

Emerging researcher pedagogies: The “Dear Data” project

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Introduction

This special edition of the Morning Watch is the second collection of papers from the Faculty of Education doctoral students who are participating in ED 702 A/B Advanced Research Methodology in Education in 2017/18. ED 702 is a core course and is delivered over two semesters. This year we used Patricia Leavy’s (2017) book *Research Design* to anchor our discussions. Through this book we discussed quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches. In this course, and other courses, students become familiar with the ins and outs of research methodologies as they search for the methodology, or even methodologies, they will focus on in their own research projects. In addition to the theoretical knowledge of research methodologies, we, the course facilitators, wanted to include further experiences in our pedagogy. For us, *creativity* was something we felt was important and often under-represented in research courses. We also wanted to link creativity to *critical thinking* in students’ minds. *Practical research knowledge* was also a priority. All these are difficult to include in a seminar-based course. Creativity is a complex, multi-faceted concept and is often not linked to critical thinking, and practical research knowledge is challenging to impart in a theoretical course. How can students experience the day-to-day logistics of a research project including unexpected challenges without actually undertaking a research project?

We found an answer in the Dear Data Project (Lupi & Posavec, 2016). Dear Data was a task undertaken by two information designers over a year-long period. Each week, they collected personal data and represented these data visually on a post-card which they mailed to each other (see <http://www.dear-data.com/theproject/>). They collected data on topics such as decision-making, laughter, goodbyes, and many other every-day topics. Each set of data was then transcribed visually by hand into complex representations, accompanied by a key which provided the translation of the codes. They argued that the personal nature of the project not only aided them in understanding and visualizing the data, it also helped them to know themselves as researchers. Hence our instructions for the second assignment in ED 702:

Dear Data assignment: The task for this second assignment is to collect and present (personal) data. Visit <http://www.dear-data.com/theproject> and watch the video. For this assignment and unlike the Dear Data project, you will collect data for 3 weeks on a topic of your choice. The data can be quantitative and/or qualitative, but it must be personal data since you will not be applying for ethics clearance. Once you have collected the data, you will need to visually represent the data and translate the process for your reader. In the paper, include a rationale for the data collection, the data presented in visual form, an explanation of the data, an interpretation of the data, and a reflection of this data collection process including insights about yourself as a researcher. Reflect on your own epistemologies, processes, and choices.

Creativity

Doctoral education revolves around capacitating students with the skills to conduct and communicate research effectively. While research methods courses can provide students with knowledge and understanding of the logistics, the conceptual nature and the theoretical underpinnings of research, few courses focus on the insight, creativity, and inspiration needed to generate novel and original research. Doctoral students are expected to make original contributions to knowledge, and originality is seen as an essential component of doctoral research. Creativity is a vital component of originality and often thought to be key to doctoral student education because of the “potential of moving existing knowledge to new dimensions”; however, it is often not encouraged in pedagogy or in curricula (Brodin, 2017, p. 1). Baptista et al., (2015) argue that creativity can be seen as the process while originality is the product in doctoral education and if we want originality in the end, we need to include creative processes during candidature. Amid pressures to conform, and in contexts of scholarly traditions that restrict creativity and reward compliance, viewing doctoral students as capable creative agents becomes even more imperative (Brodin 2017). In ED 702, we wanted to incorporate a creative element to the course, so that while students learned about the rules, traditions, and conventions of research, they also engaged in the wonder and imagination that research processes can generate.

Creativity is, of course, an empty concept, except for the discourses that flow through it (Phipps, 2010). It is one of those terms where we all know what it means while at the same time we appear to speak different languages when we try to articulate that meaning. The concept is steeped in commonsense yet we “run the danger of nothing being ruled out and invocations of it will mean or explain nothing” (Diffey, 2004, p. 91). Many different competing and incompatible ideologies lay claim to the concept until it is steeped in multiple assumptions. In one conversation, creativity could mean neo-liberal aspirations of innovation for income generation, the ordinary process of producing an object, the genius of artistic brilliance, and myriad other meanings. Creativity, then, is an uncertain term, at times intangible and ethereal while at the same time seeming commonplace and solid (Tierney, 2012). We wanted to spark students’ imaginations, to fill their heads with research dreams, and to connect their hearts to the idea of doing research. While we taught logic, reasoning, and meticulousness, we also wanted students to learn imagination, to see, perhaps to feel, what reason could not grasp. Of course, it is impossible to teach students how to imagine (Wang & Huang, 2018), but we felt that creating the conditions for creative processes could lead to something. We believed, as Hyland (2002) has argued that “it is true that almost everything we write says something about us” (p.352), and that the process of learning to write at university involves the creation of a new identity. We also believed that “genuine learning requires a deep engagement and must embrace difficulties, intellectual challenge and appropriate levels of meta-cognitive awareness” (MacLaren, 2012, p.162). Risk-taking is fundamentally linked to creativity (Baptista et al., 2015). If we want students to have the courage to take risks, to make mistakes, and to pursue research projects that are innovative, critically relevant, and socially important, we need to provide safe training grounds for students to authentically experiment. We also believe, like Brodin and Frick (2011), that “critical and creative thinking are closely interrelated components in ...responsible scholarly thinking” (p. 135). Brodin and Frick (2011) suggest that doctoral education needs “critical creativity” because “creativity, imagination, intuition, empathy and reflective thinking” are part of critical thinking (p. 136). For these reasons, we saw creativity as a personal process of divergence and agency (Das, 2012). Since students have to transfer their learning into their own research areas, we wanted the assignments to carry impact – enough to survive the relocation, and we thought that engaging students on a personal level in a creative research project would do this.

Creative and critical thinking

Critical and creative thinking are interwoven in the purposeful thinking that is necessary for exemplary research. Critical thinking is associated with rigor and discipline, creative thinking results in originality and productivity, and both are part of the notion of “excellence of thought” (Paul & Elder, 2008). Excellent thinking has a creative dimension when we design our research to create outcomes. We originate ideas and plans with a purpose; our thinking is not random, it is purposefully driven. In addition, we have criteria to make judgements about whether we are achieving what we set out to do, and we apply these criteria in a judicious manner. In fact, we continuously monitor our research, making changes where necessary. Thus, critical and creative thinking work together to produce high quality research.

Paul and Elder (2008) view creativity (generative power) and criticality (judiciousness) as two parts of a whole that can only be separated artificially. For our Dear Data project, students had to think creatively and critically. They had to develop a purpose for their projects, think about how to portray their data visually, and then write about the process they went through in conceptualizing their ideas, planning, and then putting this into practice. The assignment gave students an opportunity to collect real data, without ethics approval as it was about themselves, and to analyze their data, produce results, and arrive at conclusions. Before the students could visually represent their data, they had to observe, notice, see, pay attention to behaviours and details that otherwise may not have been apparent to them. The students also learned through experience that by observing their behaviours and actions, they influenced their behaviours and actions. This was noted in the original Dear Data project, indicating that these students’ experiences affirmed the findings of Lupi and Posavec (2016). According to Paul and Elder, “outstanding creative work ultimately emerges from application involving both criticality and originality” (p. 13), an apt description of our project in ED 702.

A condition that is seen as necessary for the fostering of creative thought is an environment that stimulates the development of creativity. Creative thinkers from the past, such as Beethoven, Leonardo Da Vinci, Aristotle, Marie Curie, and many others not only had a certain amount of innate ability, but they also grew up in environments that provided opportunity, whether from family or school, for them to flourish in intellectual and creative discipline. Whether an artist like Michelangelo or a scientist like Newton, these great thinkers combined creative and critical thought in the pursuit of truth. As teachers of PhD students we need to demystify critical and creative thinking, and to cultivate these capacities in our students. The Dear Data project provided this opening and our students flourished in their critical and creative thinking.

Practical research knowledge

For the Dear Data assignment, students had to choose a topic, conceptualise a project, collect data, analyse, and visually represent the data. They also had to situate their data collection within a broader framework of research. Students could choose to collect data on different topics for each of the three weeks or they could collect one set of data over the whole period. Each had to make a multitude of decisions about the research process, some of which turned out to be problematic, and they had to begin again. They presented their ideas in class and each week when we met we asked for an update on their Dear Data project. They could ask for on-going support for the duration of the project. We also paired students in a “buddy” system so they could bounce ideas off each other outside of the classroom and find support when their research plans failed to meet their expectations. This relatively low-stakes project provided the conditions for students to experience small failures without major consequences.

They found collecting the data to be demanding as well as fascinating with many unpredictable pitfalls. The personal nature of the topics was self-motivating as these emerging researchers piqued their curiosity to discover if what they thought about themselves was true. Turning the data into a visual representation was the most difficult aspect for most. They were conscious of having to communicate the data rather than just present it. Overall, the Dear Data assignment provided an authentic research experience where students gained the opportunity to come to know themselves as researchers: what data they enjoyed working with, how much control over the data they needed, how much ambiguity they felt comfortable with, and so on.

Patrick Wells, a marine biologist/high school science teacher started out being skeptical about using art to represent data. He began his journey with collecting data through the use of social media, using realism as his genre of art, but did not feel satisfied with what he was accomplishing. Through collaboration and self-examination he discovered an inner capacity which he strengthened as part of this project.

Chinwe Ogolo used the Metrobus for her travels within St. John's, NL. She was feeling dissatisfaction with her experiences and used this project to collect data on her areas of concern and interest in relation to this form of public transportation. She used metaphorical representations for her data, such as an umbrella, which she felt depicted a sense of security and safety. She discusses the internal dilemma she faced between representing with art and writing a research paper.

Haley Toll collected her personal dream data through journal writing, reflecting on her "conscious and subconscious research process, ontologies, and epistemologies". She also kept a gratitude journal for one week. She symbolically represented her data in mandala art, using a quilt metaphor.

Julia Halfyard collected data on demonstrations of love, connecting this with her recent experience of thyroid cancer. She established patterns in her data and represented her findings in a musical composition, providing an opportunity for her passion for music to become an intrinsic piece of her research.

Abena Omenaa Boachie struggled with nail biting for many years and decided to collect data on a habit she wanted to understand and discontinue. She represented her data of "when" as a zentangle on a leaf, what nails she bit on hands, and her feelings when she was nail biting on a "circle of emotions". Through the process, she not only increased her research skills, but she also decreased her nail biting behavior.

Chris Cumby tracked his "good-byes" over a three week period, representing them with lines, dots, and colour. He also compared goodbyes between rural and urban life. Coming from a critical feminist-queer background, Chris' paper focuses on the process of doing research as a new doctoral student. Together these six papers present a diverse array of dear data projects, with underlying commonalities.

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