is comprised of five chapters. Chapter Two consists of a review of the current literature highlighting four key areas that relate to the study: a depiction of the current state of the qualitative inquiry community, the need for an improvement of methodological understandings amongst seasoned and emerging researchers, and the use of both social constructivist learning theory and concept mapping as tools to engage in paradigm dialogue. The chapter culminates with a concept map that illustrates how the four sections of this chapter are interconnected, helping to build the argument for this study.

Chapter Three begins with a description of my role as researcher and my epistemological stance. I discuss the significance of social constructivism in this study, both as a methodology and as a practice in the facilitation of the concept mapping activity. The design of the study describes pre-activity planning, the frameworks I used, and the activity procedures I followed. Data collection and analysis are also discussed, including the use of triangulation and member checking. Chapter Four highlights the four thematic findings emerging from the study. Each finding is dealt with in sequence, followed by a discussion and synthesis of each of the findings. The last chapter of the study offers concluding thoughts and recommendations for further study.
Chapter 2: Review of the Literature

In order to lay the groundwork for this chapter, the first section reviews the literature focused on the current state of the community of Qualitative Inquiry (Q.I.) researchers. Building on this, the next section addresses key issues and concerns that emerging researchers need to be aware of as they enter the domain of Q.I. and possible solutions for improvement. The third and fourth sections diverge to focus on reviewing constructivist learning theories and concept mapping research specific to the paradigm mapping activity that has been central to this study. The final section of this chapter both summarizes and visualizes the interconnecting theories found between themes in the literature using a concept map.

On the Current State of the Community of Qualitative Inquiry Researchers

Experts in the educational research field have communicated varying perspectives regarding the state of the qualitative inquiry community, but a majority suggest the state is far from stable. Preissle (2006) takes stock of the current community, drawing not only on her 35 years of practice in qualitative inquiry, but also on research studies and related literature to suggest that the community is facing an ongoing, and perhaps even necessary, identity crisis. She questions the vague and anti-quantitative label ‘qualitative’ to describe such a large community. Preissle describes the current Q.I. community as, a ‘confederacy’ of diverse scholars whose domains intersect, overlap, and who can “live peaceably with differences and disagreements” (p.687). She notes the challenges inherent in making sense of such a vast community, observing that Q.I. has simply become an
umbrella term for a cross-disciplinary, overlapping community of practice, and a domain whose frameworks and practices overlap, but share few common assumptions. Preissle reflects on her decades in Q.I to share the path that has led to her own positioning and shares her hopes that future generations in Q.I will continue debating about the type of community they wish to be, while appreciating inherent similarities and differences.

While Preissle characterizes the field of Q.I. as a ‘bramble bush’, Lather (2006) similarly refers to the present state as a ‘wild profusion’. Lather (2006) has faced equivalent complexities as Preissle suggests, and she too, describes this as a challenge in her own teachings with graduate/post-grad students. Lather acknowledges the overwhelming proliferation of paradigms and methodologies that exists, yet she feels that proliferation is a ‘good thing’. She describes her use of paradigm mapping to assist her students in understanding the field and to illustrate interrelationships amongst qualitative methodologies, yet is mindful of the dangers of categorizing thought, referring to Foucault’s observation that “linear, structural models reduce and ‘tame the wild profusion of existing things” (Foucault, quoted in Lather, 2006). Lather also notes that earlier, linear models attempting to illustrate the domain of Q.I. only highlight differences and incommensurability, yet mapping holds together those very incompatibilities, allowing space for emerging knowledges to flourish while vying for legitimacy. In addition, Lather notes that a proliferation of paradigms also serves to break-up cultural monoliths and consensus models. Lincoln and Guba also recognize this proliferation and wish to highlight areas of convergence and confluence amongst methodologies. In their heavily cited article, Paradigmatic controversies, contradictions, and emerging confluences, Lincoln and Guba (2000) identify major issues as well as recent and substantial changes
in qualitative paradigms, but seek an opportunity for negotiation and possible achievement of harmony. The authors draw attention to key issues most often in contention: inquiry aim, nature of knowledge, goodness, quality criteria, values, ethics, voice, training, accommodation and hegemony. The authors conclude that they do not seek to promote a common discourse or conventional paradigm in this post-modern moment, but to identify areas of convergence and confluence. Denzin (2008) however, fears that the qualitative inquiry community has already lost its’ footing and hence its’ place at the bargaining table. Denzin provides a concise historical overview of paradigm conflict beginning with the paradigm wars of the 1980s, followed by qualitative inquiry's wide acceptance into the field in the 1990s and finally, the proliferation of paradigms, which bring us our third and present moment (See Denzin, 2008).

To summarize, current thinking on the state of the qualitative inquiry community is wide-ranging. Despite this range, there appears to be agreement that qualitative research is a large domain and continues to grow as new methodologies emerge. In order to make sense of this proliferation of paradigms and to strengthen the community, Denzin (2008) urgently calls for a renewed paradigm dialogue and a need to form “interactive networks across interpretive communities” (p. 322). Addressing this call for a paradigm dialogue is the focus of this study, and takes place amongst a community of emerging qualitative researchers.

**A Need to Improve Methodological Understandings and Making informed Choices**

Not only does the field of qualitative research appear to be a scattering of methodological choices, but growing evidence supports the claim that greater focus needs
to be placed on paradigm, methodology and epistemology in order for both seasoned and emerging educational researchers to make informed and justified choices for conducting and situating their research (MacKenzie & Knipe, 2006; Hayes et al., 2009; Paul & Marfo, 2001, Preissle, 2006). In their article, *Research dilemmas: Paradigms, methods and methodology*, authors MacKenzie and Knipe (2006) recognize these as challenges and issues faced by emerging researchers as they begin their research journeys. Based on their study of over 40 research texts, they note the difficulties that can emerge from trying to understand the perceived dichotomy between qualitative and quantitative inquiry and the challenges of making sense out of contradictory information that exists. It is their belief, based on the research texts reviewed, that methodology and paradigm are not effectively addressed, and texts frequently fail to explore the role of research paradigm in suitable depth. Therefore, the authors’ stated aim is to, “assist first time and early career researchers make considered decisions about the type of study they may undertake, the process involved in undertaking a research project and the debates in the literature surrounding theoretical frameworks underpinning research” (p. 193). The authors offer a solution through their development of a series of diagrams that organize common language, and a ten stage visual representation of a non-linear, decision-making process for students new to educational research (See MacKenzie and Knipe, 2006). Paul and Marfo (2001) are also concerned with the complex task of rethinking research preparation programs in education in an effort to increase meaningful inquiry. They note that based on their experiences, a growing number of doctoral students are making methodological choices long before they have sufficiently developed specific research questions, with little or no conceptual groundwork into the core philosophical assumptions of the
particular methodology (p. 538). They draw attention for the “need to develop a collaborative research culture within which multi-paradigmatic perspectives are valued and practiced” (p. 543) Such a culture, they add, should place greater emphasis on philosophical, epistemological, ethical and historical understandings of research paradigms so as to avoid simplified understandings of methodologies. As such, they provide recommendations for use in classrooms to help prepare novice researchers; some of the suggestions include a focus on self and its role in inquiry and providing greater knowledge needed to understand genres of inquiry, thus improving students’ ability in making informed methodological decisions. Lastly, Paul and Marfo suggest that participants must be able to see themselves as learners, have a willingness to share what they know and an openness for change. In line with Paul and Marfo, Cooper and White (2012) note that the relationship between the person doing the research and the research itself is often ignored and they argue that the acknowledgment of autobiographical context is often neglected in qualitative research. Cooper and White observe the complexities beginning and practicing researchers face in post-modern times, and as a way of working through such complexities, they developed what they refer to as the ‘five contexts’; a conceptual framework that includes the historical, the political, the postmodern, the philosophical and the autobiographical contexts to understand and interpret qualitative research.

Carter and Little (2007) widen the circle to include established researchers and address serious concerns that underscore the need for more work to help all researchers clarify, justify and engage deeply with their methodological approaches. They advocate for the reconsideration of the three intricately interconnected principles of epistemology,
methodology and method, also noting that reporting is frequently insufficient and inconsistent in these areas. They identify several problems that occur due to this lack of engagement being the application of a ‘post-hoc’ methodological approach to reporting, and secondly, what they describe as ‘methodological fundamentalism,’ referring to the resolute stance researchers may take on a particular methodology without an openness to change or merge elements of methodologies. Carter and Little offer a decision making framework to provide what they describe as, “a way of thinking that will guide researchers thorough valuable material and assist them to make sounds choices of their own" (p. 1327). They propose a series of ordered decisions and stress the need to begin with epistemology, arguing that epistemology is foundational and will influence decisions about methods and methodology. These include, “Decision One: Choosing an Epistemological Decision; Decision Two: Selecting a Variant of a Methodology to Employ; Decision Three: Selecting Methods, Within the Chosen Epistemology and Methodology that will Produce the Best Data to Answer the Research Questions” (p. 1326). Carter and Little hope that such a framework will not only justify methods, it will serve to evaluate one another’s contributions and allow for greater insight. They note some of the limitations to their proposed framework, including the absence of ontology and a lack of concrete instruction for some researchers. To a similar degree, a recent article by Hayes et al. (2009) focuses its attention on current qualitative research projects, arguing a greater need for explicit positionings and a transparent methodological approach communicated by research authors for their audiences. More specifically, they argue that epistemological awareness and instantiation of methods that shape qualitative research design and reporting are generally not sufficiently addressed, and note
incidences of ambiguous methodological descriptions. Hayes et al. describe a systematic review they conducted on a series of high impact educational research journals in 2006 to highlight some of the methodological problems across fields, journals as well as authors. In their findings, they noted that, “only 6 of the 24 (25%) qualitative articles were identified as articulating an (e)pistemological position or theoretical perspective that was aligned with their purpose statements” (p.691). Some of the concerns they identified with regards to uninformed methodological ambiguity were grouped into three categories: missing design details, such as the absence of a research question or questions, a purpose statement that did not make reference to epistemology and a theoretical perspective that was present but did not have a function (p. 695). Failure to make epistemologies, methodologies and theoretical perspectives explicit, they claim, can produce research designs that “can appear random, uninformed, inconsistent, unjustified, and/or poorly reported” (p. 688). Furthermore, they argue that clear and explicit theoretical perspectives and epistemologies can prevent “misalignment between the researcher’s understandings of an (e)pistemology and the understandings of the reader” (p 696) and will ultimately benefit educational research overall. Finally, Hayes et al. address the limits of knowing, and the challenges of articulating what one does know. They feel that the extent of not knowing can be as valuable as articulating one’s (e)pistemological position.

To summarize, current literature illuminates a number of issues and challenges faced by both emerging and qualitative researchers. The core of the issue is often a result of poorly informed methodological choice and positioning (Hayes et al., 2009), and an inconsistency and lack of engagement with a selected methodology (Carter & Little, 2007). Paradigm mapping has been one method proven helpful for researchers to navigate
their positionings (Lather, 2006). The qualitative research community overall can likely benefit from support systems to increase their critical understandings of methodologies, to situate their research and make informed and justified methodological choices. This section has highlighted some of the potential frameworks and decision-making models that have been developed to assist researchers to improve their methodological understandings, situate and justify their choices, resulting in improved research. The following two sections will review current theoretical and practical tools that can be utilized by emerging researchers to engage in paradigm dialogue through social constructivist concept mapping in an effort to overcome some of the key issues addressed in this section.

Social Constructivism as a Theory of Learning

Because this study is centered on the collaborative concept mapping activity using a constructivist approach, this section is focused on reviewing literature that specifically addresses social constructivism. This section of the literature review aims to follow the development of constructivist theory to illuminate and clarify some of the perplexities around social constructivism as it applies to learning. Although constructivism has no clear single person or movement responsible for developing some of its’ central theories, its’ roots are traced back to a number of early thinkers who span a broad philosophical spectrum and include: Giovanni Battista Vico, Paul Goodman, Jean-Jacques Rousseau, Immanuel Kant, John Dewey, Von Glaserfeld, Karl Popper, and Lev Vygotsky (Lowenthal, and Muth, 2009; Phillips, 1995). The evolution of constructivism eventually makes a split in which one camp claims the construction of knowledge as an individual
matter, while the other claims that knowledge building is a social practice, while another camp is planted in between both views (See Phillips, 1995). Social constructivism, the area of interest in this study, is influenced by Lev Vygotsky’s writings, although he never referred to the term ‘constructivism’. His social and cultural perspective of knowledge creation focused on the belief that learning occurs through a social and interactive process through language, and within cultures (Lowenthal, and Muth, 2009). Vygotsky’s contemporary, Ernst von Glasersfeld (1995), has added that learning is an interpretive process, and learners use their prior knowledge and belief systems to make sense of new knowledge.

Constructivism has played a key role in education reform in a variety of disciplines (Kinnucan-Welsch, 2010). But according to Fosnot (2005), some confusion around constructivism exists today in which pedagogical strategies such as discovery learning and ‘hands-on’ approaches have been confused with constructivism. She clarifies that constructivism is a theory of learning, and not a theory of teaching, adding that from a constructivist perspective, learning cannot be directed, but can be facilitated. Fosnot (2005) suggests that from this perspective, learning is self-regulatory, in which the learner struggles to make meaning based on a personal model of the world and new insights. In addition to constructing new representations of models of reality, the learner must then further negotiate meaning through a social discourse or practice. Glasersfeld (2005) adds that, “learning is a constructivist activity that the students themselves have to carry out. From this point of view, then, the task of the educator is not to dispense knowledge but to provide students with opportunities and incentives to build it up”. (p. 7)

With Glasersfeld’s views in mind, the final section will review current literature
on the use of concept mapping as complimentary tool to carry out paradigm dialogue amongst emerging qualitative researchers in a constructivist environment.

**Concept Mapping as a Collaborative Learning Tool**

Concept Mapping (CM) embodies many of the qualities found in constructivist learning. This section highlights current understandings of Concept Mapping as a tool to promote meaning making and improve student understanding in a collaborative learning environment. It is helpful to note that CM is consistent with constructivist epistemology and holds constructivist underpinnings (Edmondson, 2005; Kinchin, 2014). To preface, a concept map can be defined as a “graphical representation of domain material generated by the learner in which nodes are used to represent domain key concepts, and links between them denote the relationship between these concepts” (Reader and Hammond, 1994, p. 99). More specifically, the nodes symbolize concepts (also referred to as points, vertices), and in this case, a concept can be defined as a “perceived regularity or pattern in events or objects, or record of events, designated by a label” (Novak, 2008, p. 25), while the links (also referred to as lines or arcs) represent relationships between concepts (Elorringa, 2013). CM as an educational tool emerged in the late 1960s, was developed further in 1972 as a research program and increased in popularity in the educational field in the 1970s (Novak, 2010, Novak & Musonda, 1991). Increasingly, the uses and potential benefits of CM as a tool for collaborative learning are being studied. A detailed, meta-concept map has been developed to better understand and visualize components of concept mapping (See Novak, 2008). Recent literature provides a strong argument for the use of CM. One of the reasons CM is so powerful for promoting meaningful learning is
that it serves as a kind of template or scaffold that helps learners organize and structure knowledge (Novak and Can˜as, 2008; Edmondson, 2005). CM can also be used to understand how students structure meaning, thus enabling instructors to tailor their teaching. Furthermore, the explicit, visual, structured nature of concept maps provide a ‘road map’ to capture learners’ understanding of a particular topic at a particular point in time, but also the transformation of thinking over time. It becomes a tangible record of conceptual understanding. (Edmondson, 2005; Ritchhart et al., 2009). Concept Mapping has also been proven as a viable meta-cognition tool (Edmondson, 2005; Ritchhart et al., 2009), in which learners can regulate and advance their own learning (Cheung, 2006). As a collaborative, constructivist tool, learners become active agents in co-constructing and developing shared meanings (Cheung, 2006; Edmondson, 2005).

More recently, CM using technology has gained much attention. Khamesan and Hammond (2004) point out that over the past two decades, the increasing interest in CM has led to several new computer-based CM tools. Based on their studies, Khamesan and Hammond have reported that CM software tools increased efficiency, allowing users to modify, maintain and analyse CM more easily. Moreover, Ng and Hanewald (2010) claim that CM software promotes socio-constructivist learning methods and argue that socioconstructivist learning is one of the most discussed learning theories in technology-based learning environments.

Yet despite the widespread support for CM in both face-to-face and online environments, Eppler (2005) identifies some issues that may surface when used as a learning tool. He argues that CM as a visualization tool tends to be less memorable, if it’s being used for the purpose of remembering facts and concepts. Eppler also suggests it is
better suited as a personal learning tool and that some learners will have problems understanding concept maps developed by others. He suggests CM be used as one of several in an arsenal of mapping tools, such as a mixed-mapping approach. Cheung (2006) argues further that integrating concept maps into teaching can be problematic as it is an intellectually vigorous process that demands a great deal of cognitive loading onto learners. Cheung notes that CM activities can be quite time consuming, leading to frustration and eventually defeating the entire process of knowledge construction. Even with such limitations, CM features have a proven capacity to enhance the knowledge of participants via a socially constructivist process. In consideration of the purposes and objectives of the concept mapping activity and paradigm dialogue, I would argue that the benefits outweigh the limitations.

**Summary**

The concept map below has been developed as a summary for this chapter and draws attention to the connections between each section of the literature discussed. The map also provides a visualization of key arguments for this study. It begins by illustrating varying perspectives on the state of Q.I. community, addressing challenges and current issues faced by both emerging and seasoned researchers and highlighting potential solutions. Both concept mapping and constructivist learning methods are reviewed as potential tools for paradigm dialogue.
Chapter 3: Methodology

Overview

This chapter begins by providing background and context to explain how the study originated. It then sets out to describe my role as researcher as it relates to my epistemological stance. An in-depth section on social constructivist research methods details how the data collection process was carried out using semi-structured interviews, follow-up written responses and observations through video analysis of a class mapping activity. The following section will describe the particular methods used for data analysis. The chapter finishes with reflections on methods used.

Connecting the Role of Researcher with Epistemological Stance

This section connects the role as researcher and epistemology for three reasons: in my earlier write up of this study, both were separate sections, yet held too many overlapping ideas to be divided. Secondly, my constructivist epistemological stance underlies the entire research process since epistemology informs methodology, and methods are informed by methodology (Carter and Little, 2007). Thirdly, my constructivist stance assumes that I am inextricably linked to this study as a ‘passionate participant’ (Lincoln and Guba, 1985). This section draws upon parallels between my role as researcher and my constructivist epistemological stance. To begin, Denzin and Lincoln (2005) state that, “epistemology asks, how do I know the world? What is the relationship between the inquirer and the known? Every epistemology …implies an ethical- and moral stance towards the world and the self of the researcher” (p.183).
Although I cannot get into the minds and hearts of my participants, the use of language, observation of interactions, and discourse help to arrive at co-constructions of meanings and understandings that are inclusive of my own thoughts and reflections throughout the process. I also recognize that my constructivist stance means that the research process is not linear; rather it cyclical and iterative, involving interactions with my co-constructors and collected data until there is some form of consensus, or shared understandings through multiple truths. Lincoln and Guba (1985) also note, “the investigator and the object of investigation are assumed to be interactively linked so that the ‘findings’ are literally created as the investigation proceeds” (p.111).

It has been suggested that epistemology influences the relationship between the researcher and the participant (Carter and Little, 2007). In this study, I have placed myself in a unique position in which I am both researcher and colleague. As such, I engaged with my research participants in a cordial, personable and friendly manner within the constraints of what is ethically appropriate, through the entirety of this study, as well as during the course time spent together. Denzin and Lincoln (2005) point out that a constructivist epistemology “connects action to praxis and builds on anti-foundational arguments while encouraging experimental and multi-voiced texts” (p. 184). Hence, the aim of this study is not to arrive at one truth about participants’ experiences, but to understand the complexities and multiple truths, using discourse with participants in order to consider whether paradigm dialogue mapping activity for emerging researchers is a potentially helpful tool. Yet I am also aware of how this form of ‘backyard research’ (Glesne and Peshkin, 1992) can alter the findings in my study, and it is also possible that my presence as both colleague and researcher may bias responses (Creswell, 2009). As
such, triangulation of research data has been drawn upon to minimize bias and improve
the accuracy of interpretations as much as possible (further discussion in upcoming
section). My own biases, values, personal background and assumptions that may shape
my interpretations must also be explicitly identified (Cresswell, 2009). We are also
reminded by Cooper and White (2011) that “the researcher must always be ready,
willing, and able to identify his or her assumptions pertaining to the study at hand, in
whatever form that study may take” (p 7). As a self-described visual learner, I have long
felt that concept mapping and related visual tools have been helpful in generating
meaningful understanding and improving one’s knowledge in a particular field.
Throughout my graduate studies, I have been utilizing such tools, and sharing my
experiences with others. My assumptions prior to the concept mapping activity and
interviews, was that each participant would benefit as I did with mapping and
visualization techniques, which has not been the case. I had also presumed that the use of
technology would be a solution to some of the limitations faced in the live concept
mapping activity. The next section will look at my personal connection to social
constructivism and how it has shaped this study.

**Personal Connection to Social Constructivism**

My choice of methodology, akin to many participant interview responses,
emerged from an earlier exposure to a particularly resonating methodology. For me, this
was my introduction to constructivist learning theory from seasoned teachers during my
formative teaching years at Ursula Franklin Academy Secondary School in Toronto. In
line with the school’s Community of Learners framework that includes values such as
connected knowledge, democracy and community service, some of the most effective and commonly used frameworks for mentoring staff was constructivist in nature. This included constructivist learning environments that focused directly on students, authentic problems and tasks, group projects and discussion, student choice, and the use of authentic assessment (Lowenthal, and Muth, 2009). This approach has since been central to my pedagogy, and has impacted my decisions for the development of the concept mapping activity. In my first year of graduate studies at OISE, I was drawn to the course *Constructivist Learning and Online Design*, which provided deeper theoretical grounding and further exploration of constructivist learning in online environments. As such, my personal and professional interest in Social Constructivism as a methodology came into sharper focus. Much like the response from interviewees in my study, my methodological choice seemed to me to be a ‘natural fit’, shaped by my ‘prior and positive experiences.’

I should note here that while I had leanings towards this particular methodology, many questions lingered about the other methodologies I was being exposed to, and they still do. I also understood that until my research topic and guiding questions became more concrete, I would not be able to decide upon the most effective approach to take. I have gained greater understanding of constructivism having approached it as both a learning theory (related to class activity) and a research methodology.

**Social constructivism**

It is not lost on me how critical it is that I am clear about rationalizing how I situate myself, being a central theme for my study. Although constructivism has been reviewed in the previous chapter, it is here that I will discuss social constructivism as a
methodology within educational qualitative inquiry. Used within the field of education, the term ‘social constructivism’ can be applied to a variety of perspectives, including sociocultural, critical and cultural (Davis and Sumara 2002, p. 409). Social constructivism as it applies to the nature of the concept mapping activity - a process of inquiry, is employed. To expand further, Costantino (2008) describes this process as an instance “in which knowledge is constructed between inquirer and participant through the inquiry process. Inquiry is carried out through a hermeneutic methodology that is essentially dialectic and iterative and where insights and understanding emerge from the joint construction of inquirer and participant” (para. 10). Furthermore, Guba (1990) notes that constructivist researchers “proceed in ways that aim to identify the variety of constructions that exist and bring them into as much consensus as possible” (p. 26). During the data collection, the inquiry process described above was utilized in both the semi-structured interviews and follow-up written questions. The interviews took into consideration the interpretive and dialectic nature of social constructivist methodology. The interviewee’s point of view was paramount; each participant was key in constructing meaning. Follow-up questions and member checking ensured I had interpreted as closely as possible what each participant was communicating during the interview. Furthering the iterative process, one of the follow-up questions contained an insightful statement by a participant during the interviews and each participant was asked to comment. Observation through the analysis of the videotaped activity offered an added dimension to the study, and as such, I was also able to address the processes of interaction among the participants (Creswell, 2009). The following sections in this chapter will further elucidate how social constructivist methodology is embedded into the design of the study.
Framing the Study

This study also falls in line with many of the aspects of an intrinsic case study (Stake, 2005), which is based on a research problem emanating from my deep focus on the concept mapping activity. This activity is in effect the ‘bounding system’ (Smith, 1978) for the rest of the study. Case studies are typically bound by time and a particular activity (Merriam, 2009). While the activity took place during one class period, retrospective interviews and questions did not occur until several months later. Case studies also involve in-depth description and analysis (Merriam, 2009). Such a focus allows for greater depth in the exploration from a variety of perspectives. Because I decided to transform the activity into a thesis after the activity, my position as facilitator and participant was much more than marginal. There are both advantages and drawbacks to this; on the one hand, I was deeply immersed in the activity, participating to the same degree as others, but the cost of this immersion was a lack of information gathering from the perspective of an observer. Some of my reflections on the activity are vague and unclear. The videotaping has aided with recall of events, but this too, comes with a set of limitations (to be discussed in upcoming section).

Participants

The class consisted of eleven students, one instructor and one teaching assistant. Of this number, ten students and myself were present and participated in the class concept mapping activity. The course instructor also participated. All students present for the activity were invited to an interview, and six of the nine students volunteered. Interview participants include six graduate level students; two M.A. students, one M.Ed
student and three Ph.D candidates, all of whom are in the Curriculum, Teaching and Learning Program of study.

Table 1
Interview Participant Descriptions

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age Range</th>
<th>Gender</th>
<th>Level of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terry</td>
<td>25-30</td>
<td>Non-gender conforming</td>
<td>M.A.</td>
</tr>
<tr>
<td>Don</td>
<td>31-35</td>
<td>Male</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Aisha</td>
<td>25-30</td>
<td>Female</td>
<td>M. Ed.</td>
</tr>
<tr>
<td>Mariko</td>
<td>20-24</td>
<td>Female</td>
<td>M.A.</td>
</tr>
<tr>
<td>Samara</td>
<td>40-45</td>
<td>Female</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Rowan</td>
<td>31-35</td>
<td>Male</td>
<td>Ph.D.</td>
</tr>
</tbody>
</table>

Design of the Study

This study is centered on the collaborative concept mapping activity I facilitated that took place during an Introduction to Qualitative Inquiry course and prior to my decision to make the activity a case study for this thesis. At the beginning of the course, students were asked to focus on a particular qualitative research method of academic interest, which would culminate in a presentation of their findings with their peers. As stated at the outset of the study, my inability to situate myself was followed by a foray into the field of countless qualitative research methodologies. With support and approval from the instructor, I decided to review existing paradigm charts and maps and explore new ways to produce a visual tool that would enhance my own understanding of the field of qualitative research, and ultimately in the hopes of situating myself. As I worked alongside colleagues in the course, I was curious to learn how they reached their own methodological choices and their understandings of the field of qualitative research. At the same time, I was reviewing current literature that called for paradigm dialogue amongst qualitative researchers in order to strengthen the qualitative inquiry community.
(more on this later). I began to consider how paradigm dialogue, done in conjunction with creating a methodological concept map would be a helpful visual tool and activity for emerging researchers. The following sections will describe the pre-activity planning, frameworks used for the concept mapping activity and the activity itself in greater depth.

**Pre-activity Planning /Frameworks**

Arriving at a concise set of criteria to help participants communicate their methodology was a difficult process. I was conscious about overloading participants with too many tasks before the activity, and also hoped to minimize research jargon that could possibly obstruct or hinder the flow of the activity. Therefore, a distillation of common criteria from four frameworks was employed, building on existing knowledge and current thinking. Each of the frameworks will be described below as they relate to the concept mapping activity. The first of these frameworks was introduced in my qualitative inquiry course and was developed by Hayes et al. (2009). Researchers can use this framework as a spatial tool to conceptualize epistemological decision-making. Presented in chart form, methodologies are defined and distinguished through a series of what the authors describe as, “decision junctures: examples of theoretical and methodological choices that could be associated with particular theoretical perspectives” (p. 689). Methodologies are neatly categorized under their respective paradigms and each decision juncture is accompanied by a brief description under the particular methodology (See Hayes et al., 2009). Such decision junctures criteria includes: epistemologies, purpose statements, research questions, sampling strategies, main data collection methods, analysis method, trustworthiness/ validity, main knowledge producer, role of researcher, and researcher’s
relation to practice. The authors note that criteria, or decision junctures, were drawn from past and current qualitative methodology literature that would prove more accessible to a diversity of readers. This spatial conceptualization provides valuable information about methodological characteristics, but as the authors acknowledge, is limited in demonstrating any overlapping and interrelated qualities.

The second framework to be incorporated was Lincoln and Guba’s (2000) *Paradigm Position on Selected Practical Issues* chart (See Lincoln and Guba, 2000), which aims to present how paradigms exhibit differences, controversies and contradictions. Situating themselves as social constructivists, authors Lincoln and Guba identify, build on and include new issues and criteria raised by fellow researchers in the field of social inquiry, thus extending the analysis further. In identifying a ‘blurring of genres’ (See Geertz, 1980) and a confluence of ideas, Lincoln and Guba seek to provide an opportunity for negotiation between paradigms. The authors address what they believe as the issues most often in contention: inquiry aim, nature of knowledge, goodness, quality criteria, values, ethics, voice, training, accommodation and hegemony. Lincoln and Guba finish by contending that they do not seek to promote a common discourse or conventional paradigm in this post-modern moment; but to identity areas of convergence and confluence. They reason that although the issues are contentious, they feel strongly about the need to, “create intellectual, theoretical and practical space for dialogue, consensus and confluence to occur” (p. 167).

The third framework to be used was Katrin Niglas’ (2001) diagram that organizes methodologies within paradigms in which she identifies “an overlap and mutual influence between different traditions.” Of interest to me were the descriptions she used that
illustrated the change in focus and research interest among methodologies presented (See Niglas, 2001). Descriptive terms such as laws, relationships, fictions, deconstruction, reflection and emancipation were used for my activity in the hopes that they would further assist students in situating their methodologies. Lastly, through their autobiographical interviews with world renowned researchers, Cooper and White (2012) have developed *The Five Contexts*, which they describe as “a theoretical framework for conducting, understanding, and interpreting qualitative research in education and in other disciplines” (p. 23). The five contexts include: the post-modern, philosophical, historical, autobiographical and political. Students had previous exposure and experience using this framework to help define their methodologies. Prior to the activity, I presented how social constructivism could be understood through the five contexts (See Appendix A).

Four weeks prior to the mapping activity, I asked class members to consider their chosen methodology through the lens of seven criteria, distilled from the above frameworks to include: Epistemology, Knowledge Producer, Role of Researcher, Data Collection, Voice, Ontology and Truth. Using the criteria, participants were asked to prepare responses in a few words or brief statement that best described their methodology according to their current knowledge and understanding (See Appendix B). Responses were recorded on a grid (See Appendix C) and a ‘methodological web’ (See Appendix D) was created, using their responses for each methodology in preparation for the activity. In addition to providing methodological criteria for the mapping activity, I was also interested in the use of visual metaphors as a playful, yet meaningful tool for understanding methodology from a different perspective. Eppler (2006) points out that visual metaphors can be a way of organizing content meaningfully. He argues that the use
of associations with the metaphor can convey additional meaning about the content being explored and can be helpful in connecting what students already know. To balance out could be perceived as a rigid set of responses to criteria, the use of visual metaphors using atypical questions about methodology to elicit alternative responses was appealing to me as a facilitator. Hence, Water developed into the thematic metaphor during the activity; students would be asked to navigate the paradigmatic waters on the concept map in order to situate their methodology. Additionally, several questions given prior to the activity asked students to employ visual metaphors for their selected methodology. These questions were based on an activity developed by Patti Lather (2006) in which she envisioned paradigms as social events, colours, games and sports. Students were asked, “If your methodology were a floatation device, what would it be (eg: raft, dingy, buoy, canoe, Viking ship etc.)? Consider the size, capacity, purpose, colour etc, and be prepared to justify your choice in the activity.” (See Appendix E). Participants were encouraged to view the concept mapping activity as an opportunity to visualize and observe how related methodologies converged, diverged, bridged, took bends, came from sources, or became islands. They were further inspired to think without borders using the idea that water has no definable shape.

Activity

As facilitator, I provided minimal instructions so peers would have an opportunity for critical thinking and creative problem solving together. Students were asked to carry out the map activity collaboratively using qualities Adri Smaling (2000) proposed for paradigm dialogue; informational, self-reflexive, communicative, interactive, open,
mutual trust and respect, and aimed at self-clarification, mutual understanding and shared learning process. Following the brief set of guidelines, methodological ‘webs’ were distributed. Students were then free to begin the mapping activity. A video recording captured participant interaction during the activity and has been used for analysis and triangulation. At the end of the activity, peers reflected on the process, and considered how they made decisions to situate their methodology in negotiation with peers. Following the activity debrief, the concluding exercise gave students the opportunity to share their responses to the second set of questions regarding the floatation device and colour of methodology. The entirety of the activity lasted no longer than 45 minutes.

**Data Collection**

The following methods were used to collect data: observations and a video recording of the class concept mapping activity, semi-structured interviews and a series follow-up questions with written responses. This section will discuss each method in greater depth.

**Interviews**

Recruits for the interviews were past participants from the Introduction to Qualitative Inquiry Course at the graduate level. The interview process has been deemed low risk, and interviewees were provided with the questions and format prior to the interview, along with assurances that they could stop the interview at any time. Interviewees were given an information letter briefly explaining the study, and were asked to sign a consent form (See Appendix F). Pseudonyms are used in place of the names for interviewees, and all data has been stored on a password protected personal
computer and hard drive. As a potential benefit to participating in the interview, participants have been offered access to a digitized version of the collaborative concept mapping activity that took place in class, and the opportunity to further manipulate and develop the concept map for their own purposes. Interviews were conducted over a two-week period and took place five months following the completion of the course. Of the six interviews, three were Skype video calls, three were face-to-face, and I was the sole interviewer. An audio recording was made at the time of each interview and written transcripts were created for data analysis. The interview questions (See Appendix G) were split into three thematic sections: Methodological knowledge/ Prior experience, Learning Style/ Preference and the Class Activity. The following outlines the type of questions posed. Section One is titled ‘prior methodological knowledge/ experience’. This section began with experience/ behavioral questions to understand each the interviewees’ prior experience/ knowledge with qualitative research methodologies and their personal journey of how they arrived at making a methodological choice. The second section on learning preferences/ styles were a range of experience/ behavior questions as well as opinion and value questions regarding their thoughts on collaborative learning. Asking interviewees about their thoughts on collaborative learning, and to recount a recent collaborative experience helped deepen my understanding. Lastly, section three asked specific questions regarding the collaborative class activity. In this case, questions ranged from feeling questions, sensory questions, value and opinion questions. The last question was hypothetical; asking participants about their thoughts on potential benefits of an online mapping tool. As the interviews progressed, questions were modified as needed, and probing questions were used to elicit further detail. When
interacting with participants, such as the oral interviews conducted for this study, Glesne (1999) reminds us that ethical considerations are always interconnected between our casual interactions with research participants and our data. Throughout the interview process and ensuing interactions with participants, I was mindful of my dual role as researcher and colleague. I endeavored to maintain a tone of a “friendly chat while trying to remain close to the guidelines of the topic of inquiry” (Fontana and Frey, 2000 p.660). Our shared experience in the qualitative research course and struggle to situate ourselves methodologically offered a closer understanding. Because of this connection, interviews were more conversational in nature and my role was that of an active participant in the negotiation of meanings (Fontana and Frey, 2000). Yet at the same time, the interviewees were also aware of my interest in concept mapping and visualization in education, I was therefore aware of the potential for responses to be influenced by any implicit biases I may have conveyed in the interview.

**Video Analysis**

My direct involvement as both a participant observer and sole researcher would not afford the opportunity for concentrated observation and note taking. Being an activity with a high level of interaction, I could not rely fully on my own memory of events. Additionally, the opportunity for detailed scrutiny of conduct and interactions between participants in this particular activity would be unavailable using other methods (Silverman, 2011). According to Peter Loizos (2008, as cited by Garcez et al., 2011), video recording is necessary “whenever any set of human actions is complex and difficult to be comprehensively described by one observer as it unfolds” (p. 149). Drawing on
analysis methods in sociology, such as conversation analysis and ethnomethodology, video analysis is a form of microanalysis that addresses the key principles of qualitative research (Heath et al., 2010). The main objective of the video analysis in this study was to observe the complex social interactions between participants during the activity. Goffman (1982) defines social interaction as, “that which uniquely transpires in social situations, that is, environments in which two or more individuals are physically in one another’s responsive presence” (p.2). This method of analysis helped to illuminate some of the tacit ways in which participants collaborated with one another (Silverman, 2011; Fele, 2012) by focusing on body positioning, movements, gestures, expressions, direction of gaze and handling of material objects. The steps taken to analyze social interaction from the video began with a preliminary analysis to catalogue data (See Appendix H), followed by a substantive review of data, and lastly, an analytic review of the body of data. (Heath et al., 2010). In this last stage, several key theories for the study were constructed based on interpretations of the patterns that emerged during analysis (Knoblauch, 2012). It should be noted that due to the number of participants and their movements around the space during the activity, it was not possible to record and accurately capture all of the verbal interactions happening simultaneously. Preliminary notes of the video analysis have identified when a participant speaks, and parts of dialogue have been recorded to the best of my abilities. Verbatim dialogue has not been transcribed. Audio occurring at the de-briefing following the activity has been transcribed and used for analysis (See Appendix I).

Despite the many unique properties of recorded video, I was mindful of the limitations. As Guardez et al. state, “the use of this resource does not replace the presence
of the researcher in the field and it does not intend to produce evidence of reality” (p. 259). Although a reliable source, subjective decisions were made before, during and after the recording process, all of which have a direct or indirect impact on the analysis. The camera was stationary and mounted on a tripod using a wide angle in the hopes of capturing the overall activity. In reviewing the video, some activity occurs out of frame and much of the sidebar conversations between participants is inaudible. In addition to framing decisions, participant awareness of the video camera can have a “distorting effect on the social ‘reality’ under investigation” (Gibson, 2008, p.917). Although all participants agreed to be captured on video, it cannot be known if behaviors were altered because of the presence of a camera. Prior to the interviews, I used recent viewing experiences as a source to recall specific interactions. This helped frame questions directed to particular participants regarding their interactions in the activity.

Lastly, this video serves as a useful artifact should this type of activity be done again, in which the facilitator can review and modify their future interactions, decisions, use of language etc. Observing movement and interaction of participants with peers and the concept map using the video recording was also useful in offering a point of triangulation, which will be discussed in the next section.

**Triangulation**

Triangulation has been utilized as a strategy for achieving validity in this study. Merriam (2009) suggests triangulation as a useful strategy for achieving credibility in the analysis of findings, particularly from an interpretive-constructivist perspective. The use of multiple methods of data collection, in this case, observation, interviews and video analysis proved helpful in checking one against the other. Merriam states, “triangulation
using multiple sources of data means comparing and cross-checking data collected through observations at different times, or in different places, or interview data collected from people with different perspectives or from follow up interviews with the same people” (p. 216). Although triangulation appears to be a worthy undertaking in order to demonstrate validity through careful and considered analysis of multiple methods, it can still be problematic. Mason (2002) warns that the use of different methods and data sources are likely to shed light onto different social or ontological phenomena. Furthermore, Mason notes that triangulation implies “a view of the social world which says that there is one, objective, and knowable social reality, and that all that social researchers have to do, is to work out which are the most appropriate triangulation points to measure it by.” With such issues in mind, triangulation in this study has been used mindfully. The video recording of the activity and the interview transcripts are an instance in which triangulation was utilized to observe interactions between participants, and several interview questions asked participants about their perceived role and actions during the activity. Many participants described their actions during the activity with limited clarity (which they acknowledged) during the interview. Both methods were used in conjunction to achieve a fuller picture of the activity process. The video also assisted to fill in or corroborate participant statements. Because the interviews occurred months following the activity, I expected instances in which a slight variance between the video captured and the recollections of participants existed.

**Member Checks**

Member checks were conducted as a means to ensure an accurate interpretation of interviewee perspectives and to rule out any possibility of misunderstanding (Merriam,
They took place two weeks following the oral interviews. Each participant was provided with a copy of the interview transcript with a corresponding document that broke down the interview responses into three distinct themes, along with my interpretations using general and particular descriptions (see Erickson, 1986). Participants were asked to check the accuracy of my interpretations, and were encouraged to clarify, amend or edit notes in a new column. After the member checks were approved by interviewees, they were asked to respond to some follow up questions in writing for further clarification and or to expand on their responses from the interview.

**Data Analysis**

Data analysis for this study has been an iterative process. This section aims to provide details of analytical methods used for interviews, and the analysis of video footage. Because the activity in the study became a consideration for my thesis after it occurred, I was grateful to have a video recording as well as a group of willing and engaged participants for the interviews. Immediately following my decision to pursue the class concept mapping activity as my thesis topic, I immediately began to analyze the video recording, noting interactions between participants, and writing reflections on my own experience as a participant-facilitator. After partial analysis of the video, I began conducting oral interviews. This dual task of data collection and analysis, I believe, sharpened the focus and evolution of my interview questions. As I noted emerging patterns that related to my research questions and listened to ideas I had not considered, I was able to modify interview questions as I progressed. I transcribed each interview immediately after the session and noted my developing thoughts along the way. Once completed, I was ready for further coding of data. I coded manually, chunking data on
coloured paper to differentiate participants and my research questions. Most of the categories for coding emerged from statements from the interview and video transcripts that resonated with research questions and literature. Some categories emerged from responses that were repeated by various participants. I utilized several methods of organizing the data for analysis. Erickson’s (1986) description/analysis/interpretation method was used predominantly for transcripts, diagrammatical data organization was utilized to sort out common concepts used by interviewees in their responses, a cross-sectional indexing of data was used to slice through all data formats, a case study analysis was used to focus on the concept mapping activity (Mason, 2002). Finally, video analysis was conducted as a method of microanalysis to observe complex social interactions. This variation of approaches offered more than one dimension in which to organize and observe data, and in my opinion, increased my level of understanding. All of these approaches follow similar objectives: to make sense of the data and move the researcher towards a deeper understanding in order to make an interpretation of the larger meaning(s).

For the interview transcripts, the first stage of analysis utilized Erickson’s (1986) three key components for data analysis: particular description, general description and interpretive commentary. He suggests that these are units that “become the basic elements of the written report of the study” (Erickson, 1986). Using this process, particular descriptions were drawn from raw data, including quotes from interviews, notes from video analysis and participants’ written responses. I used these particular descriptions to observe emerging patterns, which became general descriptions (See Appendix J). At this point, I checked in and interacted further with interview participants.
to ensure that their responses and social constructions were accurately described and understood (Glesne, 1999). Lastly, I abstracted ideas from the patterns further, to arrive at an interpretive commentary for the chapters in this study. Merriam (2009) notes the fine balance that must be struck while writing up the findings between description and interpretation, and evidence and analysis. Hence, use of direct interview quotes has been frequently used to support my interpretations.

While both Erickson’s (1986) method of analysis and a case study approach helped organize data around themes, the case study offered the added opportunity to place the focus on a specific event. The case study approach afforded the opportunity to study the complex mapping activity as a distinctive part of the research. This particular emphasis on the ‘intricately interwoven parts’ (Mason, 2002, p.169) of the activity illuminated findings in a way that categorical indexing may have failed to show. Cross sectional data organization was also used to ‘slice’ through the whole of the data sets to organize and shape findings. Organizing key data diagrammatically was an efficient analytical tool used alongside other methods, as an interpretive method to ‘read’ data. Diagrams have been used several times in this study, helping to highlight relationships in the data as well as emerging concepts.

Finally, the video analysis begins at the early stages of the concept mapping activity, when some of the first participants begin to lay individual their methodological webs on the floor, up to the last stages of the activity, when many participants are standing and observing the concept map. Due to the limited footage (the recording began after the activity was well underway and stopped before the activity was complete), the entire activity could not be completely analyzed. To recap, the activity took place on the
floor in a classroom. Tables and chairs were pushed against the walls to allow for sufficient space. The camera was mounted on a tripod and placed at the front of the classroom. At some points in the recording, some participants move out of the frame and are not visible. This movement is accounted for in the preliminary review of the footage. In what takes roughly 20 minutes, participants begin to use the space to build a concept map collaboratively, connecting methodologies along with further identifying criteria based on criteria developed by Niglas (2009).

Visible conduct of the activity was transcribed using three stages: preliminary review-catalogue the data, substantive review of data, and lastly, an analytic review of particular fragments of interest (Heath et al., 2010). For the preliminary review, the video segment of the activity was split into 16 fragments and each fragment was 20 seconds in length. In this preliminary stage, I made a detailed recording of the kind of interactions that took place and made brief notes regarding potential phenomena or activity that would be of interest for future analysis (See Appendix H). Secondly, a substantive analysis was conducted in which I selected particular fragments of interest. From these fragments, repeated viewings were conducted to observe the complex interactions and fine details between the 11 participants. In the last stage, analysis was refined and emergent themes were constructed and cross-referenced with interviews and personal notes. It should be noted here that fragments that appear in this study have been edited so that participants are not recognizable. The final section in this chapter will review and reflect upon the data collection and analysis process.
Reflections on Methods

Due to the fact that I chose to focus on the concept mapping activity for my thesis topic after it was completed, many gaps in the data have had to be managed. Had this been my thesis focus prior to the activity, I would have ensured that my video set up included a wider camera angle to encompass the full activity space. Going a step further, I would have also considered a two-camera set up to capture multiple angles of the interactions missing or obstructed in some parts of the video. Attaching microphones to several participants to capture the layers of conversation occurring simultaneously could have addressed the gaps in the audio. With regards to the retrospective interviews, I regret not having the opportunity to interview more participants present at the concept mapping activity. As this was a small class size, each participant’s insights were invaluable. In retrospect, I would have also preferred to conduct a group interview immediately following the activity, rather than the short de-briefing that took place. While the informal de-briefing was videotaped, a more directed, focus group interview could have revealed new insights and fresh thinking. Understandably, at some points in the retrospective interviews, some participants just could not recall some of their social interactions with peers. With regards to my interview skills, I feel they were weaker with the first two participants, and it wasn’t until the fourth interview that I felt I had a built up satisfactory technique. The last couple of interviews had the ease and fluidity of an authentic conversation and both interviewees expressed enjoyment after they finished. In retrospect, a mixed method approach would have helped reach a closer understanding about how participants ‘felt’ about making a decision for their methodological approach.
For example, the use of a Likert scale or questionnaire would have been helpful tools to gauge their feelings, and would have provided an additional point of triangulation.
Chapter 4  Thematic Findings: Description, Analysis, Synthesis

This chapter reveals four thematic findings that developed out of the study. The purpose of this chapter is to describe in detail each of the four thematic findings in sequence, and follow up with an integrative analysis and synthesis of each of the findings at the end. Thematic findings emerged after organizing pertinent data into the four categories based on their significance to the research objectives. The first theme, derived from research questions, deals with the experiences emerging researchers faced as they learned how to navigate and situate themselves amongst the many qualitative research methodologies. The second finding was a recurring theme that emerged from interviews having to do with participants’ perceptions of qualitative research as a method of storytelling. The third thematic finding originates from the initial research questions and deals with the process of collaborative knowledge building through a concept mapping activity. The last finding originated from an insightful observation from one participant regarding the possibility of our own embodiment being an impediment to a face-to-face collaborative experience.

1. The Process of Navigating and Situating

The theme for this section is a result of the findings from interview questions and the written responses. This section presents the findings from participant responses regarding their experiences as emerging researchers attempting to make a decision about a methodological approach. This section will first look at the level of prior knowledge and experience with qualitative research of each participant, discuss the criteria and
factors that shaped their current methodological choices, and the level of complexity the participants described during their decision process.

**Prior knowledge and exposure to qualitative research methodologies**

Participants were interviewed about their knowledge and level of experience with qualitative research methodologies (QRM) prior to the introductory course in which the activity for this study took place. All participants described some prior level of exposure and experience. Three participants pursuing a Ph.D. had a range of prior experience with QRM in their Masters programs from introductory courses and thesis work. One of the Ph.D. participants, Don, remarked that,

I did my M.A. in History, and that’s where my background with research comes from, is that sort of narrow focus. So as far as other methodologies, I would say I had a limited understanding of ones that were outside of History, sort of context. So overall, I’d say I had a limited understanding before Karyn’s [introduction to qualitative inquiry] course except for my own background in History. So I was confident in that, but not in all the other aspects of qualitative research at all really so, it was really eye opening.

A second PhD participant, Samara, remarked that, “I don’t think that I actually really absorbed the words qualitative research until Karyn’s class, which I audited the year before.” The last Ph.D. participant, Rowan, notes having taken a qualitative research course during his Masters degree and had thesis-based experience with a particular QRM. Of the remaining three participants interviewed, Aisha, pursuing her M Ed. shared, “I think my prior knowledge goes back to my undergrad, really. When I had to take a methodologies course. And then after that, I don't think I necessarily looked at methodologies as a methodology. I might have done some stuff in my classroom, but not necessarily made the connection that it was a research method.” Terry, a
current M.A. student, described their early exposure to QRM in their undergrad as a confusing and complex struggle:

I had taken some courses as a part of my Honours undergrad. I had to take a research methodology course...I want to say that I had some sort of knowledge of it before hand, but I remember going through the course and handing in my ethics application...and her [the course instructor] being like, ‘this isn't the methods section.’ As you were saying it had nothing to do with methodologies. It's like, all the methodologies that I thought fit...none of them were right...But I guess that I want to say that I knew something about it [qualitative research methodology] before this course, but even going through my undergraduate thesis, I don't think [I did].

The last participant Mariko, also pursuing an M.A., described an in-depth exposure to QRM, originating from her undergraduate studies in Anthropology and Equity studies, and further exposure in her upper years with Feminist and Queer anthropology.

To summarize, regardless of their level of prior education, all participants had some form of exposure to and experience with QRM, and prior experience and exposure ranged from taking one introduction to qualitative and quantitative inquiry course, to more in-depth, thesis-related research experience.

Criteria and factors influencing methodological approach

Participants were asked to describe the criteria or factors that helped shape the decision for their current methodological approach. The table below illustrates the range of criteria expressed by participants.

Table 2
Participants' factors and criteria for methodological choices

<table>
<thead>
<tr>
<th>Factors and Criteria</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on academic background/ prior academic experience using a particular methodological approach</td>
<td>4</td>
</tr>
<tr>
<td>Familiarity/ Comfort/ Connection</td>
<td>3</td>
</tr>
<tr>
<td>Practical relevance to career</td>
<td>2</td>
</tr>
</tbody>
</table>
Ethical considerations 1
Participant’s Epistemology 1
Ideal for research questions 1
Participant’s Personal Identity 1

As might be expected, four out of six participants discussed choosing an approach that was based on prior academic experience or exposure. Rowan explained, “I guess I came into the Ph.D. program thinking I would do autobiographical to begin with, just because I had such a good experience with it.” Don expressed similar feelings; “one prompt was just my History background, so that is what I felt most familiar with.” Terry based their methodological approach on prior academic experience and exposure, but only after a great deal of struggle. Terry explains the choice for their approach occurred “early on in my university [undergrad] career, I gravitated towards LGBT studies, and the more I got into it, I realized how limiting that could be in itself. And then in comparison, how limiting feminism and feminist theory could also be, and the concept of queer theory, when it was finally introduced in one of my English courses…it was eye opening in a sense.” In a similar vein, Mariko described how her methodological approach was influenced by her undergrad experiences with several QRM from different perspectives, but it was still a struggle to position her self and her research. She explains, “I came into the class sort of very conflicted about where I wanted to situate myself. I knew where I wanted to situate myself ethically, in terms of a framework, very non-positivist, but I wasn’t sure where I wanted to situate myself in terms of methodology. That’s sort of where I was.” Of these four participants who based part of their decision for methodological choice on previously known methods, the first two participants Don and Rowan, expressed a feeling of comfort and familiarity with their chosen methodology,
while the latter two participants expressed a complex struggle to situate themselves amidst several approaches within previously known methodologies. Of the latter two participants, Terry also added that their identity played a role in deciding on a methodological approach, and Mariko added that her epistemological stance played a role in her methodological approach.

**Internal/ external process**

All participants stated that making their methodological choice was both an internal and external process, and that external influences ranged from course colleagues, a former undergrad professor, a current professor, and a work colleague. Mariko’s response articulated what many participants expressed; “I think it’s both an internal reflective process and external process. Internally, I was grappling with issues of ethics and my own experiences. But then I turned to others who were working in ethnography and other things I was interested in. I talked to Karyn about…what she thought would be a good area to research and explore further. So that’s how I came to Ethnography.”

**Level of complexity in making a decision for methodological approach**

As to the complexity of making a decision, experiences ranged greatly, from being described as a “natural decision” to a “crisis of faith.” For participants Aisha and Rowan, both expressed a more straightforward decision-making process than their peers. Rowan notes that, “It felt natural. It felt natural, it [I] just fell into it, it was easy.” Yet for Don, he expressed his process as, “in a way complex, because I didn’t know, and I still don’t know what it is that I’m going to story, I mean I have a topic area, but I don’t
have a narrow research question yet, so trying to figure out a methodology for a question I don’t yet have, that has created complexity.” Samara opened up about her complicated process after which she finally discovered a methodology in which she felt a deep connection:

Phenomenology, when I came to hear and have it explained to me, which was one of the middle ones that we had done, not one of the beginning ones. I got excited. It was like when I went shopping for my wedding dress and they said, ‘you’ll know when it’s the right one’, and I blushed on the dress, although I am separated now. But I felt like this heart understanding and connection to phenomenology. Have I ever thought why? I think it’s because my, I love human behavior and I love people.

On the other end of the spectrum, Terry describes a struggle with feminist theory prior to being exposed to their current approach, queer theory, as having had “such a hard time trying to figure out how to fully identify as a feminist researcher. That is, it was almost a crisis of faith.” Mariko expressed her process as “really complex” in having felt conflicted about situating herself within a methodology that reflected her dual academic disciplines, Equity Studies and Anthropology.

The foregoing discussion has illustrated the range of experiences participants faced as they made their methodological choices. All participants described some prior level of exposure and experience before they began the introduction to qualitative inquiry course in which this study took place and the level of experience/exposure varied greatly. Two thirds of participants stated that a factor in their methodological decisions had something to do with their prior academic background or prior academic experience. Other factors included level of familiarity and comfort with methodology, practical relevance to career work, connection to research questions and ethical, epistemological and identity factors. All participants stated that making their
methodological choice was both an internal and external process, and that their external influences included academic colleagues, instructors and work colleagues. The level or complexity in making a methodological decision varied greatly amongst the participants.

2. Research is about telling stories

The second thematic finding in the study highlights and discusses a recurring way of describing qualitative research that emerged from each of the interviews conducted. Using verbatim analysis (See Rugg & Petre, 2007) of the transcripts, it was revealed that the word *story* or *stories* by each of the six interviewees, a total of thirty times. I used the term twice in total during all the interviews, but only after it was used first by the interviewee. At a minimum, one participant used the term *story* once, and at a maximum, one participant used the term ten times during their interview. It should be noted that the incidence of using the term *story* was highest amongst the three participants who focused on the following three methodologies: phenomenology (one participant; used 10 times), one participant who focused on narrative theory (used 6 times) and one participant who focused on autobiographical theory (used 6 times). A map was drawn up for analytical purposes to illustrate the number of times and the context in which the term was used (See Appendix K).

Generally, the term *story* or *stories* was used in a variety of ways, such as, describing a teaching and learning method, to describe a worldview, as the basis for popular culture, and as a way to connect with colleagues. But most frequently, *story* was used to describe the central objective or role of either qualitative research or their chosen methodology. And of the 30 times the term was used, in 20 instances it was used for this
purpose. Going even further, *story* was used to explicitly describe Q.R. or a particular methodology 9 times. The following interview quotes exemplify how *story* was used explicitly as being either central to or an objective of Q.R. When discussing the appeal of mixed-methods, interviewee Terry responded, “I don't think any one methodology can really encompass any research topic...but to get at a fuller story, how I see qualitative research is that it's really what you are looking for, a story of some kind. You might even say a literacy.” Interviewee Samara describes her chosen methodology as such, “I think phenomenology tells a story and it’s an archive. It tells a story of the time and space you shared.” The same interviewee goes on to illustrate the differences between qualitative and quantitative research: “qualitative is the meat of the story and quantitative is more of a factual, the facts and the statistics.” In 11 instances, 5 out of the 6 participants used the term *story* was used implicitly to describe a central element or objective of qualitative research, or to describe a particular methodology. Another participant, Mariko, explained the centrality of stories in her current research as such; “I'm using the life history stories, life history narratives to not necessarily as evidence of the way the world is because I'm not entirely convinced privileging the experience of the group being researched. I think that's really important, but I don't think it's the be all and end all of truth. So I'm looking at those stories more as evidence of what ways there are that are possible in a given situation, not necessarily how things have to be. And using those stories is evidence of one way.” When asked about the importance of having an understanding of the range of methodologies and their interrelationships in qualitative research, one interviewee, Samara, responded, “I really want to understand it because this is my place, qualitative research, whether as a professor, whether as a career
teach[er], or whatever I’m going to do with it, it’s all about qualitative research. It’s all about the care of the stories of the people that matter to me.”

One interviewee, Rowan, used the word story 7 times, predominantly to describe his methodological approach. In his interview, he shared, “I’m really into, I guess, autobiographical, that’s where I sort of lean towards just because I like a narrative story to tell approach to research.” Rowan also added that the notion of storytelling in research felt like a most natural approach to him.

To summarize, each of the participants used the word story, or stories on their own volition in their interviews, as little as once by one interviewee and as much as 10 times by another. The word was used in a variety of context, but the diagrammatical analysis (see appendix) points to its use to describe qualitative research or a particular methodology much of the time.

3. On collaboration

The six interview participants expressed a range of sentiments with respect to collaboration in educational settings. This findings section summarizes each of the six participants’ experiences using data from the video analysis and post-activity interviews.

To refresh, the term ‘Niglas Cards’ mentioned in this section refers to the criteria developed by Katrina Niglas (2009). Each of the criteria was placed on a card, which were laid out in a particular order on the ground prior to the activity as a means for participants to situate themselves. During the activity, some participants decided to pick up the Niglas cards and move them to different spaces. The diagram below illustrates my initial layout, prior to manipulation by participants.
Beginning with Terry, in their interview, Terry described a discomfort in collaborative situations, and remarked, “I’m not a very collaborative person. I’m more solitary. I prefer to muse with myself, rather than with others…the process of interaction with other people usually freaks me out.” Video analysis substantiated Terry’s feelings. Throughout the recorded activity, Terry does not speak to other participants at any point, and looks up occasionally after a joke or comment is directed at the whole group. Terry is situated at the far end of the classroom and works alone. When Terry finishes positioning their web cards amongst the Niglas cards, Terry gets up and walks along the back of the room to survey the concept map. Terry appears to move out of the way when other participants approach. Terry picks up a Niglas card at the other side of the room and brings it over to their web at the end of the activity. In the interview, Terry shares that they prefer to collaborate after they’ve had time to reflect independently: “I start things off better by myself. I tend to be too hesitant around other people, but once,
usually once I have something going, sharing afterwards is better.” The diagram below is an edited video still of showing the positioning of participants. Terry is labeled ‘B’.

Figure 3 Edited video still of Terry, figure ‘B’ positioning web cards

Both Mariko and Aisha fell into the middle of the spectrum with their mixed feelings about collaboration, based on their interviews. Both noted that assessment was a key factor in determining whether or not collaboration would be a positive experience, and both stated a preference for collaborative activities that were not assessed or evaluated. Aisha also added that a shared workload was another critical factor in the success or failure of a collaborative endeavor. Although their feelings of collaboration were similar, Mariko and Aisha’s experiences in the concept mapping activity differed. In the video recording, Mariko is seen positioning her self and her methodological web cards on the floor quite early in the activity. She begins working beside Terry, but does not interact with Terry or with any other participants initially. She uses the Niglas cards to begin to situate her web. Although she does not speak in the early stages of the activity, she does acknowledge comments made by other participants and their positioning through eye contact and a smile. She spends time looking around at other
participants’ work and laughs after a joke is made. Eventually, Mariko sits up on her haunches to look around and then stands up to look at the entire space. After doing so, she walks across the space to collect more Niglas cards and a quote to bring back to her web. She does this a couple of times during the activity, and each time, she bends down to look at the work of her peers, and makes a couple of comments directed to one participant at a time. Figure 4 illustrates Mariko’s positioning towards the end of the activity, as she surveys the near completed concept map.

Figure 4 Edited video still of Mariko ‘A’, as she surveys the concept map

Although Aisha expressed similar feelings about collaboration as Mariko, her interactions with peers during the activity differed. Aisha is frequently interacting with one or more participants. As the activity begins, she is standing and talking quietly with Samara, who is helping her untangle her web strings. Aisha sits down at the center of the room and begins to place her web without looking at those around her. She looks up briefly at the camera. She works for some time on her own, often looking up and around at her peers. She is noticeably comfortable interacting during the activity; she asks the
facilitator a practical question about the activity, answers a question directed at anyone in the group, and is visibly engaged when other participants make a joke. She makes a joke of her own and initiates a discussion about the movement of webs with other participants. Figure 5 shows Aisha working in the center of the map in collaboration with her peers.

At the end of the activity, Aisha tries to place the remaining Niglas cards on behalf of the group. Holding up a card to Mark, she asks: “What are regularities? I’m just asking, can you define it?” When he does not reply, she asks the group: “Anybody, can you define it? ‘It sounds a bit positivist!’” In the interview, Aisha acknowledges she does not remember specifics about the activity, but does recall a positive experience. She states: “I thought it [the activity] was a good idea because it allowed people to situationally place themselves with their research methods in tune with everyone else’s methods. I think at that point in time, it was everyone was so heavily vested in everything they had
done, and learned and shared, that it was very cool to so and collaborate to see. I remember saying 'oh this is over here, let's move this, let's move that'. So things were constantly moving and nothing was ever left in one place.”

The remaining three participants, Don, Rowan and Samara all expressed a number of positive feelings about collaboration, generally speaking. Don noted that, “I tend to thrive in that type of environment, and I don’t really work well in isolation. So I prefer collaborative learning whether it be with a partner, and I do enjoy small groups as well…I find I get more out of it, and I also find that it stimulates my ideas more, versus when I’m by myself.” Based on the video analysis, Don was significantly involved in the interactions with other participants. At the beginning, he is standing with another participant and is quietly looking at his methodological web. Not long after, Don is part of a semi-circle surrounding me, the facilitator, and is asking questions for clarification. After I leave, Don continues to discuss the activity with Rowan. Mark joins the pair and motions for them to move closer to the table, presumably to compare their webs. Don is also concerned with Rowan’s web, and is pointing to it and speaking to Rowan. It seems that Mark is offering a suggestion, and Don nods. As others begin to kneel on the ground and place their webs, Don does the same, but first scans the ground and takes a long look at what other methodological webs are around him. Don appears mindful about the placement of his web. Once he has finished placing his web, he stands with a small cluster of participants to look on at the development of the concept map.
In the interview, Don described his experience like this: “I took a step back to think about how it [his methodological web] would fit with the other things. And that’s what I typically do… when the activity was going on and other people were in there and working on it, I tend to step back and think about it before I make a move. Other people were moving things all over the place and talking as they went, I was more, I did do that for the first one…and after that I was looking and thinking a bit more.” Don and Rowan met during the course and worked together closely on assignments. Rowan expressed similar sentiments about collaboration. Rowan remarked: “I welcome it, I don’t think everything should be a lone journey, because most of graduate work is on your own. Right? So when there’s an effort to collaborate with someone and you both agree and you both decide that it’s a mutual respectful thing to do with each other, for sure.”

Through the preliminary video analysis, Rowan is observed standing at the back of the classroom looking at his methodological web amongst several peers in a semi-circle. He looks up and listens to me, the facilitator as I answer a question from Don to clarify the
activity. Rowan then moves in closer with his peers to discuss. Mark is explaining something, and Rowan listens. He looks around at the ground to observe what his peers are doing. He acknowledges a joke made by a peer by looking up with a slight smile. Mark initiates a move to kneel on the ground to place his web and Rowan follows him; they are having a quiet discussion together. Rowan looks around again, and changes his positioning closer to me. He places his web cards and continues to observe others while do so. A few jokes are made, and Rowan does not acknowledge the first one, as he looks deeply concentrated, but does acknowledge the second one with eye contact. Rowan appears to respond to the events around him, looking up each time a comment is made. Overall, he is fully engaged with the activity, and speaks with others intermittently.

The last participant to be discussed is Samara, who also shared her positive feelings about collaborative at the graduate level. Samara explains: “Well I for sure like group work, and I always have…I do get to have deeper friendships with my colleagues, which is cool. I get to hear how they think and see things, which may be a perspective I never
considered. And we get to talk about it and grow. Because then I have four other opinions, not just the opinions I am supposed to be taught.” During the activity, Samara works closely with Aisha at the outset. She is observed talking with Aisha looking at her own web as well as Aisha’s. Samara reaches over to help Aisha untangle her web. Samara eventually moves away from Aisha to interact with the Niglas cards alone. Samara also spends much of her time walking around the space, looking at her peers’ webs as well as the quotes and Niglas cards spread out through the space. After she has crossed the space several times, she settles on a space to the right of the frame and kneels down to work. Soon after she has settled on a place to situate herself, she looks up to observe others, and seemingly changes her mind. She picks up her cards and web and moves to the far left of the frame, close to the instructor. She asks the facilitator a practical question, and once she has her answer, she continues to work. After this, Samara is out of the frame and no longer visible. Figure 8 below depicts Samara’s position right after she has moved across the map to reposition herself.
As for my role in the activity, the video analysis reveals that I begin at the back of the room and can be seen talking with Don, Mark and Aisha. I recall them asking questions about the activity, about how they should begin. To the best of my recollection, I recall telling them that they can work in any way that felt right to them; be it talking with peers first or looking around at the Niglas card layout and finding a place. I can be heard offering a chart of the methodologies to Don and Mark, but they decline, saying they can work without it. John and Rowan are also on the periphery of this discussion, but are only listening. After responding to some questions, I begin to move towards the center of the map and look around. Figure 9 depicts me right after I have answered participant questions at the back of the room in the early stages of the activity.

I recall thinking at the time that the activity was much quieter and more reflective than I had expected. To break the ice, I say out loud, “I actually feel more connected to
Hermeneutics” and move closer to the web of the instructor as I do so. Using the video analysis as a cue, I recall making a few jokes to break the silence. At the time, I remember feeling that I needed to initiate discussion and thinking aloud to get others to do the same. As I am working on situating my methodological web, I am seated. I occasionally answer a question from participants about the activity. I look around asking where John is situated. Once I do this, he looks up, considers my web and brings his web closer to mine. As he is coming closer to me, he says, “I’m just not sure where to connect to.” A few participants laugh at his plight. At one point, I drag my whole web even closer to the instructor’s web. As I do this, Aisha jokingly expresses frustration that she wanted to be connected to my web and I am moving away. Finally, I stand up and move closer to Rowan and Aisha to survey the progress of the concept map. Towards the end of the activity, Aisha is busy trying to tie up loose ends. As she does this, she says for the group to hear, “I’m just a middleman, connecting everybody.” At this, John responds, saying, “Well you’re doing a great job, great job.” The diagram below illustrates where each of the participants finally placed their webs (the fully detailed web is not shown, only the name of the methodology). Note the final placement of the Niglas cards.
Overall, most participants felt positive about concept mapping in general, as well as the concept mapping activity in the class. Two participants, Rowan and Mariko, mentioned their prior experience and personal use of concept mapping during their graduate studies. Rowan remarked that he used an online mapping tool to work out the details of his thesis. For Mariko, she viewed concept mapping as a rich visual tool for understanding complex topics. She explains, “I think I learn a lot that way. I think I learn best from physical models that are sort of in the world that I can engage with, in a tactile way. But failing that, I do a lot of mind mapping on the computer. I think I can understand things more clearly that way as opposed to you know, writing an essay, where everything is linear and whether it makes sense. As opposed to a concept map, where you take ideas as they come and put them where you need them to be…for
concepts that are not so concrete, I think that concept mapping really does work for me.” Rowan expresses similar feelings about the strengths of a visual learning tool such as concept mapping. He points out, “anything that can connect people to share ideas, and that this is more of a visual connection tool, I think it’s viable because again, not all of us are textual learners. A lot of people are visual learners, and to have that and to be able to collaborate is a huge step forward for sure.” Rowan’s observation about visual learners is astute. Five of the six interviewees were either self-described visual learners, or articulated the benefits of visual learning tools. Mariko states, “I think primarily I'm a tactile learner, I learn by doing things physically engaging with things in a physical sense and then I think secondly I'm a visual learner.” Don shares, “I learn a bit better from the visuals, like concept mapping stuff” and Samara confidently responds, “100% I am a visual learner, and experiential learner and a kinesthetic learner. I know that about myself.” Lastly, Terry responds that the use of a visual tool, “helps me be more present, I feel.”

As for collaborative concept mapping, participants shared some interesting perspectives. Aisha revealed how observing her peers interact with the map assisted in her own learning; “I wasn't so sure of what things would go together, but to watch people around me place those cards and other people moving yarn [the string that was attached the criteria on each methodological web], I guess that was more my focal point because I didn't know what connections I would make.” Aisha also noted the importance of communication during the process so that all participants are truly working collaboratively. She explains, “just because people get offended when you move things, and your view and my view might not be the same. I might think of it as a merger, but
you're probably thinking from another perspective, no way is it a merger. And if it's only one concept map where we are all supposed to have some sort of agreement, then there needs to be conversation around it.” Terry felt that observing peers to be helpful as well. Terry adds, “for me, I want to say it was more interesting watching other people place their bubbles [methodological webs], and watching Karyn tie string after string and tie in everything. And kind of grasping what I could do from that. I would say that's what I, got. For my lack of understanding towards maps, I think that helped me kind of figure out.” To add to this, Terry went into more detail regarding their challenge with concept mapping. Terry explains, “I think it depends on what it is. Because as much as I kind of enjoy doing the mind map in 1018, I didn't really understand the purpose of it. I kind of just don't understand maps of any sort…Yes, I am overall a visual learner, but my mapping issues come from, I self-diagnose with discalculia, a math version of dyslexia… there is just something that doesn't process.” When asked about whether or not he found the concept mapping activity to be a helpful and positive experience, Don responded, “I did because it was collaborative, but in the same sense for me, the way I operate, I found certain people took over a little bit. Not in a negative way, that’s just the way they figured things out, by talking and figure things out, it didn’t really give me a chance to focus about figure it out a bit.”

To recap the findings from this section, the six participants interviewed expressed a range of feelings regarding collaborative work in graduate level courses. Terry expressed a discomfort in collaborative situations, and their interaction during the activity confirmed their feelings. Aisha and Mariko both communicated mixed feelings about collaboration, both stating a preference for collaborative activities that were not
assessed. Aisha also noted that the success of a collaborative endeavor depended on a balanced workload between participants. Based on the video analysis, Aisha appeared engaged, comfortable interacting with peers, asking questions, discussing the activity, and making jokes. Of the participants in the group, it is likely that Aisha made the most comments directed to the full group. Mariko, on the other hand, was quieter than Aisha during the activity and she worked mostly on her own. Towards the end, she spoke quietly to some participants and joked with another. Mariko appeared quite aware and mindful of the physical space and paid a lot of attention to the Niglas cards, the quotes and the webs near to her web. She also moved across the full space several times to observe the work of her peers. Of the group, Don, Rowan and Samara all communicated quite positive feelings about collaborative work. Don expressed enjoyment of collaborative activities, feeling that such interactions were stimulating. Don appeared significantly involved in the activity, both through his verbal interactions with peers and the placement of his web alongside the others. He appeared quite mindful about the overall space and where his particular web fit in. Rowan also shared Don’s perspective about collaboration, and appeared to rely greatly on what other participants were thinking and doing. Rowan spent the first part of the activity in discussion with peers, and followed the cues of other participants during the activity. Samara began the process in discussion with another peer, and as she grew more comfortable, she began to engage with the Niglas cards and other webs. She clearly did not hesitate to change her mind and move her web across to the other side of the layout. Of all the participants, Samara moved around the full space of the activity the most. Five of the six participants either described themselves as visual learners, or to benefitting in some way through the use of
visual tools. With regards to concept mapping as a visual learning tool, all interview participants expressed some degree of positive feelings and usefulness. One participant shared how their difficulty with concept mapping was based on a learning challenge they faced.

The final thematic finding for this study relates to the embodied experience of collaborative concept mapping.

4. Bodies in The Way: Towards a Disembodied Experience?

Bodies in the way

This last thematic finding originated from an enlightened observation Mariko shared about the concept mapping activity, which may pose a significant limitation to the activity. Mariko’s statement will be the central focus of this final section of the findings. Using video analysis and responses to Mariko’s statement from other participants, this section will elaborate on the impact and possible limitations of a fully embodied collaborative concept mapping activity in a classroom setting. Mariko explains:

I think a lot about bodies, and how they connect with our experiences. And I feel like in an activity like that [the collaborative concept mapping activity in class], that is so big, and based on the floor, our bodies really come into play. So at the beginning, we weren’t really thinking about where anything needed to go in relation to each other as much as we could have because our bodies were in the way…I think that the activity was heavily mediated by physical presence, and I think that this may be a limitation.

Mariko’s interview statement was later shared with other participants in a series of follow up questions. Below are the written responses from participants regarding Mariko’s concerns. Terry was in agreement with the observation and added further
thoughts about the physical space and the effects of participants’ movements. Terry 
remarks, “I think it's a really enlightened question. In my opinion, it was limiting 
because it was a smallish space, and although we were allowed to move about however 
we wished, it wasn't always an option, either because someone was in the spot we 
wanted to be in, or they happened to move their piece [web] to another location without 
your noticing so you could no longer connect your piece to it.” Aisha looked at the issue 
of space from another angle, and noted how our physical presence took up valuable 
space where methodological web could have gone and proposed a solution: “I think our 

bodies took up positions of where the cards could have gone. I think if perhaps we did it 
[concept map] against a wall or board…it could have solved this.” Aisha also notes what 
could be lost if we removed our physical presence from the activity; “but I still feel that 
sometimes its important to involve one’s entire being in the situation. And the cost 
would been the final result because you may lose the interaction of everyone doing at 
onece and discussion what and why they are doing it at the time.”

On the other hand, Rowan and Don did not necessarily agree with Mariko’s 
statement. Rowan shared an interesting perspective on our physical interactions, “I don't 
have the same feelings at all. I feel that it actually connected us more because we were 
using our bodies and bumping into each other. It wasn't a distraction for me at all and I 
don't think it limited our collaboration. “ Don also saw things differently from Mariko, 
but did note the confines and limitations of the physical space. “I didn't think about 

bodies or how they limited us in anyway at any point. The only thing I thought about in 
the beginning was the lack of space to move around within the class, but I did not relate
that to bodies but more to the tables being in the way and the fact that some people jumped in quite quickly.”

In the retrospective interviews, some general were posed to participants about other possible limitations of the face-to-face collaborative activity. Besides the concern that bodies obstructed the activity, other possible limitations included: a concern about the logistics in that it was difficult for all participants to physically connect their webs if needed, it could be physically limiting to participants with mobility issues and challenges with the academic jargon used.

In my own experience as facilitator, I recall feeling that participants were concerned about the space. I also wondered whether decisions about situating oneself was going to be a matter of convenience rather than finding an ideal ‘fit’ for one’s methodological web. I also observed the number of times participants had to stand up to view the whole of the concept map in progress. As Terry points out, “It was also hard to get a full picture regarding the process as there were so many bodies blocking the moment, and although there is something to be said for watching individuals take part of the process and to see their faces/emotions translate into the final project...there's also something to be said for just being able to see the final project.” In the activity de-brief, one participant, Sam, mentioned how not being able to see a concept resulted in a missed connection. He reflects, “I missed critical theory [web] entirely, cause I didn’t see it! I was looking for it, where was critical theory?”

The following series of video stills are taken in 20-second intervals and highlight only a small portion of the many complex interactions that occurred during the activity.
Video analysis methods were used to observe bodily conduct including positioning, movements, gestures, expressions, direction of gaze and proximity to other participants.

The first frame depicts the positioning of the first two participants on the floor (A and B), both interacting with their webs and the Niglas cards, while the remainder of participants are standing and looking at their webs. Several participants are out of the frame. The positions of A and B face the arc of the Niglas cards (see figure 10), with their backs to the others. At the same time in frame 1, three participants are at the back of the room having a quiet conversation in a semi-circle. In frame 2, participant D has walked over and turned his head to view the methodological webs of participants A and B. In frame 3, A and B have their backs to C, G, J, and possibly other participants as well. In frame 4, participant E sits to place her methodological web, but has not yet looked at what A and B have done at the other side of the room.

Figure 11 Video stills from activity taken at 20-second intervals (frames 1-4).
In frame 5, I positions near A, but has her back to E. Participants G, H and F are having a quiet discussion and J is at the periphery. In frame 6, participant C sits down to begin situating her web and appears interested in connecting with Niglas cards. C is working at an angle in which she cannot read the web cards of participants A, B, and E and vice versa. In frame 7, participant G and H, who were in discussion earlier begin to situate themselves and are often around at other participants’ webs. H and E also make verbal contact. J is seen positioning himself to the right of the frame, and cannot easily read the cards of other nearby participants. Previous to this frame, J had taken time to look around at webs. In frame 8, all visible participants are seated. A, G and I appear to be collaborating, but with their backs to B and F. B and E appear too far to make a possible connection, F, H and E have their backs to J.
In frame 9, B and J stand to see while B, A and J stand and look on. In the last frame, K appears from the left of the frame. Many participants, including K, B, J, H, and A are standing and observing the space, while G, E and I are still kneeling on the ground.

**The embodied mapping experience**

As the findings from the video analysis and interviews have revealed, participants frequently faced some significant challenges and limitations collaborating in the physical presence of a large group of people for a number of reasons. During the interviews and in follow up questions, participants were asked to envision a collaborative concept mapping activity in an online format and share their thoughts. Responses ranged from enthusiasm, to uncertainty, to little interest, and all participants reflected on limitations and what would be lost in an online concept mapping activity. Aisha, Rowan and Don all responded with interest at the thought of building a collaborative concept map in an online environment, but both Don and Rowan noted
how one mode was not necessarily better than the other. Both Aisha and Rowan remarked on the efficiency and practicality of mapping online. Rowan returned to his earlier statement about the effectiveness and huge step forward for visual learners. Overall, Rowan felt that, “this would work online as well as there are many online visual mapping tools. I think it would be a different experience, not better or worse, just different. For those who feel comfortable with online tools that do the same thing, it would be a worthwhile activity as well.” Don pointed out that the ability to return to the online tool at any time to modify and change the map as thinking evolved would be an asset. He also noted that, “I found sometimes you have a great discussions, connect certain things, all of a sudden a week goes by, you go back to class and you have a fuzzy memory of what you were talking about. But if it’s online, that’s why I think it would be great if it was used during class, when some of these things come up during class, you can come back to it, and build…I know for me, from a visual standpoint, it would help a great deal.” Samara and Mariko noted some of the gains in an online mapping activity. Mariko offered a suggestion to use online concept mapping as an ongoing knowledge building opportunity, remarking, “I think it would be really interesting to be able to engage with others in that way, and then also to engage with past users. If that methodology has been researched before, why start from scratch, why not take what they know and build upon it, or change it.” For Terry, the notion of an online concept mapping activity with peers did not offer the same appeal. Terry remarks, “In that particular format, I can see how it would help other people, but I don't think it would help me. I need something a bit more, I guess I'm more linear.” Terry, like others, pointed out some of the obvious limitations to the online format under consideration. For
the majority of participants interviewed, lack of face-to-face communication was the main drawback to mapping online with peers. Don’s comment sums up many participants’ feelings: “I guess an online activity has its own limitations as well so I'm not sure if I could say one approach would be better than another. If it was to be an online activity I think you would lose a great deal of the face-to-face collaboration that made the activity fun and interesting.” Aisha pointed out how in a text-based online environment, communication may not always come across as intended; “you speak to someone and you're having a conversation, and say this is why it is. You might not be able to get that unless you actually physically have a conversation with them.” Samara concurs, and adds, “I worry about that. And the other piece I worry about it is lack of face to face and the physical space to discuss who we are, to discuss methodologies.”

Lastly, participants noted that lack of knowledge, skill or confidence using an online environment can hinder the experience. Rowan points out that, “not everyone would appreciate having to use a tool like that. Not everyone has the knowledge to be able to use a tool like that, to get online, to be comfortable…or sharing their view on it [their methodological approach], in such a public way.” Samara, who disclosed limited computer skills in some areas shared, “I’d need very easy steps, and once I do that once or twice, and with someone, I’ll have it. But what does that mean for those with fewer skills than me? They might not even get to it.”

In summary, participants shared a range of thoughts from Mariko’s perspective that the activity was heavily mediated by physical presence and thus a potential limitation. Two participants noted how physical presence took up valuable space and felt there was often someone in the way of where they wanted to situate themselves. Two
other participants remarked on feeling confined in the physical space, but one of these participants attributed the lack of space to the room and not physical bodies. And finally, one participant felt more ‘connected’ because of the close physical proximity to others.

Concerning positioning, video analysis reveals several instances in which some participants were working on the map with their backs to one another and several participants situated their webs upside down from others. In both cases, parties could not be able to sufficiently read the work of others. In a number of instances, participants were positioned too far away to actually physically interact with one another and their webs. In another situation, participant I moved towards K, and participant E communicated to I that she was trying to stay close to her but she had moved.

Throughout the video, many participants are frequently seen kneeling and working, then standing up to survey the concept map. Terry expresses the challenge of trying to see the bigger picture: “It was also hard to get a full picture regarding the process as there were so many bodies blocking the moment, and although there is something to be said for watching individuals take part of the process and to see their faces/emotions translate into the final project...there's also something to be said for just being able to see the final project.”

When asked about the potential of moving the concept mapping activity to an online environment, thinking ranged from enthusiasm, to feeling that it was either better or worse than face-to-face, just different, to not feeling that it would be more effective. Participants shared that an online environment could offer added benefits to visual learners, the online map could be used as an ongoing tool to be modified as thinking changed or evolved, and it could be utilized as an ongoing knowledge building activity.
between more than just one class of participants. As for limitations, the most common concern was the loss of face-to-face communication and physical presence. Also noted was a concern for participants who lacked the skill or confidence to work in an online environment.

The final section of this chapter provides an integrative analysis and synthesis of each of four findings described above.
5. Analysis and synthesis of thematic findings

This final section of the chapter will provide discussion and synthesis of each of the findings from the study in sequence. To recap, the thematic findings in the study include: the complex process of navigating and situating amongst methodologies, research is about telling stories, collaboration and concept mapping and the embodied concept mapping experience.

The complex process of navigating and situating

The first finding was an exploration of the early experiences of emerging researchers as they navigated the complex process to situate themselves amongst the many qualitative methodologies and make a decision for a methodological approach. Data analysis from the study revealed that all participants reported some prior level of exposure and experience with QRM before they began the introduction to qualitative inquiry course and the level of experience/exposure varied greatly. Despite the range of prior experiences and exposure, all participants shared a desire to deepen or improve their understanding of the QRM field. Reasons to improve understanding included a perceived gap in their current knowledge, prior experience with QRM was too narrowly focused, an openness to new methodologies, a desire to better understand the entire field to assist in their Doctoral level work, and to strengthen the justification for and confidence in their chosen methodology. Moreover, it was revealed that two thirds of participants stated that their prior academic background or previous experience with a particular methodology was a deciding factor in their current methodological approach. Additionally, half of the participants mentioned feeling a sense of familiarity and comfort with their current methodology. To piece it all together, two thirds of
participants in the study made methodological choices based on prior experiences or academic background, while at the same time, all of the participants expressed a desire to improve their understanding of the QRM field. And just as Wright (2006) surmises, “we are each always already positioned and yet have agency to (re)position ourselves in the theory, practice and discourse of educational research (p. 7). To build on this, all participants stated that making their methodological choice was both an internal and external process, and that their external influences already included academic colleagues, instructors and work colleagues. This suggests that each of the participants have already been exposed to some form of ‘paradigm talk’ with one or more individuals in order to make their methodological choice. And although some participants described the journey to locate a suitable methodological approach as ‘natural,’ others found the process very complex and as one participant described it, a ‘crisis of faith.’ Together, these findings underscore the potential value and need for a social process to assist and support emerging researchers navigate through the vast field of qualitative methodologies. More specifically in this study, a concept mapping activity, in collaboration with peers, may be one way to build on the existing partial knowledge of each participant, which in turn becomes a space in which participants must negotiate meaning together. Returning for a moment to Denzin (2008) and his urgent call for renewed paradigm dialogue, this concept mapping activity, while only on a very small scale with emerging researchers, can be seen as a way to support the need for what he describes as the formation of, “interactive networks across interpretive communities” (p. 322).
Also of great interest in this set of findings is that only one participant explicitly stated that her epistemological stance was a deciding factor in her methodological approach. While it is possible that other participants may have considered epistemology as a factor in their decision for their methodological approach and simply did not articulate it in their interviews, there was little evidence that it was mentioned indirectly or implicitly either. On a larger scale, St. Pierre (2002) sees this as problematic and claims that, “much educational research…does not even acknowledge its epistemological groundings” (p. 26). In fact, Carter and Little (2007) stress the need for researchers to begin methodological considerations with epistemology, arguing that it is foundational and will influence further decisions regarding methods and methodology. Much in line with this thinking, the collaborative concept mapping activity draws on criteria from existing frameworks, including epistemology, and provides a sequence for thinking about methodological positioning. In the creation of their methodological webs, each participant was asked to use a set of predetermined criteria based on four existing frameworks (see appendix B) to think through their methodology of choice and to explicitly articulate their positioning. The stages of this activity can be seen as one possible solution to the growing evidence claiming a need for greater focus to be placed on paradigm, methodology and epistemology in order for both seasoned and emerging educational researchers make informed and justified choices for conducting and situating their research (MacKenzie & Knipe, 2006; Hayes et al., 2009; Paul & Marfo, 2001, Preissle, 2006).
The story is the meat

This second thematic finding about stories is a smaller finding, but nevertheless worthy of discussion. This finding highlights a recurring word used by participants to describe qualitative research that emerged from interviews. Despite the range of methodological approaches, the term story or stories was used 30 times in total, by each of the participants. Furthermore, two thirds of the time, story was used independently by participants to describe the central function or objective of qualitative research or a particular methodology. It is interesting to consider how story resonated with qualitative researchers as a defining term, or as one participant aptly described, “the story is the meat of qualitative research.” Perhaps this finding is reflective of what Denzin (1997) refers to as the ‘narrative turn’ in social science. And as Lewis (2011) has described qualitative research, “we take in stories, our own and others and tell them back to our self and to others in a recursive process that augments our understanding” (p.506).

Perhaps the use of stories and storytelling can be used as a unique lens through which to share understandings of qualitative research. Earlier in the study, I described how I used visual metaphors as a playful yet meaningful tool for understanding methodology from a different perspective. In the concept mapping activity, I used water and floatation devices as visual metaphors for mapping methodologies, the idea based on a prior paradigm activity conducted by Lather (2006). Adding to this, Eppler (2006), has pointed out that visual metaphors can be a way of organizing content meaningfully and argues that the use of associations with the metaphor can convey additional meaning about the content being explored and can be helpful in connecting what students already know. Even though story has become a resonating term with this particular group of
participants in this small-scale study, the inclusion of story as a metaphor may be of some worth in a paradigm dialogue with other future emerging researchers. Seeing qualitative research as an act of storytelling can be a familiar perspective, but at the same time, much like the use of visual metaphors, offer another angle to thinking about objectives of chosen methodologies.

**Making a case for face-2-face**

Some valuable insights came out of the study with regards to the social nature of this face-to-face activity. This section discusses four observations about collaboration and their possible interpretations, including: the need for processing time prior to collaborating, the role of facilitator in a constructivist learning environment, how physical actions influence subsequent actions, and the use of humour in social interactions.

In this section, I discuss some of the findings as they relate to the literature on constructivist learning theory and concept mapping in a collaborative environment. Eleven participants were involved in the concept mapping activity, and six were interviewed afterwards to share their perspective on collaboration, and more specifically collaborative concept mapping. The six participants interviewed expressed a range of feelings regarding collaborative work in graduate level courses, and despite the ranging sentiments, all participants could see the overall value of collaboration. While one participant expressed a discomfort in collaborative situations, two others stated that positive collaborative outcomes were dependent on assessment and shared workload, and the remaining three expressed quite positive feelings. In addition to the mostly supportive comments about collaborative work, five of the six participants either
described themselves as visual learners, or to benefitting in some way through the use of visual tools. With regards the concept mapping as a visual learning tool, all interview participants shared some degree of positive feedback as to its’ usefulness as a learning tool. However, one participant shared how their difficulty with concept mapping was due to a learning challenge.

Video analysis revealed that all participants were engaged in the activity in a variety of ways with one another or with the material objects on the map. The video captured a range of bodily conduct including walking through the mapped space, the movement of material objects, hand gesturing, turning, standing, kneeling and sitting. Verbal interaction also ranged from quiet discussion with one other participant, small group conversations, to full group discussion and laughter. Yet one overarching trend among virtually all participants was the need to process information prior to engaging with other participants’ methodological webs. In the initial stage of the activity, participants appear to be looking carefully at their own methodological webs (see appendix D for an image of methodological webs) with only a few very quiet discussions occurring. Unfortunately, some time was also spent untangling the strings of the webs as well. Eventually, more participants engaged with the Niglas cards (see figure 2) laid out on the floor. Much of this was done in silence. This quiet time appeared to be used to process information and get a sense of their surroundings. Of the few discussions that did occur in the early stages, much of it appeared to be about activity clarification. Almost all participants at this time were looking at their own information on their methodological webs. Eventually, conversation began to build. This finding could suggest that participants may require some independent ‘think time’ to
orient themselves to the activity, and more importantly to process information independently before sharing and interacting with one another. Ernst von Glasersfeld (1995) has noted that learning is an interpretive process, a process in which learners use their prior knowledge and belief systems to make sense of new knowledge. Perhaps some think time prior to the interactive activity will assist participants to review their own framework and existing knowledge before engaging with others. As one participant shared, “there was not enough time to sit there and think.” Additionally, time to look around and process the material objects in the physical space may prove helpful. With that said, it could be argued that thinking done aloud could be helpful to some participants. In the video, two participants in particular can be observed spending much of the early stages in discussion together, presumably sharing their thinking about the process.

Another finding deals with my role as facilitator during the activity. Based on the video analysis and my own recollection of the event, my role went through a shift. In the beginning of the video, I can be seen at the back of the room answering questions from various participants. I recall most of the questions being about activity objectives and clarification on what was expected. I remained in this space for some time, assisting participants with questions. As the activity moved along, my role gradually shifted from that of facilitator to that of participant and peer. I eventually took a place amongst my peers and interacted as a participant. Only a few times I was asked questions about the activity; the rest of my verbal and physical interactions had to do with my methodological web and placement on the map. My role as facilitator in this constructivist, student-centered learning activity supports the literature on
constructivism as a learning method. In this particular activity, it is the students, not the instructor, who become the active agents in co-constructing and developing shared meanings (Cheung, 2006; Edmondson, 2005) and the objectives of the activity were in line with what Vygotsky (1978) pointed out years ago; that collaboration and social interaction between peers can support and improve learning and overall outcome. In one instance towards the end of the activity, one participant, struggling with academic jargon, asks a participant nearest to her about the meaning of a word. When he fails to answer, she opens the question to the group, not necessarily directing the question at either the facilitator or the instructor.

To further the argument about the relevance of social interactions between participants in a learning situation, countless instances in the data from video analysis illustrate how the actions of one participant are responsive to the actions of another. The complex mapping activity was ultimately the result of countless successive sequences of actions. Heath et al. (2010) define sequential organization as, “the vehicle through which participants produce and make sense of each other's actions and activities. It enables the routine and ordinary character of everyday activities and events to be accomplished by participants themselves in concert and in collaboration with each other” (p. 69). One example from a video fragment shows a participant moving her methodological web in a particular direction. This causes another participant to say, ‘no, don’t move away!’ She then picks up her web to move closer. As she uttered the words, four other participants, already standing, turn to look at what is happening. They form a semi-circle around both participants to watch how it unfolds. This initial interaction, moving the web, produced a ‘next’ action, the utterance, which was based on the prior action. Such seemingly small
interactions offer the opportunity to, “enable us to examine how participants themselves are orienting to the actions of others (Heath et al, 2010, p. 73). And of particular interest in these interactions was the use of humour to produce ‘next’ actions, or ‘turns.’ In several instances, a humorous comment or joke was made by one person, which influenced subsequent actions in the activity. In one particular instance, one participant walked by the methodological web of another participant and made a lighthearted joke about their methodology. This ‘turn’ spurred a third participant to laugh, and make a comment. Because of the joke, yet another participant got up and walked over to witness the web and offer their suggestion. Together, they looked at the whole of the map to consider another placement. This interaction caught the attention of a fifth participant who looked up, observed the web, then looked back up at the two participants involved in conversation about placement. Based on my experience in the activity, humour became a ‘turn’ that not only encouraged discussion; it appeared to lighten the mood, increase interaction and increased the feeling of camaraderie in the group. One last significant ‘turn’ in the activity had to do with the physical environment. Heath et al. remind that, “rather than treat the immediate physical environment as an overarching influence on action, examine the ways in which the participants orient to and constitute features of that environment. The analysis should delineate the resources used to accomplish action - it is critical to consider how a range of material and bodily resources might bear upon the action, if only to provide explicit grounds to discount their relevance (p. 93). An analysis of the physical environment and material objects would have enough content to fill a chapter on their own, and is out of the scope of this small study. Yet I would like to point out one brief example of how one participant used
physical space and material objects to make a strong statement. Based on my recollection of the activity, I recall the instructor of the course, whose methodological web was hermeneutics, took many pieces of string and began to attach the string to each participant’s methodological webs. She then carried a long piece of string outside of the classroom door and into the hallway. This non-verbal action, linking her material object to many other objects in the class and out the door made a powerful statement and a learning opportunity for other participants in the room, and if I understood correctly was a compelling statement about the interconnectedness across many methodologies and the infinite nature of hermeneutic inquiry.

**Towards a disembodied mapping experience?**

This section provides some further consideration about the effect of the physical space and our presence within it during the activity. In an earlier finding, one participant made an observation about the activity remarking, “we weren’t really thinking about where anything needed to go in relation to each other as much as we could have because our bodies were in the way…I think that the activity was heavily mediated by physical presence, and I think that this may be a limitation.” In examining this further, other participants reacted to the statement with a variety of responses. To recap, two participants noted how physical presence took up valuable space and felt there was often someone in the way of where they wanted to situate themselves. Two other participants remarked on feeling confined in the physical space, but one of these participants attributed the lack of space to the room and not physical bodies. And finally, one participant felt more ‘connected’ because of the close physical proximity to others.
Adding to this the findings from video analysis, I noted how participants frequently faced some significant challenges and limitations collaborating in the physical presence of a large group of people. Because of the size of the space and the bodies in the way, it was difficult for anyone to have an unobstructed view of the entire concept map for the duration of the activity. Even at the end, it was only slightly less difficult to take in the contents of the entire map due to its sheer size. As for body positioning, video analysis reveals several instances in which some participants were working on the map with their backs to one another, several participants situated their webs upside down from others, and the physical distance between others made it very challenging to visibly connect their webs. Additionally, in an oversight on my part in the pre-planning, I did not consider how the blue strings used to connect criteria to each methodological web would be so confining; many participants resorted to cutting their webs free of the strings. Although deeply engaging and productive collaborative work can often be messy, messiness also holds the potential to detract from the learning experience. I recall thinking at the time of the activity that it appeared messy and disorganized, but this could have also been due to the lack of time to fully sort out the map as a group. I speculate that an extended or ongoing activity would likely have produced different results.

Further limitations and restrictions have been identified by participants and in some of the recent literature on concept mapping (CM). In interviews, participants shared other possible limitations to this face-to-face activity, including: logistics, frustration with the academic jargon and potential limitations for people with mobility issues. Eppler (2005) has also identified some concerns with CM as a learning tool. He
notes that CM as a visual tool tends to be less memorable, and is better suited as a personal learning method, and suggests that some learners have difficulty understanding concept maps developed by others. However, much of these potential limitations can be either resolved or minimized for this particular activity. After careful analysis and reflection on the activity, offering participants ‘think time’ prior to collaboration provides an opportunity to assess the logistics of the activity and some time to pose questions for clarification. Additionally, clear definitions for academic jargon can be provided, as well as greater use of plain language when possible. Eppler argues that CM as a visual tool tends to be less memorable, but for this particular activity, the objective is not the memorization of the concepts on the map, rather it is about the process of the activity itself and the cognitive connections that are made between participants through negotiation. Because the CM in the activity is collaborative, participants share in the responsibility for its’ creation and development over time.

Returning to the concern about the physical limitations and restrictions that were experienced in the face-to-face activity, each participant was asked in the subsequent interview for their responses to using an online environment in order to resolve some of the face-to-face limitations. Not surprisingly, responses ranged from great interest to indifference or disinterest. Several participants stated that an online environment could offer added benefits to visual learners. Its’ online presence could be used as a knowledge building activity and an ongoing tool that could be modified as thinking changed or evolved. One participant suggested, “I am looking at this as an ongoing project that builds a repository of knowledge about qualitative research, which I think could be really valuable, not only to course users, but to folks outside of that as well.” Khamesan
and Hammond concur, reporting that CM software tools increased efficiency, allowing users to modify, maintain and analyze CM more easily. Online, participants would have the added ability to see the large picture or concentrate on one particular branch of the map at any time. Lastly, Ng and Hanewald (2010) add that CM software promotes socio-constructivist learning methods, a method that has been central to this activity.

As for limitations, the most common concern was the loss of face-to-face communication and physical presence. More specifically, participants were concerned for the loss of informal conversation, the potential for miscommunication or misunderstandings, the lack of ability to find agreement, the lack of opportunity to discuss identities face-to-face, the loss of the tactile experience and finally, a concern for those with deficient digital literacies. The loss of social presence should be of major concern for this particular activity of paradigm dialogue, in which the foundation is conversation, negotiation, and understanding. Careful, mindful consideration of the expectations of digital technology in any educational setting is prudent. In light of today’s often unquestioned overly optimistic perception of digital technologies, Selwyn (2014) suggests a “de-accelerated, detached and disinterested gaze” when considering the use of technology in educational settings. He wisely points out that, “it is important to ground our analysis in the present-day uncertain realities of educational technology. Indeed, there is a need to be confident in the messy, uncertain nature of education and technology, and not feel obliged to present too certain or neat a picture” (p.18). As such, this study has carefully weighed the perceived benefits of an online concept mapping activity, and provides suggestions for further practice and research.
Chapter Five: Summary, Discussion and Conclusion

In the preceding chapter, the presentation and analysis of data was reported. Chapter Five consists of a summary of the study, discussion of the findings, implications for practice, recommendations for further research, and conclusions.

Brief Summary of the Study

This study has reported on a collaborative concept mapping activity as a method to engage emerging researchers in much needed paradigm dialogue. As discussed in this study, notable qualitative researchers have observed that the current field of qualitative research is a ‘proliferation’ of paradigms; one that is a challenge for researchers to fully comprehend. For emerging researchers in particular, it can be a complex field to navigate and situate their research. Adding to this, recent literature points out a number of deficiencies in the reporting of qualitative research methods in academic research, which is often the result of poorly informed methodological choices and positioning. At the same time, there is a call for a renewed paradigm dialogue amongst qualitative researchers in order to strengthen the field of qualitative research and to build “interactive networks across interpretive communities” (Denzin, 2008, p.322). This study therefore, proposes the use of content-specific (using four existing methodological frameworks) concept mapping tools in a collaborative environment as a means for paradigm dialogue. Based on socio-constructivist learning theories, the CM activity offers participants opportunity to explicitly share their positioning, negotiate meaning and to recognize the possibilities for movement amongst methodologies. This process aims to improve
understanding and clarify thinking about the field of qualitative research. More specifically, this activity also aims to support emerging researchers situate themselves on the qualitative inquiry map, potentially leading to better informed research and improved justification of methods. Another benefit of the paradigm dialogue mapping activity is the opportunity for social knowledge building and negotiation of meaning amongst participants. Students are responsible for articulating and expressing their perspectives as well as locating commonalities and differences. Such a dialogue also aims to empower participants to be more open to new possibilities, alternative views, and the fluidity to ‘move’ around the qualitative map. As such, the collaborative concept mapping activity is neither a chart nor a hierarchy, nor is it chronological; it is a conversation.

In a small introduction to qualitative inquiry course, 11 participants collaborated in the concept mapping activity, which was recorded for video analysis. Following the activity, 6 of the participants were interviewed about their experiences. The following section is a summary of the findings from this study.

**Discussion of the Findings**

This study revealed four thematic findings of interest. The first theme, derived from research questions, dealt with the experiences emerging researchers faced as they learned how to navigate and situate themselves amongst the many qualitative research methodologies. The second finding was a recurring theme that emerged from interviews having to do with participants’ perceptions of qualitative research as a method of storytelling. The third thematic finding originated from initial research questions and explored the process of collaborative knowledge building through a concept mapping activity. The last finding originated from an insightful observation from one participant
regarding the possibility of our own embodiment being an impediment to a face-to-face collaborative activity.

The first finding revealed that all participants had some prior level of exposure and experience with qualitative research methodologies before they began the introduction to qualitative inquiry course and the level of experience/exposure varied greatly. Despite the range of prior experiences and exposure, all participants shared a desire to deepen or improve their understanding of the QRM field. Two thirds of participants stated that their prior academic background or previous experience with a particular methodology was a deciding factor in their current methodological approach and half mentioned feeling a sense of familiarity and comfort as a decided factor.

In summation, two thirds of participants in the study made methodological choices based on prior experiences or academic background, while at the same time, all of the participants expressed a desire to improve their understanding of the QRM field. And just as Wright (2006) surmises, “we are each always already positioned and yet have agency to (re)position ourselves in the theory, practice and discourse of educational research (p. 7).” Interestingly, all participants stated that making their methodological choice was both an internal and external process, and that their external influences already included academic colleagues, instructors and work colleagues. This suggests that each of the participants have already been exposed to some form of ‘paradigm talk’ with one or more individuals in order to make their methodological choice. Although some participants described the journey to locate a suitable methodological approach as ‘natural,’ others found the process very complex and as one participant described it, a ‘crisis of faith.’

Such findings help to strengthen the argument for the value and need for a social process
to assist and support emerging researchers navigate through the vast field of qualitative methodologies. Such an activity can also respond to calls for paradigm dialogue amongst qualitative researchers. Another point of interest from this set of findings highlights that only one participant explicitly stated that her epistemological stance was a deciding factor in her methodological approach. This is seen as problematic on a larger scale as “much educational research…does not even acknowledge its epistemological groundings” (St. Pierre, 2002, p. 26). Research also suggests that more focus be placed on epistemological stance early on, and some argue that epistemology is foundational and will influence further decisions regarding methods and methodology.

A smaller finding revealed that all participants used the word story, or stories on their own volition in their interviews, as little as once by one interviewee and as much as 10 times by another. The word was used in a variety of contexts, but the diagrammatical analysis points to its use to describe qualitative research or a particular methodology much of the time. Perhaps this finding is reflective of what Denzin (1997) refers to as the ‘narrative turn’ in social science. And as Lewis (2011) has described qualitative research, “we take in stories, our own and others and tell them back to our self and to others in a recursive process that augments our understanding” (p.506). I suggest that stories and storytelling is one possible lens through which to engage in paradigm dialogue with emerging researchers, offering another angle through which to consider methodologies.

The third finding concluded with some valuable insights into the social nature of this face-to-face activity. The six participants interviewed expressed a range of feelings regarding collaborative work in graduate level courses, and despite the ranging sentiments, all participants could see the overall value of collaboration. In addition to the
mostly supportive comments about collaborative work, most described themselves as visual learners, or to benefitting in some way through the use of visual tools. Video analysis revealed that all participants were engaged in the activity in a variety of ways with one another or with the material objects on the map. Yet one overarching trend, based on the sequence of interactions among virtually all participants was the need to process information prior to interacting with other participants’ methodological webs.

Also, my role as facilitator in this constructivist, student-centered learning activity supports the literature that promotes constructivism as an effective learning method. Peers, more often than the instructor or facilitator, became the active agents in co-constructing and developing shared meanings in the activity (Cheung, 2006; Edmondson, 2005). Moreover, the objectives of the activity were in line with what Vygotsky (1978) pointed out years ago; that collaboration and social interaction between peers can support and improve learning and overall outcome. Countless instances of social interactions between participants illustrated how the actions of one participant were responsive to the actions of another. The complex mapping activity was ultimately the result of countless successive sequences of actions, which Heath et al. (2010) describe as a sequential organization. And of particular interest in these interactions, the use of humour produced ‘next’ actions, or ‘turns.’ In several instances, a humorous comment or joke was made by one person, which influenced subsequent actions in the activity. Humour also appeared to lighten the mood and increase the feeling of camaraderie among the group.

The last finding was based on a participant’s observation that the activity was heavily mediated by physical presence and thus a potential limitation. Two participants noted how physical presence took up valuable space and felt there was often someone in
the way of where they wanted to situate themselves. Two other participants remarked on feeling confined in the physical space, but one of these participants attributed the lack of space to the room and not physical bodies. Yet on the other hand, one participant felt more ‘connected’ because of the close physical proximity to others. Concerning positioning, video analysis revealed several instances in which some participants were working on the map with their backs to one another and several participants situated their webs upside down from others. In both cases, parties could not be able to sufficiently read the work of others. In a number of instances, participants were positioned too far away to actually physically interact with one another and their webs. When asked about transferring the concept mapping activity to an online environment, there was a wide range of thinking. Participants expressed the added benefits for visual learners and noted how the online map could be used as an ongoing tool to be modified as thinking changed or evolved; the online environment holds the potential to be an ongoing knowledge building activity between more than just one group participants. Khamesan and Hammond (2002) have added that CM software tools increase efficiency, allowing users to modify, maintain and analyze CM more easily. Online, participants would have the added ability to see the large picture or concentrate on one particular branch of the map at any time. Lastly, CM software promotes socio-constructivist learning methods (Ng and Hanewald, 2010). As for limitations, the most common concerns for an online activity were the loss of face-to-face communication and physical presence, as well as a concern for those who lacked the skill or confidence to work in an online environment. Loss of social presence is a major concern for this study as dialogue, negotiation, shared understandings and meaning-making are the foundations for the activity. As one
participant put it, “being able to talk it out was important.” In our current culture of unquestioned trust in educational technologies, Selwyn (2014) wisely suggests a “de-accelerated, detached and disinterested gaze” when considering the use of technology in educational settings. This study has carefully considered the perceived benefits of digital technology in relation to this dialogue-based concept mapping activity. Both the face-to-face and the online option carry their own set of restrictions and limitations. The following section offers a solution that considers the needs and objectives of the study using a balanced approach.

**Implications for Practice**

Given the small number of participants and specific nature of the study, the findings presented here should be viewed as descriptive in nature. Paradigm dialogue through collaborative concept mapping in future qualitative inquiry courses is highly recommended in order for emerging researchers to improve their overall understanding of the complex field of qualitative research. Literature reviewed for this study has highlighted a number of deficiencies in academic qualitative research regarding methods. The ever-expanding, complex qualitative research field is an area in which emerging researchers do require assistance to navigate. This study recommends the use of a concept mapping activity using a combination of methodological frameworks as the basis for the activity. These frameworks include: Cooper and White’s (2012) *The Five Contexts* framework as a lens through which each participant shares and presents their methodology to peers. Lincoln and Guba’s (2000) *Paradigm Position on Selected Practical Issues* chart can be used to represent key criteria that distinguish each participant’s methodological web for the activity. Lastly, Katrin Niglas’ (2001)
descriptive criteria that illustrate the change in focus and research interest among methodologies were placed directly on the concept map to help participants orient their positioning. Adding to this framework, I would suggest including some form of ‘paradigm compass’ to assist participants orient their methodologies at the beginning of the activity. The findings from this study are a modest contribution towards demonstrating ways in which collaborative concept mapping using established socio-constructivist learning techniques can support the co-construction of knowledge in a multi-voiced conversation. In a small way, this activity may help elicit conversation amongst emerging researcher communities and provide a solution to numerous calls for increased paradigm dialog.

**Recommendations for Further Research**

Further research for this concept mapping activity would benefit from trial uses of online concept mapping software in conjunction with face-to-face concept mapping. While the research conducted for this study has identified numerous efficiencies using online tools, there is still concern regarding the loss of social presence if the activity were to be conducted fully online. One possibility for future research would be the exploration of a blended model of both face-to-face and asynchronous online learning. In this scenario, participants could use online concept mapping tools on their own time, combined with frequent dialogue in a face-to-face class to discuss the progress and evolution of the concept map. Another possibility would be to pair students and use tablets during the class. The class could then regroup to discuss and edit the map as a full group. One participant suggested, “taking what has been done online, and bringing it back into the classroom and discussing it with every classroom participant being
involved.” Another participant recommends multiple mapping activities to be placed throughout the course as thinking evolves. She suggests that, “it would be a good activity to do not in the beginning, maybe a third into the class and at the end of the class. For oneself to see how they might have moved around in their understanding… what was good about doing that particular activity, purely it gave you ownership…and if you do it a second time, then you see how it might have evolved, and what that means. It was an excellent activity, but it happened too late.” The concept maps created for this study (see figure 1 and appendix K) were created using CMap Tools, developed by the Institute for Human and Machine Cognition (a university affiliated research institute). Based on my research and personal experiences with concept mapping software applications, CMaps appears to offer the most sophisticated tools for graphically expressing understanding of a knowledge domain. Furthermore, Cmaps offers useful and efficient features that address some of the needs of paradigm dialogue such as, synchronous editing with multiple users across the internet, a history tool that can illustrate changes in group thinking over time, and a text box for chat with other collaborators. Further exploration and use of Cmaps, in particular its’ collaborative capabilities, would be very helpful to this field of research.

Conclusion

My own experience as an emerging researcher taking on this topic of study has helped me gain a sense of clarity and insight into the complex field of qualitative research, and a new understanding of the fluidity of my own positioning as well as an appreciation for new methodological possibilities. It is my hope that this study can assist fellow emerging researchers embarking on a similar journey.
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doi:10.3102/00346543071004525


doi:10.1080/09518390600975701


Appendices

Appendix A: Constructivist Methodology using the Five Contexts

Historical
‘Humans engage with their world and make sense of it based on their historical and social perspectives—we are born into a world of meaning bestowed upon us by our culture.’
Crotty, 1998

Philosophical
We actively construct our own meanings and understanding (or our own version of truth) of the world we live in through a social process. Life is a sense-making process.

Auto-Biographical:
- Interpretations made by constructivist researchers are shaped by the researcher’s own experiences and backgrounds. Crotty, 1998

Post-Modern
It exists within the post-modern climate: A multitude of approaches to knowing exist. Knowledge is partial, local, situational

Theorists include: Gersick, Bruner, Vygotsky, Piaget, Dewey, Wertsch, Berger & Luckmann, Crotty
Appendix B: Methodological Questions for Participants

1. Please use several words for each of the following criteria to describe your research methodology. Feel free to re-visit the ‘Series of Decision Junctures’ chart Karyn gave us in the first class (I have attached it to this e-mail). You may wish to stick with the similar descriptions or develop your own.

   a) Epistemology
   b) Main Knowledge Producer
   c) Role of researcher
   d) Validity
   e) Purpose Statement
   f) Data Collection Methods
   g) Voice
   h) Truth

2. What word(s) below relates most to your research methodology? - causality, theories, pattern, laws, predictions, fictions, interpretation, understanding, problem-solving, emancipation, deconstruction, reflection. Or does your methodology reject these? Or is there another?

3. If your methodology were a floatation device, what would it be (eg: raft, dingy, buoy, canoe, Viking ship etc.)? Consider size, capacity, purpose, colour. Have fun with this one, and be ready to explain your selection!

4. If your research methodology were a colour, what would it be?

5. What two other research methodologies does yours most connect/ overlap with? Which is it least connected to?

6. Name two of your big thinkers.
### Appendix C  Grid of Methodological Responses from Participants

<table>
<thead>
<tr>
<th>Research Methodology</th>
<th>Epistemology</th>
<th>Knowledge Producer</th>
<th>Role</th>
<th>Data Collection</th>
<th>Voice</th>
<th>Ontology</th>
<th>Truth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructivism</td>
<td>Constructionism, contextualism, subjectivism</td>
<td>Participants: knowledge is constructed through a social process</td>
<td>Involved, Active, Reflect, Revise, Agent of change</td>
<td>Interviews, community narrative, journals</td>
<td>Passionate Participant</td>
<td>Relativism-local and specific constructed realities action research establishes its ontological framework from the practical knowledge generated by practitioner(s) within their sites of practice</td>
<td>Anti-foundational</td>
</tr>
<tr>
<td>Action Research</td>
<td>grounded in the local context of practice with direct application back to the local context; however, “local knowledge can often also function as public knowledge by informing practice and policy beyond the immediate context”</td>
<td>Practitioner Participants (PAR)</td>
<td>Interview, discussions, questionnaire, observations</td>
<td>Everyone’s voice, dependent on position of researcher</td>
<td></td>
<td></td>
<td>based on social justice and educational goals; dependent on local context and applicability to the specific situation(s)/problem(s) being investigated.</td>
</tr>
<tr>
<td>Narrative</td>
<td>the person who is being studied. This does not necessarily have to be two different people. The person being studied and the person writing or researching can be the same individual.</td>
<td></td>
<td></td>
<td>Individual who is being studied</td>
<td></td>
<td></td>
<td>accepted, critical, from whom</td>
</tr>
<tr>
<td>Queer Theory</td>
<td>Deconstruction of “normal”</td>
<td>Participant(s), researcher, social surroundings, historical conversations, observer</td>
<td>Active, passive, interpreter, observer, political</td>
<td>Interview, data collection, textual/film/historical analysis</td>
<td>Researcher’s, participant(s)’ observer’s</td>
<td></td>
<td>Everyone</td>
</tr>
<tr>
<td>Phenomenology (Karyn)</td>
<td>Contextual Based on relationships between mind, body and world</td>
<td>Researcher/participants</td>
<td>involved</td>
<td>Stories</td>
<td>Researcher/participant</td>
<td>Deriving essences of human behaviour</td>
<td>Essence of consciousness</td>
</tr>
<tr>
<td>Hermeneutics (Karyn)</td>
<td>Contextualism subjectivism</td>
<td>conversation</td>
<td>Co-interpreter</td>
<td>Cultural artefacts, archival materials conversation</td>
<td>Multiple</td>
<td>Existentialism, Transcendentalism (the Invisible) “idea of being” existence of patriarchal society</td>
<td>multiple</td>
</tr>
<tr>
<td>Ethnography Rebecca</td>
<td>Objective Contextualism Feminist Epist.</td>
<td>Participant Researcher</td>
<td>Active Political Advocate</td>
<td>Interviews texts (archival) observation</td>
<td>Standpoint of participant</td>
<td></td>
<td>Multiple realities</td>
</tr>
<tr>
<td>Ethnography</td>
<td>researcher and participant collaborate</td>
<td>observe, participate, guide research questions</td>
<td>interviews, observation</td>
<td>voice of observer and participants</td>
<td>culture, subjective</td>
<td>subjective</td>
<td></td>
</tr>
<tr>
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<td>---</td>
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<td>---</td>
<td></td>
</tr>
<tr>
<td>Austen</td>
<td>subjectivism, constructionism</td>
<td>researcher deconstructs and rebuilds knowledge philosophically and substantively; Participants also play as knowledge producers</td>
<td>researcher researches and also participates in the research: Question, investigate, deconstruct, and rebuild</td>
<td>Multiple: Both subjective and objective; often collective</td>
<td>Transcendentalism, existentialism, relativism, deconstruction</td>
<td>Multiple; relative; constructed</td>
<td></td>
</tr>
<tr>
<td>Post-structural</td>
<td>Adds skepticism, pluralism, and relativism to subjective, objective and constructive traditions of knowledge creation</td>
<td>Researcher and researcher and participant collaborate</td>
<td>Researcher researches and also participates in the research: Question, investigate, deconstruct, and rebuild</td>
<td>Multiple: Both subjective and objective; often collective</td>
<td>Transcendentalism, existentialism, relativism, deconstruction</td>
<td>Multiple; relative; constructed</td>
<td></td>
</tr>
<tr>
<td>Critical Theory</td>
<td>Transactional/subjective</td>
<td>Active, political, advocate</td>
<td>Dialectical, interviews, reflection, observation</td>
<td>‘Transformatively intellectual’ as advocate and activist</td>
<td>crystallization</td>
<td>Truth is many, and constitutes a system of socio-political power</td>
<td></td>
</tr>
<tr>
<td>Positivism</td>
<td>Dualist, objective reality exists beyond human mind</td>
<td>Knowledge is discovered</td>
<td>-discover causality and fundamental laws</td>
<td>-scientific method, objective data, analysis, stats.</td>
<td>‘disinterested scientist’ voice of researcher</td>
<td>Naïve realism</td>
<td>Foundational Objective findings = truth universals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research Methodology</th>
<th>Descriptive Words</th>
<th>Floatation Device</th>
<th>Colour</th>
<th>Connecting Methodologies</th>
<th>Contrasting Methodologies</th>
<th>Big Thinkers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Research</td>
<td>Plan, Act, Observe, Reflect; problem-solving, social justice, educational justice</td>
<td>I may see it is a modern type of fishing boat (functional/practical) that is always looking for how to improve its effectiveness and efficiency by examining the results of its purpose/actions (i.e. fishing) and reflecting on how/where it can go to improve (educational goals?) its success (practice).</td>
<td>red</td>
<td>Grounded theory Critical inquiry</td>
<td>Classical ethnography</td>
<td>Dewey &amp; Lewin; Lewin, Marilyn Cochran-Smith &amp; Susan Lytle, Herr &amp; Anderson</td>
</tr>
<tr>
<td>Queer Theory</td>
<td>Deconstruction, anti-normative, LGBTT2SQQAAPF I</td>
<td>Tardis</td>
<td>Rainbow?</td>
<td>Every methodology</td>
<td>Every methodology?</td>
<td>Judith Butler; Michel Foucault;</td>
</tr>
<tr>
<td>Phenomenology</td>
<td>Deconstruction/reconstruction Hermeneutic</td>
<td>Houseboat/ submarine</td>
<td>Tie dye</td>
<td>Narrative Post-structural</td>
<td>Ethnography</td>
<td>Edmund Husserl Martin Heidegger Maurice Merleau Ponty Maxine Greene</td>
</tr>
<tr>
<td>Hermeneutics (Karyn)</td>
<td>Pattern, interpretation, understanding, deconstruction, reflection, critique</td>
<td>Self-inflating life jacket</td>
<td>Deep grey</td>
<td>Narrative and phenomenology, heuristics</td>
<td>traditional ethnography</td>
<td>Gadamer, Merleau Ponty</td>
</tr>
<tr>
<td>Narrative</td>
<td>laws, interpretation, understanding, emancipation, reflection, OPPRESSION</td>
<td>- I would say a canoe because it allows more than one onboard to navigate narrow and wide channels of water where other devices would not be able to venture into.</td>
<td>RED and yellow</td>
<td>critical analysis, interpretive</td>
<td></td>
<td>John Holt, Paulo Freire</td>
</tr>
<tr>
<td>Ethnography (austen)</td>
<td>interpretation, fiction, patterns</td>
<td>kayak - the researcher and participant are each one blade</td>
<td>orange</td>
<td>feminist methodologies,</td>
<td></td>
<td>Geertz and Clifford</td>
</tr>
</tbody>
</table>
of the paddle; both are required for the research to progress

| Constructivism | Mustard yellow |
| Critical | life raft | orange |
Appendix D  Example of a ‘Methodological Web’ created for Activity
Appendix E  Images of Floatation Devices chosen by participants
Appendix F  Information and Letter of Informed Consent

**Research Project:** Collaborative Concept Mapping as a Means to Work Through Paradigm Dialogue with Emerging Qualitative Researchers

Date: April 15, 2014

Dear Colleague,

I am writing to you in the capacity of my being a graduate student at the Ontario Institute for Studies in Education (OISE/UT). After completing the course *Introduction to Qualitative Inquiry* (CTL 1018) with you, I furthered my interest in qualitative research methodologies, which has resulted in my Masters thesis. As part of the thesis, I am conducting a small research project related to collaborative learning using concept mapping activities to initiate paradigm dialogue amongst emerging educational researchers.

I am interested in looking at the extent to which concept mapping tools can be used by researchers in a collaborative paradigm mapping activity that is aimed at constructing knowledge, improving understanding and clarity regarding methodologies. Moreover, to what degree can paradigm dialogue and mapping help students navigate and situate themselves in a way that ultimately leads to better informed decisions about methodological choices? My goal is to interview peers who took the *Introduction to Qualitative Inquiry* (CTL 1018) course in the fall 2013 and I would like to invite you to participate. Please know that your participation is completely voluntary and that you can withdraw anytime. I would like to conduct an individual 45-60 minute telephone or face-to-face interview with you at your convenience, between now and June 15th and I would like to audio-record our interview simply as a memory aide. I would also like to have your permission to use any of your comments from the class concept mapping activity and discussion that took place on November 27, 2013 and was recorded on video (I would like to only use written text from video transcript and I can provide a copy of the transcript for you).

Please find attached a proposed list of interview questions. Your feedback and suggestions are greatly appreciated. Please feel free to not respond to particular questions. Following the interview I will analyze the interviews and write about my findings. Pseudonyms will be used for names and any identifying information to protect your confidentiality and privacy. After this study is completed, I will destroy any record from our interview including my written notes and the audio record.

Should you choose to participate, please read the following consent form, and send the completed and signed form below to me (You can do this in person or via email (alisonlouise.mann@mail.utoronto.ca). If you have any questions please contact me at: 705-872-2880

Sincerely,

Alison Mann
Consent Form

Title of Study: Collaborative Concept Mapping as a Means to Work Through Paradigm Dialogue with Emerging Qualitative Researchers

Researcher: Alison Mann (alisonlouise.mann@mail.utoronto.ca)
Name of participant: __________________________ (please print)
Telephone __________________ Email address __________________

I understand that this study in which I have agreed to participate is intended to assess my personal experiences as a participant in a collaborative concept mapping activity. My involvement will include a personal telephone or in person interview with the researcher, lasting approximately 45 minutes to an hour, and may be followed up with telephone or email requests for clarification.

The purpose of this study is to provide the researcher with a better understanding of the extent to which concept mapping activities, both face to face and online, can be a potential tool to assist emerging researchers clarify and deepen their understanding of the vast methodological choices, and ultimately to help situate oneself on the paradigm map. My participation is entirely voluntary and I am free to withdraw from the study at any time and for any reason without penalty. I understand that all personal data will be kept strictly confidential and that the content of any discussions or communications with the researcher will be coded so that my name is not associated with my responses. I understand that the researcher is the only individual who will have access to my responses.

I understand that the researcher will use the results of this study in her thesis work.

There are no foreseeable risks to participating in this research project,

☐ I have agreed to allow this interview to be audio taped
☐ I do not wish this interview to be audio taped
☐ I have agreed to the use my comments from video transcripts from the class activity to be used in the thesis work
☐ I do not agree to the use of my comments from video transcripts from the class activity to be used in the thesis work

I __________________________ (please print your first and last name) have read and understood all the information regarding to my participation in Alison Mann’s research project: Collaborative Concept Mapping as a Means to Work Through Paradigm Dialogue with Emerging Qualitative Researchers and choose to consent.

Participant signature __________________________ Date

Researcher signature __________________________ Date

If you have any further questions or concerns regarding your participation in this study, please contact Alison Mann at (705) 872-2880. A written transcript of your interview will be provided to you upon request.
Appendix G  Interview Guide and Questions

Retrospective Interview: Using Paradigm-Mapping activities in an Introduction to Qualitative Research Course to improve learning

Introductory Script
Thank you so much for taking the time out of your busy schedule to be interviewed, it means a lot to me. I anticipate this interview taking about 45 minutes in total. I’ll start with some general questions about your qualitative research background, your views on learning, some questions about the class activity, followed by some questions about the potential of an online tool to increase knowledge/understanding. Please know that you can stop the interview at any time if need be. You are also free to withdraw as a participant from this study at any stage and have your data removed. Do you have any questions before we begin? (I will provide some background information on concept mapping, a refresher on paradigm dialogue, as discussed in class, and a review of the class activity).

1. Methodological Knowledge/ Prior Experience Questions
I’d like to start with some questions about your prior experience and knowledge about qualitative research methodologies:

-What was your knowledge/experience level with various qualitative research methodologies prior to this introductory course?

- The methodology you chose to explore for this course was __________, is that correct? Confirmation

-What criteria helped you to arrive at your decision for this particular methodological approach? Would you describe this as an internal process, done in isolation, or one in which you consulted others?

-Making a decision about a methodological approach for research can range anywhere from straightforward to complex. Can you describe what your experience was like?

-Can you recall at what point did this decision occurred (before/ during/ after the course, still deciding)?

-Is there anything else you’d like to add?

2. Collaborative Learning
Now I would like to ask some questions related how you feel about collaborative learning in a classroom context.

What are your views about collaborative learning activities? What was one of your recent collaborative experiences like for you?
- How would you describe the way you learn best in a classroom environment?

- To what extent do you learn by creating? Do you learn better when you create along, with others?
- In what ways do you learn from your peers?

- To what extent do you think your peers/instructor in the research course played a role(s) in influencing/guiding your choice of methodology? In shaping your understanding?

3. Class activity

This is the last section. I'd like to focus on the concept mapping activity that took place in our last class.

- What level of curiosity did you have regarding how your chosen methodology connected with other methodologies? In what ways was making those connections important/useful to your overall understanding? What did you want to know about the relationships between methodologies?

- Do you feel you benefited from using the collaborative concept mapping activity in class? If so, in what ways? If you didn’t, why not?

- Can you recall an example of a methodological connection you might have made during this activity?

- Can you describe any new understanding(s) that might have come out of this activity for you?

What might be some of the limitations to this activity?

On a scale of 1-10, what is your level of comfort using technology?

Would you find an online concept-mapping tool for our class activity useful to your learning? Why/why not?

What do you perceive as potential benefits to an online paradigm-mapping tool? In your opinion, what are the limitations? What could be lost/gained?

Wrap-Up:

This concludes our interview. Do you have any questions for me? Your responses will be very helpful in better understanding how paradigm-mapping activities, both in F2F and using online tools may benefit student learning. If you have a few minutes next week, I’d love to conduct a ‘member check’ to share my interpretation of our conversation and make sure I have understood your responses. Would this work for you?
Appendix H  Preliminary Video Analysis
Preliminary Video Analysis of Concept Mapping Activity

Location: OISE classroom

Preliminary Review

Concept Mapping Activity

Date: November 27, 2013

Participants:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Pseudonym</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Mariko</td>
</tr>
<tr>
<td>B</td>
<td>Terry</td>
</tr>
<tr>
<td>C</td>
<td>Samara</td>
</tr>
<tr>
<td>D</td>
<td>Sam</td>
</tr>
<tr>
<td>E</td>
<td>Aisha</td>
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<tr>
<td>F</td>
<td>Don</td>
</tr>
<tr>
<td>G</td>
<td>Rowan</td>
</tr>
<tr>
<td>H</td>
<td>Mark</td>
</tr>
<tr>
<td>I</td>
<td>Alison (facilitator)</td>
</tr>
<tr>
<td>J</td>
<td>John</td>
</tr>
<tr>
<td>K</td>
<td>Course Instructor</td>
</tr>
</tbody>
</table>

Position (timecode) People Interaction Notes

<p>| 1     | 00:00:00-00:00:20 | B, A, D, C, E, H, F, K is offscreen, but hands are visible | A and B are on the ground on the left, sorting out their webs. Working side-by side but not interacting. -D watches A and B, walking counter-clockwise around their webs on the ground. Watches B and then decides to situate himself close-by (goes offscreen). -C and E are standing together in the center, of the room, untangling their webs and talking to each other. Looking at one another’s webs while they talk -J enters from the right, walks left towards A and B, glances at their webs, approaches participants standing on the right, looks briefly at their webs. -G is standing to the right, looking at his own web. Looks down at Niglas cards, looks back at his web. -F and H are situated at the back of the room, both looking at their webs, using table to sort out their webs. Minimal verbal interaction. K is offscreen, on the left. K’s hand is identifiable. K is on the ground working. -I enters from left of screen, walks to the right, goes to the back of the classroom, beside F and H. | All participants are actively engaged. This time is spent on sorting and untangling their own webs and looking over their words. -There is minimal discussion; any dialogue that occurs is only between 2 participants. |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Description</th>
<th>Notes</th>
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</thead>
</table>
| 2 00:00:21-00:00:40 | All participants except K |-A still untangling web, begins to spread web out. Working alone. -*B finishes untangling, now begins to spread out web.  
- C and E are still standing in the center. C helps E untangle her web. They are both talking quietly.  
I is standing at the back of the room, talking to F, H and E (reflection: they were asking me about how to do the web).  
-J walks over behind C and E, watches what they are doing. Looks as though J hears I explaining activity. J walks over to listen to discussion. | Two people are working on floor, two are talking together quietly, two are off screen, three participants are talking to facilitator about the activity. |
| 3 00:00:41-00:00:60 | All participants except K and S.   |-A is beginning to place her web cards in proximity to the Niglas cards.  
-B is placing their web cards, looks over at A to see her web cards two times.  
-C moves to the right as E moves to the center. C begins to look at Niglas cards on the right, standing alone  
-D not in frame (to the right)  
-E finishes saying something to C, then moves to the left, towards the center of the floor and puts her web down. E looks up at the camera briefly. Does not look at A and B to the left.  
-I speaks to F and H, offering a sheet that makes it easier to read their method info. H says he doesn’t need it. J and G are on the periphery of the discussion, standing by I to listen.  
- after I finishes, F and G begin to discuss | Rather than situating themselves with the other participants, some are interacting with the Niglas cards first.   
**Perhaps the first part of this activity can be done alone?**  
- It appears that E situates her web in a space where there is room, not based on where other participants have already situated themselves.  
**Should I have used a paradigm compass as well? To get the activity started?**  
**I did not need the string on the web!** |
| 4 00:01:01-00:01:20 | All participants except K and S.   |-A is working silently, continues to move web cards near 2 Niglas cards. D’s arm is seen reaching into the frame of the shot and moves his web card near A’s card.  
- B is working on their own web cards, reading and moving them around, perhaps near a Niglas card?  
- C continues to look at Niglas cards, also reads quotes placed around the room. Begins to walk left.  
- E lifts all her web cards off the ground and is trying to sort them out. I walks by and apologizes for the challenges with the web strings. | -4 participants appear to be using Niglas cards first. No participants are actively engaging with one another’s webs.  
- Overall, it is fairly quiet, only voices are H explaining, and F and G making short comments.  
I regret not having S and K in the frame.  
Wish I had checked on... |
-H is talking to F and G. He stands between them and is talking about something having to do with the activity. He points to something on the table, F and G walk over to look. J is looking at his web cards. While looking at them, walks over to H as he is explaining to F and G.

5 00:01:21-00:01:40  All participants except K and S.  -A is working at arranging her web. I sits down beside her and makes a comment (inaudible). I says at the end, “I actually feel connected to Hermeneutics”. B looks over as I sits down. Listening.  -E is spreading out her web cards.  -C scans Niglas cards on right once again, then crosses over the arc of cards.  -G, F, H are still standing and talking. H is looking at G’s card, pointing to it and talking.  -J is standing at back, still looking at web cards (had been given a methodology that was not his own, perhaps took time to process.

6 00:01:41-00:02:00  All participants except K and S.  -A is looking around at the ground, I makes a joke, she laughs, and keeps looking around.  -B looking around, when I makes a joke, looks in her direction. Then looks back down and places her Niglas card.  -C is now on hands and knees, placing her cards around Niglas cards, removes her scarf and continues to work.  -E untangles her cards, appears to be reading them again  -F is looking again at his cards, standing to the right of the frame. H is watching him do this, watching him go through his own cards, offers suggestion?  -G is looking around at the ground, where others have situated themselves. I makes a joke, G looks in her direction, then looks at what she and others around her are doing.  -J is on the periphery of G,F, H. Untangling and looking at his web, standing up.

7 00:02:01-00:02:20  All participants except K and S.  A, who was the first to sit down, is now sitting on her haunches, finally lifts up to stand, tucks in her shirt. When standing, she looks around the entire space.  -B is sitting cross legged, holding one of their web cards, looking around, then tentatively places card.  -C is to the right, picks up a quote and a Niglas card, crawls over to the left.  -E is stretching her web cards out, looks at though she is trying to get closer to I. Looks briefly over to her right at H, who is beginning to sit down.  -F is still standing, and is looking around at -seems as though most people need the time to review their own methodology, then consider the Niglas cards, and THEN look at one another. All the people on the ground seem to be working alone.  -No strings attached (section title)  -Helpers: H, I. Leaders: A.  -Speech spurs other people into action, out of their own thinking. Makes them aware of the presence of others.

Some of the participants G and F, seem to begin to participate after discussion with H. H seems to lead them through the activity.
other webs on the ground. As G and H begin to sit, he moves towards them.  
-H takes initiative, sits down behind I, and begins to place web. While doing so, it appears he is instructing G.  
-G follows H, quiet discussion between he and H. He then crouches down to the left of H.  
-J is still standing, looking mostly at his cards, then says “Am I all by myself over here?” K’s hand can be seen, stretching over on the left to connect with Niglas card.

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<thead>
<tr>
<th>Time</th>
<th>Participant</th>
<th>Activity</th>
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</table>
| 00:02:21-00:02:40 | All participants except K and S. | -A and F are the only participants standing. A is looking down at her contributions, looks across at other Niglas cards, then walks across to the other Niglas cards.  
-B is sitting cross-legged, holding a web card, and is obscured by A standing. B can be seen look far across over to I who is talking and moving cards.  
-C has web, Niglas card and quote in hand; moves herself on her knees over to the left, near K. Asks I if it’s okay to move cards around.  
-E is looking down at her web, then looks over to H, and then behind her at J, then back to her web.  
-F is still standing, looking carefully at others webs (G and H) then strains to look over at A and B webs.  
-G, although initially positioned near H, looks over at I and begins to move his web over to I’s.  
-H moves his own cards around, then looks over to E to see hers. Begins to move closer to her.  
-I moves web up a bit closer to K’s, as facilitator, answers a question.  
-J is standing at the far right, alone. Sits down cross-legged and begins to stretch out web cards. |
| 00:02:41-00:03:00 | | -A finds a quote on paper as she is walking along, takes it, and walks back to her web. She places it by her web.  
-B is sitting cross-legged, moving their web cards. Working on their own.  
-C is on her knees, then gets up and walks over to other webs. Brings hers with her.  
-E asks facilitator if she can move Niglas cards. Moves on close to her web. I asks where positivism (J) is, and she points and answers.  
-F is the only one standing, looking around. He crouches down near G and H.  
-H is looking at his placement, holding his cards. Is aware of others. Looks over when I |

Early hunch: it seems that participants need time to process their own criteria, then situate themselves using Niglas cards, perhaps a compass of paradigms? THEN they can begin to interact. But what about participants like F and G, who seem to prefer talking it out? Interesting how participants are moving Niglas cards around, I never thought about that. Several groupings up to this point: F,G,H, and sometimes J. Leadership: E, H, I. Perhaps A too, is modeling. One participant is responsive to another’s verbal requests, moves over.
<table>
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<tr>
<th>Time</th>
<th>Event Description</th>
<th>Notes</th>
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<tbody>
<tr>
<td>00:03:20-00:03:40</td>
<td>A appears to be finished with her web, is kneeling and looking at G’s web. Stands up, walks across the map to the right and picks up a Niglas card. B stands up, walks along the back of the room, behind other participants to observe. Stops at positivism (J) bites their nails. C, K and D are all off screen, but are likely working close to one another. E is crouching, looking at Niglas card and her web, bites nails for a moment. Looks up and laughs as A makes a joke. F watches G carefully for a few moments, then eventually looks back down and places his cards. G is looking down at his placement, then swings head around to look at A and B’s placements (they are no longer sitting there) I not speaking, just placing web cards.</td>
<td>We need an orientation to start this activity, a compass, or a paradigm venn diagram (build on knowledge). Several instances of humour appear to help relax participants, initiates more movement. E, C, A all seem confident to make some moves that were not part of the instructions (Moving Niglas cards).</td>
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<tr>
<td>00:03:41-00:04:00</td>
<td>A passes from left to right, and as she does so, she makes a comment about where J is placed (across to the right, alone). This spurs E to laugh and tease him about his placement. She looks back down at her cards. This ‘turn’ inspires I to walk over to have a look at his placement. J responds by saying “I’m just not sure where to connect to” while he is scratching his chin. He looks over at the entire map. I looks along with him. B is watching the interaction, and as they look around the map, so does B. H looks up and laughs after the teasing from E to J. His gaze lingers, and then he looks down and continues to work. F and G don’t seem to be responding to the joking, they are both looking down and are moving their webs.</td>
<td><strong>Turning point. Use of humour about the positioning of J. This involves at least 6 (visible) participants. Once one person states that they have a problem, others become involved and there is some interaction.</strong></td>
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<td>00:04:01-00:04:20</td>
<td>A is kneeling, places a Niglas card that she had gone across the room for. Once joke is made, it appears she was listening, and understood. There is a small smile on her face, but she continues to look down and does not make eye contact. When she is done placing card, she walks carefully across the map to the right. B does not respond to the joke with either a smile or eye contact. Bends down to pick up a Niglas card and put it near their web. E smiles as the joke is made, she appears to be trying to concentrate on her card. She then moves the card.</td>
<td>Another joke is made about the mapping activity and the fact that a positivist web is left out. Most of the room responds in laughter, eye contact and another funny response. The room gets quiet again after that.</td>
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</table>
- F does not look up or respond, appears to be concentrating on his web.
- G looks up when joke is made and makes eye contact with K (who made a response to joke) he continues to move web cards around.
- H looks up and makes eye contact with J and I when joke is made, full smile. Still smiling, he looks down at his web, begins to scratch head, then shoulder.
- After J makes joke, he backs away, puts hands in pocket while standing, backs away, tucks in shirt, then walks counter-clockwise around map to survey. Stops behind G, F and H.

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<th>13</th>
<th>00:04:21-00:04:40</th>
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<tr>
<td>I begins a ‘turn’ when she moves her whole web to reach closer to another web on the left. E responds by saying, “No, don’t move away!” This causes B, G, F, H, and A to stop and look up to see what is happening. G, H are sitting and watching, F, J and A are standing and watching. ** this is a key fragment: One participant asks the other not to move because she feels connected. The two having the discussion are both crouching on the ground, 4 standing participants are watching on, making a semi-circle. It appears livelier and more interactive that the beginning.</td>
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<th>15</th>
<th>00:04:41-00:05:00</th>
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<tbody>
<tr>
<td>K moves into the shot and is carrying a long string across the map, presumably to connect to something on other side. I, G and E are in the center of the map, I is looking at how to connect to other webs and is looking around moving her web. G is moving his web cards closer to others. E is kneeling, moving her web, scratching her head look back and forth between her web, and H’s web. H is kneeling on one leg, looks up at standing J to say something, then rises to stand. J has hands on hips, looking down, then responds to H. B is at the very back, standing close to their web, moves away at K comes closer. A is standing with arms crossed, looking at map and watching others. -There appears to be more interaction as a whole group at this point; several participants are standing and looking around.</td>
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<tr>
<th>16</th>
<th>00:05:01-00:05:20</th>
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<tbody>
<tr>
<td>J asks a question, appears to be directed at I, but A, B, G, H, F are all looking on, involved. I does not answer question, but asks for more clarification. <strong>Camaraderie Humour</strong> “I don’t need your pity connection” J “Do you still want laws and</td>
<td></td>
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</tbody>
</table>
causality?” “yeah, those are my buddies.” A and J.
Appendix I Activity Debrief Transcripts

Videotape Transcript of CLT 1018 Class Concept Mapping Activity

Presenter: So instead of going back to our seats, maybe we can grab chairs or sit on the floor, go for it. But maybe you can sit wherever you think you can read, and then we can deconstruct (pause until all students have found a seat). So, is there anyone who would like to volunteer just to talk to us, this is actually interesting for me because [the process] was a lot quieter than I thought, everyone was really mindful and thoughtful about what they were doing. Can anyone walk us through the thinking process as you were trying to situate yourself within the [map]?

S (holds post-structuralist web): I can start because I lost my cards already (laughter). But what I tried to is well, I started with the last one, the Data Collection (card), the source could be anywhere horizontally situated, for post-structural analysis, from the data source. Meaning Making (card) and Deconstruction (card); these two things are of importance to post-structuralism, so I put most of my cards in these two places, (points to map) especially, ‘truth is always deconstructed’, so it’s there, ‘multiple, related and constructed’, which is also ‘deconstructed’. And my Knowledge and Ontology (cards) and other things are here (points to map), and Meaning Making (card), but they could also go there(points again).

Presenter: So you snapped everything all off (cut off the strings) and just put them wherever they…[fit]?

S: That’s what I did.

Presenter: Is there any other methodology, where did, so I guess Hermeneutics and Ethnography (is where) you felt most connected?

S: Yes, they speak to each other. Hermeneutics could be a great tool for post-structural analysis and ethnography can be a good data source.

Presenter: Nods to S. Anyone else?

Al: I had Action Research, so I was drawn to these things first (points to Niglas cards) Problem Solving, Relations, and then I found Reflection all the way over there which such a key point, and I really wanted to move it, but there was so much situated around it, so I put a piece of string showing the connection all the way over there. And then I just started over here and M ended up coming near me with Critical Theory and then Constructivism came over there and then I just started to spread apart my cards based on how I felt there were connections.
Presenter: and that’s interesting because in the information you gave me (prior to activity), you guys connected yourselves to Critical theory, so it’s interesting that it played out here too. Anyone else?

M: I was Critical Theory and I saw a connection to Action Research as Al mentioned, with the, well in several ways, the way the Participants (card) and Researcher (card) are connected, and the advocacy element to both of them. Like there is, there could be a strong social justice element to action research and critical theory focuses a lot on advocacy. One of the things that came to mind as I listening to S and Al talk about the way that things are spread being spread out, I almost think that rather than looking at this as a 2-D construct the way that meaning is spread out and then converges again later, it makes me think of a sphere. Like in the sense that, there’s something the S mentioned about Truth (card) and Meaning Making (card) that was close to: *truth is many and there’s messiness in truth*. The way that they can come together but through different paths.

Presenter: Absolutely, anyone else?

J: (positivism) I felt like the weird uncle at the dinner.

Presenter: So, where did you find connections?

J: The only time, with the role of the researcher, under constructivism, was Role of the Reaercher (card): detatched, that kind of fit with the positivism, and I found an opposite connection with likewise, with constructivism, around anti-foundational, foundational. Other than that, I didn’t really connect elsewhere. I looked, and I really feel that it’s the odd one out.

Presenter: In a way, that’s not really fair [of me] I put that one in for measure, just to see what would happen with it.

J: Because of qualitative positivism? {Laughs}

S: So you’re talking about mixed methods, in a way, I think.

J: Oh!

S: Because qualitative positivism sounds like qualitative-quantitative,

J: Quantitative doesn’t involve positivism though.

S: Yeah, but an imbedded way doing it could be… I don’t know. And I think that’s where I felt more flexible within the post-structuralism paradigm. Although I missed the Critical Theory entirely, cause I didn’t see it! I was looking for it, where was critical theory! (laughter) Because it, you know, it ties into all of it, meaning interpretation, knowledge construction, deconstruction, critical theory, and the data can be vast sources of data. It could be anything, starting from interviews to any information archive, any document
Presenter: It’s interesting hearing you guys struggle with this because a lot of thought went into how to put this together. The strings were initially blue for water, but there is a deeper meaning for it, in that Everything is interconnected, and sometimes you have to reach over and make that connection. And sometimes its just in other areas, it's also, I also because I starting using mind mapping software, so I thought I'll just mind map something and bring it in, and then, I thought, that isn't constructivist! So this the kind of mind map(points), I want to replicate. I want to photograph this and try put it all together. I'll show you the tool that I used. You can go in and I can add all your names. You can go in together, and can move things around. I'm going to attempt to document and put it together for us to share. But I do want to show you what I thought it would look like. Actually there are some connections, its' very very interesting, the other thing I thought about, and I will show you in my final piece, I did a navigation tool in the center, and I used the big paradigms, from Karyns text (with the venn diagram) and I was going to put that in, but then I thought Maybe I'll have people situate themselves and see what happens. So if we were to take this another step further, it would be interesting to take transparent paper and put the overarching paradigms on top of the methodologies to where we can kind of shift and move, get and take a little bit.
Appendix J  General and Particular Descriptions from Interviews

Section ONE

<table>
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<tr>
<th>Interviewee: Aisha</th>
<th>General Descriptions</th>
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<tbody>
<tr>
<td>Prior knowledge/ experience with qualitative research methodology (QRM) Where does prior knowledge come from?</td>
<td>Exposure to QRM in undergrad through a methodologies course (qual. and quant. Was a mandatory course)</td>
</tr>
</tbody>
</table>
| Criteria/factors leading to QRM (action research) decision What criteria helped form their choice for approach | -Practical and useful for her teaching profession  
-Relatable to classroom experience  
-Learned that this was best suited to classroom  
-Action Research was about making a change |
| Decision making process | Mostly a straightforward decision process, not too complex (but had to narrow down the type of action research) |
| Internal/ External process | Instructor supported through recommendation  
Worked with two class members (also teachers) on presentation |

Section TWO

<table>
<thead>
<tr>
<th>Interview # 1</th>
<th>Particular Descriptions</th>
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| Preferred learning style/ strengths How do you learn best? | -Learns best through hands-on, interactive, discussion-based  
-Uses the example of class videos being positive experience; preferred this to reading articles, discussing different perspectives  
-Ability to tailor learning to specific needs (at graduate level) and can choose which way to take learning, leads to a vested interest |
| Thoughts and feelings about collaborative learning activities | -Has mixed feelings about collaborative learning activities  
-It is dependent on who is collaborating (and the goals and level of engagement of collaborating students)  
-Collaboration does have potential to be ‘great’ all in all  
-Method of assessment for collaborative activities is important, need to be clearly addressed, feels self-evaluation is an important factor  
-Described a recent collaborative experience that she ‘hated’, poor communication in group  
-‘Watching other people, you can learn from them. But you don’t know what they are thinking, you can only make assumptions.’  
-When collaborating, it is a challenge to edit the work of others |
| Learning through creating | -You are ‘actually engaged’ and doing something you want  
-You are sharing knowledge with others, always learning, looking at a variety of sources |
| Extent to which others have impacted your selection of approach | -Went with group members because all three were educators in classrooms, together selected a ‘relatable’ approach |

Section Three

<table>
<thead>
<tr>
<th>Interview Rowan</th>
<th>Particular Descriptions</th>
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| What level of curiosity did you have regarding your chosen methodology related to other methodologies? | -Had no idea about the relationships between methodologies previously  
-Previously viewed Action Research as an isolated piece of methodology  
-Feels it would be interesting to see how QM fit together  
-Wanted to look further than the class got a chance to |
| In what ways was making those connections important/ useful to your overall understanding? | -Important  
-Learned while watching others make connections (during activity) |
| How important/ helpful is it for you to understand field of QR? | -Difficult to recall |
| Do you feel you benefited from using the |  |
collaborative concept mapping activity in class?

- Doesn’t have a vested interest in QRM relationships to the fullest extent
- Good idea, allows people to situate themselves and their methods in tune with everyone else

Can you describe to me an example of a methodological connection you have made with another student during the activity?

- Perhaps she did at the time, but does not recall

What might be some of the limitations of this face-2-face activity have been?

- Logistics of the live activity: very few cards with criteria, and challenging to everyone to physically connect their ideas in the space

On a scale of 1-10, what is your level of comfort using technology?

8-9

What do you perceive as potential benefits/usefulness to an online paradigm-mapping tool? What is gained?

- The more this activity is done, the more that can be learned, growth
- Importance on seeing connections
- Can be modified as understanding changes with new knowledge

What are the limitations? What could be lost?

- Just using text, there is a loss in conversation to expand on thoughts
- Potential for loss of understanding, misinterpretation
- Potential for offending others if you move their ideas around
- If there is only one map where all are supposed to come to agreement, there must be dialogue

Section ONE

Interviewee #3 General Descriptions

Prior knowledge/ experience with qualitative research methodology (QRM) Where does prior knowledge come from?

- Took a QR course for Masters
- Used Auto-biographical/ Narrative approach for Masters Thesis

Criteria/factors leading to QRM decision What criteria helped form their choice for approach?

- Had a prior, positive experience with particular approach
- Most of his research is of that nature
- Meaning is about understanding people, their stories, lived experiences are meaningful, at the heart
- Made sense
- Had a level of comfort
- Influenced by John Holt (auto-biographical author)
- Influenced by family member (writer/ professor)
- Felt a personal connection to the approach

Decision making process

- Felt like a very natural decision
- Made sense and was a smooth transition

Internal/ External process

- Worked in a group with a peer who held similar views

Section TWO

Interview # 3 Particular Descriptions

Preferred learning style/ strengths How do you learn best?

- Listening to debates, engagement, sharing with others
- Listens to others, ideas begin to form, gets a clearer concept
- Loves storytelling as a learning/ teaching method
- A lot of learning happens outside of classroom; using technology
Thoughts and feelings about collaborative learning activities

- Collaborative work should not be forced, it should feel natural for participants
- Describes a recent collaborative activity positively with ‘good energy’ and mutually beneficial
- Many possibilities to collaborate through technology

Learning through creating

- Uses the example of an online mapping tool he used; sorted out ideas, connected themes into chapters,
- Also describes using flipboard to create an online repository for ideas, information etc

Section THREE

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<tr>
<th>Interview # 3</th>
<th>Particular Descriptions</th>
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<tbody>
<tr>
<td>What level of curiosity did you have regarding your chosen methodology connected with other methodologies?</td>
<td>Interested in how it was connected, not necessarily why they were connected</td>
</tr>
<tr>
<td>In what ways was making those connections important/ useful to your overall understanding? How important/ helpful is it for you to understand field of QR?</td>
<td></td>
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<tr>
<td>Do you feel you benefited from using the collaborative concept mapping activity in class? Or not?</td>
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</tbody>
</table>
| Can you describe to me an example of a methodological connection you have made with another student during the activity? Can you describe any new understanding(s) that might have come out of this activity for you? | Interesting to see where everyone stood, what they were doing in relation to what he was doing
- Interested in seeing the variety of research
- It helped to see how they all connected with each other, it helped to connect the pieces. Could visualize the proximity between methodologies, and the connections
- Visual is better than reading about connections |
| What might be some of the limitations to this activity? | |
| On a scale of 1-10, what is your level of comfort using technology? | high |
| What do you perceive as potential benefits to an online paradigm-mapping tool? What is gained? | Definitely, ability to refer back
- Post online for others
- Tool always available for discussion, further dissection
- A tool for building on knowledge |
| What are the limitations? What could be lost? | If people were forced to use it, not everyone has capability to use online tool, not everyone wants to share publicly |

Section ONE

<table>
<thead>
<tr>
<th>Interviewee: Don</th>
<th>General Descriptions</th>
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</table>
| Prior knowledge/ experience with qualitative research methodology (QRM) before 1018 Where does prior knowledge | Narrowly focused on a particular QRM from M.A. in History, confident in that particular area (Narrative Inquiry)
- Limited understanding of other QRM outside of History
- Although competent in his own area, felt unprepared for QR, felt |
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| **come from?** | lost in the beginning of course
- Recommends other graduate/ doctoral students take it early on |
| **Criteria/factors in making QRM decision**<br> What criteria helped form their choice for approach? | - History background<br>- Familiarity with approach<br>- On a personal level, stories helped with his own understanding/ learning, wanted students to feel that same engagement with stories<br>- Fits for both learning and teaching<br>- Felt a connection to this approach<br>-Natural progression |
| **Decision making process** | - Complex process to decide as he didn’t have a narrow research question at the time<br>- The experience in learning more deeply about the particular QRM helped ease the process |
| **Internal/ External process** | Both internal and external: suggestions from instructor, and joined forces with a similarly-minded colleague (autobiographical) |
| **Section TWO** | **Interview #2**<br>**Particular Descriptions**<br><br>**Preferred learning style/strengths**<br>How do you learn best? | - Collaborative learning should be a component<br>- Learns better with visuals being integrated.<br>- Enjoyed video experience: watch video, time for independent thought, then sharing and discussing in larger group<br>- Begin by thinking on own, bouncing ideas off of others<br>- Enjoys seminar approach: everyone reads content, but one person is responsible for leading discussion<br>- Dialogue<br>- Professor as a facilitator, stimulates ideas, poses new questions<br>- Student led |
|  | - Thrives in a collaborative learning environment, and working with a partner in both assignments and in class<br>- Stimulates ideas, bouncing ideas around<br>- Describes a recent and positive collaboration in a group of three in which they built on one another’s ideas. Both online and face-2-face collaboration, productive<br>- Has a process of how he likes to work when collaborating with others |
|  | - Learns quite a bit from creating |
|  | - Learned from listening to other’s discuss their research interests and approaches<br>- Instructor and co-instructors provided good ideas for his research |
| **Interview # 2**<br>**Particular Descriptions** | **What level of curiosity did you have regarding your chosen methodology connected with other methodologies?** |
|  | - Gaining an understanding of other methodologies, although might not be used, is important because they will surface again (ie comprehensive exams)<br>- Good to know how one’s own research fits into the broader field |

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<tr>
<th>Table Title</th>
<th>Description</th>
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</table>
For future studies, the interviewee feels that he must know/understand QRMs and have a 'working knowledge'.

What did you want to know about the relationships between methodologies?

- Feels that their level of awareness might have been slightly higher than that of others in 1018 course, as the interviewee had already done a thesis.
- Undergrad in anthro and ethnography introduced notion of observation.
- Gravitated towards LGBT studies in undergrad, but found it limiting.
- Exposure to feminism, but found it limiting as well.
- Queer Theory introduced in undergrad English course, felt connection.

Do you feel you benefited from using the collaborative concept mapping activity in class? Or not?

- Yes, because it was collaborative.
- Although collaborative dynamics were challenging, people had different strategies.
- Activity was a bit too short, not enough time to grasp all of the connections, not enough thinking time.

Can you describe to me an example of a methodological connection you have made with another student during the activity? Can you describe any new understanding(s) that might have come out of this activity for you?

- Expresed an interest in and gravitated towards methods that were most connected to his, rather than ones that did not connect so clearly (during activity).
- Thought about connections to Hermeneutics.

What might be some of the limitations to this activity?

- Crowding, messy.

On a scale of 1-10, what is your level of comfort using technology?

- 7.

What do you perceive as potential benefits to an online paradigm-mapping tool? What is gained?

- Ongoing learning, would not lose some of the ideas that are lost a week after a discussion has taken place.
- It could be used DURING class, return to it, build on it.
- Helpful as it is visual.

What are the limitations? What could be lost?

- Not everyone might be comfortable with the online format.
- People may prefer to do this on their own.

Section ONE:

**Interviewee: Terry**

**General Descriptions**

**Prior knowledge/ experience with qualitative research methodology (QRM)**

Where does prior knowledge come from?

- Had taken some QRM courses as part of undergrad, used approaches that were easiest to understand/ relatable at that point in time.
- Feels that their level of awareness might have been slightly higher than that of others in 1018 course, as the interviewee had already done a thesis.
- Undergrad in anthro and ethnography introduced notion of observation.
- Gravitated towards LGBT studies in undergrad, but found it limiting.
- Exposure to feminism, but found it limiting as well.
- Queer Theory introduced in undergrad English course, felt connection.

**Criteria/factors leading to QRM decision**

What criteria helped form their choice for approach?

- Much of their thinking/ wrestling with a QRM occurred before the course.
- Came into course with a particular approach in mind- QRM (Queer Theory) - Introduced to it in undergrad English course.

**Decision making process**

- Much of their thinking/ wrestling with a QRM occurred before the 1018 course.
- Felt a ‘crisis of faith’ for not fully immersing in feminist theory, but felt better when they began to identify with queer
theory in undergrad, and was supported with in their decision

| Internal/ External process | -Influenced by undergrad professor  
|                           |  
|                           | -Both an internal and external process  

### Section TWO:

<table>
<thead>
<tr>
<th>Interview # 5</th>
<th>Particular Descriptions</th>
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</thead>
</table>
| Preferred learning style/ strengths  
| How do you learn best? | -Requires a combination of styles; visuals  
|                           | is important for auditory to work  
|                           | -Overall a visual learner (but struggles  
|                           | with maps of all kinds)  
|                           | -Helps them to feel more ‘present’  
|                           | -Enjoys working alone first, and then  
|                           | sharing ideas  

| Thoughts and feelings about collaborative learning activities | -Feels they do not benefit from online  
|                                                                 | learning; no connection, no sense of  
|                                                                 | urgency and not enjoyable experience  
|                                                                 | -Not a very collaborative person, prefers to  
|                                                                 | muse alone, rather than with others.  
|                                                                 | -Not always comfortable in collaborative  
|                                                                 | situations (but can be improved when there  
|                                                                 | is a history with the other participant(s)  
|                                                                 | -‘Process of interaction usually freaks me  
|                                                                 | out’  
|                                                                 | -Describes a recent collaborative project as  
|                                                                 | ‘very positive’; it ‘clicked’ between  
|                                                                 | participants  

| Learning through creating | -Describes challenges understanding maps  
|                           | of any sort. Describes how a similar,  
|                           | recent activity grouping concepts was a  
|                           | challenge to understand  
|                           | -Overall however, the act of creation  
|                           | usually does help in learning process  

### Section THREE:

<table>
<thead>
<tr>
<th>Interview # 5</th>
<th>Particular Descriptions</th>
</tr>
</thead>
</table>
| What level of curiosity did you have regarding your  
| chosen methodology connected with other  
| methodologies? | -does not feel that a single methodology  
|               | can encompass any research topic  
|               | -Need more than one methodology to get  
|               | at a fuller story, a single methodology can  
|               | be one-sided  
|               | -more than one methodology makes for  
|               | better research  

| In what ways was making those connections important/  
| useful to your overall understanding?  
| How important/ helpful is it for you to understand field  
| of QR? |  

| Can you describe to me an example of a methodological  
| connection you have made with another student during  
| the activity?  
| Can you describe any new understanding(s) that might  
| have come out of this activity for you? | -recalls trying to make a connection with  
|                                           | the more introspective methodologies  

-Recalls trying to make a connection with the more introspective methodologies
What might be some of the limitations to this activity?
- If someone wasn’t a visual learner, may have trouble understanding maps, trouble with special awareness

On a scale of 1-10, what is your level of comfort using technology?
8

What do you perceive as potential benefits to an online paradigm-mapping tool? What is gained?
- Not helpful to them in particular, but could see how this would benefit others, linear thinker

What are the limitations? What could be lost?
- Not helpful to them in particular, but could see how this would benefit others, linear thinker

Section ONE

<table>
<thead>
<tr>
<th>Interviewee: Samara</th>
<th>General Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior knowledge/ experience with qualitative research methodology (QRM)</td>
<td>Felt as though she hadn’t really absorbed QR until 1018 course</td>
</tr>
<tr>
<td>Where does prior knowledge come from?</td>
<td>Knew some of the obvious differences between qual and quan.</td>
</tr>
<tr>
<td></td>
<td>Did QR for Masters thesis using ethnographic narrative (used it to listen to stories and identify trends)</td>
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<tr>
<td></td>
<td>During MA, exposure to narrative, hermeneutic, post-structural, ethnography- those approaches felt very natural</td>
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<tr>
<td></td>
<td>Does not have as clear and understanding of QRM that don’t come as naturally to her</td>
</tr>
</tbody>
</table>

| Criteria/factors leading to QRM (phenomenology) decision | Felt very connected to approach, the phenomenology of life |
| What criteria helped form their choice for approach? | Felt excited by it (analogy to the wedding dress and making a big decision) |
| | A love for human behavior (undergrad in psych, soc, anthro) |
| | Feels it (phenomenology) is ideal lens for approach to PhD topic, identify a phenomenon and deal with it |
| | The notion of stories and storytelling are attractive to her |

| Decision making process | Phenomenology came to her when she was ready for it (see transcript on page 26 for a quote to use) |

| Internal/ External process | Exposed to particular QRM (Phenomenology) in course |

Section TWO

<table>
<thead>
<tr>
<th>Interview # 4</th>
<th>Particular Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred learning style/ strengths</td>
<td>Likes working in groups</td>
</tr>
<tr>
<td>How do you learn best?</td>
<td>Enjoys the reflective qualities of the independent writing process and independent thought</td>
</tr>
<tr>
<td></td>
<td>-likes essays, journaling and using writing for ‘Deconstructing the day’</td>
</tr>
<tr>
<td></td>
<td>Describes herself as a visual learner, experiential, and kinesthetic</td>
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</tbody>
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<tr>
<th>Thoughts and feelings about collaborative</th>
<th>Has positive memories of working collaboratively as a</th>
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</table>
### learning activities

- Allows her to get to know colleagues better and form deeper relationships, is able to see and hear how they think about things, new perspectives

### Learning through creating

- Describes herself as a visual learner, experiential, and kinesthetic
- Learning by doing. Has to ‘do’ something to learn; cannot just ‘show’

### Section THREE

#### Interview # 4

<table>
<thead>
<tr>
<th>Particular Descriptions</th>
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</thead>
<tbody>
<tr>
<td><strong>What level of curiosity did you have regarding your chosen methodology connected with other methodologies?</strong></td>
</tr>
<tr>
<td>- Really wants to understand the field better as QR is her ‘place’ whether as a professor, or teacher.</td>
</tr>
<tr>
<td>- Feels she needs to know and understand QR and it’s differences</td>
</tr>
</tbody>
</table>

| **In what ways was making those connections important/useful to your overall understanding?** |
| **How important/helpful is it for you to understand field of QR?** |
| - She knows the areas she can identify with. |
| - Really wants to understand the field better as QR is her ‘place’ whether as a professor, or teacher. |
| - Feels she needs to know and understand QR and it’s differences |

| **What did you want to know about the relationships between methodologies?** |
| **Do you feel you benefited from using the collaborative concept mapping activity in class? Or not?** |
| - It’s evolutionary |
| - The ability to have a ‘check in’ to seeing what you’re learning over time, to ‘re-valuate’ |
| - Activity gave participants ownership |
| - It was a visual activity |
| - A learning tool |

| **Can you describe to me an example of a methodological connection you have made with another student during the activity?** |
| **Can you describe any new understanding(s) that might have come out of this activity for you?** |
| - Talking it out with participants was important, everyone saw different parts clearly, you need more than one dimension |

| **What might be some of the limitations to this activity?** |
| **On a scale of 1-10, what is your level of comfort using technology?** |
| - Frustrated by the language used ‘fancy lingo’ in Grad. Doctoral program, but understands this is something she must be comfortable with |
| - Could be physically limiting for some people |
| - Could be difficult for some to make a final statement |
| - Situational 5/10 |

| **What do you perceive as potential benefits to an online paradigm-mapping tool? What is gained?** |
| **What are the limitations? What could be lost?** |
| - It offers participants a vantage point, how we see the world, our lens |
| - Will show you that people see things from their own lenses too |
| - Those with limited tech skills might not get it |
Section ONE:

<table>
<thead>
<tr>
<th>Interviewee #6</th>
<th>General Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prior knowledge/ experience with qualitative research methodology (QRM)</strong></td>
<td>-Prior experience from undergraduate in anthro. and equity studies (offered different perspectives) -In upper years, had exposure to feminist, queer anthropology and in equity studies, was introduced to a completely different perspective -Felt conflicted because of undergrad exposure to QRM through different departments. Wasn’t sure of where to situate themselves</td>
</tr>
<tr>
<td><strong>Where does prior knowledge come from?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Criteria/ factors leading to QRM decision</strong></td>
<td>Ethics was important to decision making process- used the course to explore ethnography in more depth, see if it connected to her set of ethics -logistics and timing (ethical review) had to be considered (in selection of final approach) -Epistemology of selected method was a critical factor</td>
</tr>
<tr>
<td><strong>What criteria helped form their choice for approach?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Decision making process</strong></td>
<td>-Very complex process -Felt conflicted about how to situate herself between two different backgrounds (equity studies and anthropology) -Complicated because the approach studied in the course is not suited to the group of individuals she will be working with</td>
</tr>
<tr>
<td><strong>Internal/ External process</strong></td>
<td>-Both internal (reflective-grappling with ethics issues) and external (turned to others who were using similar approaches) -Received some support and advice from instructor and class assistant</td>
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Section TWO:

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<thead>
<tr>
<th>Interview # 6</th>
<th>Particular Descriptions</th>
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</thead>
<tbody>
<tr>
<td><strong>Preferred learning style/ strengths</strong></td>
<td>-Preference to working independently on course assignments, but working together in class is valuable -Tactile learner, learning by doing -Diagrams and charts are helpful -Does not think she is an auditory learner, loses interest from just listening alone</td>
</tr>
<tr>
<td><strong>How do you learn best?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Thoughts and feelings about collaborative learning</strong></td>
<td>-Finds collaborative activities can be both</td>
</tr>
</tbody>
</table>
| activities | valuable and challenging;  
-Can be challenging when it is evaluated  
-Can be valuable because learning can come from activity and from peers.  
-Information is being received from group, not just the instructor  
-Best when learning in collaboration is not evaluated  
-Logistics can be a challenge |
| Learning through creating | -Learns best with physical models, something to engage with, tactile  
-Describes a memorable experience creating a model for school and still recalling the concepts  
-Does a lot of mind-mapping on computer, rather than linear thought  
-Finds that concept mapping helps when concepts are not concrete |
| Extent to which others have impacted methodological approach | -Learns a lot from peers in terms of their experiences  
-Always asking questions about what others think and do. Everyone’s ideas are mediated by their experiences, enjoys learning others’ perspectives |
<table>
<thead>
<tr>
<th>Interview # 6</th>
<th>Particular Descriptions</th>
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</table>
| **What level of curiosity did you have regarding your chosen methodology connected with other methodologies?** | -Fairly interested, can increasingly see the commonalities between QRM  
-Interesting to see interconnections; some that seem similar diverge in epistemology  
-Learning from/ with other participants |
| **In what ways was making those connections important/ useful to your overall understanding?**  
**How important/ helpful is it for you to understand field of QR?** | -Important to be able to explain rationale for her chosen methodology  
-if she doesn’t know about other QRM, then it’s difficult to intelligently communicate choice, and is concerned that she could reach a point in research to learn that it could have been done another way  
-Important on a personal and self-preservation level |
| **What did you want to know about the relationships between methodologies?** | |
| **Do you feel you benefited from using the collaborative concept mapping activity in class? Or not?** | -Definitely benefitted by doing activity, and putting down her perspective  
hers perspective was then mediated and changed by others (positive)  
-Useful to her to observe how others engaged with her methodology |
| **Can you describe to me an example of a methodological connection you have made with another student during the activity? Can you describe any new understanding(s) that might have come out of this activity for you?** | -Was thinking about the connections between narrative and ethnography (ethnography is mediated through a perspective, and narrative is more individual self-reflection). -Thought this was an interesting connection to make |
| **What might be some of the limitations to this activity?** | -Physical space was a challenge, bodies getting in the way, participants may not have been able to get to where they wanted, may not have been able to see everything (because of being physically present)  
-Possibility of activity being physically limiting for some people |
| **What do you perceive as potential benefits to an online paradigm-mapping tool? What is gained?** | -Interesting to engage with others in this way, engage with past users  
-Possibility to build on the work of past users  
-Building a repository of knowledge of QR, useful to students and folks outside of it. |
| **What are the limitations? What could be lost?** | You lose the tactile experience, the physical experience  
-Could lose the sort of instantaneous communication with the person who is in the same space as you |
| **Suggestions:** | Could have everyone working on a computer at the same time, entire playing field is visible  
-Could do some online, take it back to the classroom (blended learning) |
Appendix K  Diagram of verbatim analysis of ‘stories’ from interviews