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Situating the Self Through Sketching: First Year Doctoral Students Finding Their Way

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Situating the Self Through Sketching: First Year Doctoral Students Finding Their Way

Abstract
As part of a two-semester advanced research methodology course, five PhD students completed three sketches—beginning, middle, and end of course—to represent how they were thinking and feeling about themselves as doctoral students as they progressed through their first year. They also wrote reflections to complement the sketches and shared their sketches in class. At the end of the course, the students co-led a study with their two instructors to examine their learnings and understandings gained from sketching. The students wrote individual narratives about their experiences and the instructors wrote narratives about how sketching was part of their pedagogical thinking. The analysis revealed seven student themes, including positive outcomes and challenges associated with sketching. One positive outcome was that students felt empowered as the sketches gave them the opportunity to reflect back on their progress, both cognitively and emotionally, over their first year of doctoral studies. Sketching itself was a challenge for some, but all felt that it was a powerful experience. Sketching provided the instructors with insights they might not have gotten through words alone, enhancing their sense of teaching and learning, and gave them valuable information to support the students.

Dans le cadre d'un cours avancé de méthodologie de recherche de deux semestres, cinq étudiants et étudiantes en doctorat ont réalisé trois croquis - au début, au milieu et à la fin du cours - pour représenter ce qu'ils pensaient et ressentaient en tant qu'étudiants et étudiantes en doctorat à mesure qu'ils avançaient dans leur première année. Ils ont également rédigé des réflexions pour compléter les croquis et ont partagé leurs croquis en classe. À la fin du cours, les étudiants et les étudiantes ont codirigé une étude avec leurs deux instructeurs afin d'examiner leurs apprentissages et les connaissances acquises grâce aux croquis. Les étudiants et les étudiantes ont rédigé des récits individuels sur leurs expériences et les instructeurs ont rédigé des récits sur la façon dont les croquis faisaient partie de leur réflexion pédagogique. L'analyse a révélé sept thèmes propres aux étudiants et aux étudiantes, notamment les résultats positifs et les défis associés à la réalisation de croquis. L'un des résultats positifs est que les étudiants et les étudiantes se sont sentis responsabilisés car les croquis leur ont donné l'occasion de réfléchir à leurs progrès, tant sur le plan cognitif qu'émotionnel, au cours de leur première année d'études doctorales. L'esquisse elle-même a été un défi pour certains, mais tous ont estimé qu'il s'agissait d'une expérience puissante. L'esquisse a permis aux enseignants d'acquérir des connaissances qu'ils n'auraient peut-être pas pu obtenir par la parole, ce qui a renforcé leur sens de l'enseignement et de l'apprentissage, et leur a fourni des informations précieuses pour aider les étudiants et les étudiantes.

Keywords
PhD students, visual representation, self-study, pedagogy, narrative writing; doctorants, représentation visuelle, autoformation, pédagogie, écriture narrative

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How do PhD students meet the challenges of their studies within the first year? It is estimated that over 50% of doctoral students in North America drop out (Bair & Haworth, 2005; Benjamin et al., 2017), and most during the first three years (Sowell et al., 2008). This is so even though many may hold prestigious fellowships with secured funding (Sverdlik et al., 2018). Doctoral students often undergo unexpected difficulties at the initial stages of their studies due to changes between their prior educational experiences and expectations and their new status (Callary et al., 2012). A considerable number of studies on doctoral education have predominantly focused on examining students' first-year doctoral experiences to understand better what accounts for their attrition or persistence to complete their program (Callary et al., 2012). We responded to this call to pay attention to students' experiences during the initial stages because such experiences can significantly affect whether students complete their PhD (Callary et al., 2012; Grover, 2007). Coming from a Scholarship of Teaching and Learning (SoTL) perspective, we explored sketching and storytelling as a mechanism to access the emotions and experiences of our first-year doctoral group. According to Poole and Simmons (2013), the intent of SoTL is to "improve student learning and enhance educational quality" (p. 118). As instructors, our purpose for this exploration was to give students the opportunity to think creatively and critically about their first year journeys and how their experiences and emotions contributed to their persistence to be(come) successful doctoral students. Learning directly from students who had successfully completed their first year was a way to increase our pedagogical knowledge to help future doctoral students persist in their education. As students, this study gave them a venue to articulate their feelings and thoughts in a non-traditional academic manner to add to the pedagogical literature of doctoral education.

We are five doctoral students and two instructors. The students attended an advanced research methods course in their first two semesters. Usually, the course is taught face-to-face, but because of the COVID-19 pandemic we had moved remotely and the course took place online. We met once a week from September until April. For all of us, it was a different space for teaching and learning, and the year was stressful and unsettled for many in the group. The two instructors had previously used sketching as a pedagogical tool in the face-to-face classes and were unsure how this would work in the online space. We all found the sketching an important component of the course and our purpose here is to document what we did and what we found.

Hubball and Clarke (2010) emphasized that a strength of research in the area of the scholarship of teaching and learning lies in the "complex understanding of the teaching and learning context" (p. 1). Our study welcomes the entanglement of the affective and cognitive domains in doctoral learning. Also, the stances of students and instructors are considered, allowing for diversity and complexity. We want to contribute to the literature on doctoral education pedagogy by exploring how sketching can support doctoral students to situate their lives and learning. Badenhorst et al. (2016) noted that thinking visually facilitates processing information in ways not "available within the confines of the linearity of text" (p. 338), provides a universal language, and can open up new perspectives on students' identities and research. Drawing on this view of thinking visually, the purpose of this paper is to explore how first-year PhD students in Education sketching as part of their learning helped them express and understand their first year experiences during a course that was delivered remotely online. An additional focus was the effect on the pedagogical thinking of the instructors. The research questions follow:

- How did developing the visuals help students understand their experiences?
- How did developing the visuals help the students express their thoughts and feelings about their experiences?
- What was the pedagogical learning for the instructors from this experience?

Literature Review

Importance of Doctoral Education Pedagogy

A review of the literature on doctoral education suggests that doctoral enrolment in many countries is increasingly growing (Burford, et al., 2021; Canadian Association for Graduate Studies, 2012; Sverdlik et al., 2018). For example, Shin et al. (2018) reported that the enrolment rate of doctoral students in countries like Canada, Australia, and the UK had seen a drastic increase within the last 15 years. While the UK and Portugal recorded an increase in doctoral enrolment by about 150% within this period, the figure was over 180% in Canada, Switzerland, Australia, and South Korea.

However, at the same time, reports indicate a high rate of attrition among doctoral students (Bair & Haworth, 2005; Benjamin et al., 2017). Attention has focused on different forms of doctorates, doctoral employability, and on doctoral problems, particularly attrition rates and doctoral writing (Cuthbert & Molla, 2015; Paré, 2019; Starke-Meyerring et al., 2014; Weatherall, 2019). The idea of doctoral pedagogy, as a focus beyond the supervisory relationship has also become increasingly popular (Cotterall, 2011; Paré, 2017). McAlpine (2013), for example, argued that doctoral pedagogy needs to move beyond individual supervision and that it needs to be a collective responsibility at the institutional level and include explicit attention to curriculum.

In our Education faculty in a mid-sized comprehensive university, we have undertaken the challenge of doctoral pedagogy by providing a two-semester Advanced Research Methods course that all first PhD students are required to take. Although the focus of the course is research methodology, the course provides an orientation to the doctoral program. The curriculum explicitly focuses on the whole student and addresses some of the issues students may face intellectually and emotionally. We/the instructors engage with issues such as why they have decided to complete a PhD, imposter syndrome, as well as research ontologies and epistemologies. The first semester requires an enormous adjustment as students become used to the writing, reading, and thinking requirements. Our pedagogical beliefs and practices as instructors play a role in helping students navigate their way through their evolving roles as doctoral students.

The Role of Feelings and Stress

Research on doctoral students has highlighted students' experiences of stress (Cornwall et al., 2019), challenges overcoming language barriers (Campbell, 2015; Holliday, 2017; Li, 2016; Russell-Pinson & Harris, 2019; Samanhudi, 2021; Son & Park, 2015; Ye & Edwards, 2017; Zhang, 2016), and managing personal and study relationships (Benjamin et al., 2017). Many doctoral students undergo unexpected difficulties at the initial stage of their studies, often due to the changes between their prior educational experiences and the expectations vis-à-vis their new status (Callary et al., 2012, p. 1). The emotions students feel as they begin their doctoral journeys can be overlooked by instructors, and sometimes the students themselves, as instructors and students focus on substantive issues. But as students move from experts in their previous contexts to novices

in this new context, they may experience many contradictory emotions. Cornwall et al. (2019) identified nine general areas as sources of stress for students during the early stage of the doctoral program. These include: time pressure, uncertainty about the doctoral process, sense of belonging in the scholarly community, social isolation, financial impact of study, work/life balance, anticipation of the future workload associated with a PhD, doubts about abilities or strengths, and engagement and effectiveness about supervision.

Developing pedagogy to help students manage the emotions they may encounter is as important to student success and retention as research methodology and the many other content-related issues. Scholars have suggested that faculties should pay attention to doctoral students' experiences during the initial stage of the programs because such experiences during this period can significantly affect whether students persist or terminate their PhD journey (e.g., Callary et al., 2012; Grover, 2007).

First-Year Doctoral Students' Experiences

Research suggests that beginning students often feel unfocused and experience a loss of confidence in their ability to contribute to research (Guo et al., 2018). For example, Hughes and Kleist (2005) noted that first year doctoral students experienced variations in their thoughts and emotions, including feelings of self-doubt and uncertainty. However, near the end of the first semester, these students had transitioned into their doctoral program. Matthews (2021), in her autoethnographical account of her first year experiences, notes a lack of control over her educational path, and feelings of insecurity and intimidation. Gonzalez et al. (2021) found students experienced a decline in physical health, mental health, and disciplinary identity during the first few years of doctoral study.

Thus, while faculties and departments continue to implement new initiatives and programs to attract students and advance doctoral education globally, they must factor in new doctoral students' experiences and well-being into such programs to provide students with the needed supports. For example, socialization and networking can be made a part of the doctoral programs and courses by ensuring that newly enrolled doctoral students have a wide range of opportunities to engage in group projects at the early stages of their program (Matthews, 2021). Achieving this can reduce doctoral students' emotional stress and feelings of isolation. Our pedagogical thinking as instructors about the role of sketching in teaching and learning led us to incorporate student sketching as an avenue for students to think emotionally, cognitively, and visually as they progressed through their first year as doctoral students.

Pedagogical Use of Sketching in Teaching and Learning

In much of the literature on the significance of visuals, there is emphasis on how drawing, in conjunction with writing, fosters deeper reflexive thinking than writing alone (Mitchell et al. 2019; Wu & Rau, 2019). Forbus and Ainsworth (2017) described value in the pedagogical use of sketching as it can lead to new insights through the visual construction of relationships that were initially only implicit. Wood and Pignatelli (2019) suggested that arts-based strategies in graduate supervision effectively forge links between theory and practice, while Feeney and Hogan (2019) asserted that visual learning strategies facilitate students' self-expression of perspectives and feelings that are normally latent, often uncomfortable, and usually hard to define. And, Fiorella and Kuhlmann (2020) concluded that drawing "fosters cognitive processing necessary for

meaningful learning" (p. 813) as it involves filtering relevant information, organizing it, and synthesizing it with one's prior knowledge.

Badenhorst and FitzPatrick (2018) suggested that using visuals in the context of research is useful for four reasons. First, visuals allow students access to complex information processes that are not often forthcoming from linear text-based interactions. Second, visuals help the articulation of non-verbal thoughts. Third, visuals, as a universal language, do not rely on knowledge of the dominant language to express oneself. Finally, visuals provide an element of play that allows the drawer to see with fresh eyes. This rationale resonated with our study because if drawing can give rise to deeper critical engagement with subject matter, and help students express themselves in creative ways that are difficult to achieve through text alone, then the pedagogical use of sketching at the doctoral level was worthy of study.

Method

We used a qualitative self-study design (Laboskey, 2004; Merriam & Tisdale, 2015; Samaras, 2011) to explore the connection between student sketches and doctoral student development. Much of the theory around self-study is centered in teacher development and teacher education (Laboskey, 2004; Samaras, 2011). We used the tenets of self-study to gain an understanding of doctoral student development in a faculty of education. Self-study values the insider emic perspective and acknowledges subjectivity as important. Much research about the experiences of doctoral students is conducted by faculty (Xu & Hjalmarson, 2022), but we chose to recognize and honor the voices of the students as both participants and researchers in this study.

Using Laboskey's (2004) criteria for self-study, we met the first condition of being both the studier and the studied. Our work was also rooted in the second criteria of improvement-aimed as we were exploring how sketching helped doctoral students in their development process. Third, our research was interactive as we shared our sketches and their meanings with each other, responding to questions and suggestions. We used multiple qualitative methods as our data collection included sketches and narratives, meeting the fourth criteria. Last, we met the final criteria of exemplar-based validation as we included detailed findings, triangulation of data and researchers, and contextual descriptions and explanations; all of which contribute to trustworthiness (Creswell & Miller, 2000; Saldana & Omasta, 2018).

Five of the authors were students in a first-year eight month research methods doctoral course held remotely online due to COVID-19. The other two authors were the course instructors who had experience using arts-based practices in their teaching as "expressive ways of knowing" (Yorks & Kasl, 2006) to encourage students to think critically and creatively, to make emotional connections with their learning, and to think differently than they might have with routine academic writing. Thus, students sketched their thoughts and feelings about where they were in their learning in the doctoral program at the beginning, middle, and end of the course. They shared and discussed their sketches in class at each of these times and complemented their sketches with reflective writing.

Students and instructors wrote narratives about this experience. The students wrote about their doctoral experiences and feelings, how the arts-based practice of sketching as a course requirement reflected their experiences and feelings, and how sketching helped them understand their experiences and feelings. The instructors wrote about their pedagogical beliefs and practices in using arts-based teaching and learning initiatives, and how they thought student learning, both

cognitively and emotionally, would be affected. The group met six times to discuss their visuals and narratives.

Ethics

We did not require institutional ethics as this was a self-study, but the concept of relational ethics was foundational to our work. According to Ellis (2007), relational ethics "recognizes and values mutual respect, dignity, and connectedness between researcher and researched" (p. 4), which aligns with self-study. In addition, the Aristotelian concept of virtue ethics grounded our work. Virtue ethics is focused on the character of the researcher and how the researcher's character influences the researcher's actions (Morris & Morris, 2016). The students had to dig deeply into who they were as doctoral students and represent themselves in honest, open ways, which also strengthens their credibility as researchers and the trustworthiness of the results (Hesse-Biber & Leavy, 2011; Saldana & Omasta, 2018).

Data Sources and Analysis

Data consist of 15 sketches, three per student; five student narratives (6034 words); and two faculty narratives (732 words). Self-study, according to Laboskey (2004), is exemplar-based. Thus, the sketches serve as metaphorical exemplars of the students' experiences, thoughts, and feelings.

Two of the students and one instructor took a leading role in the analysis, with contributions from all authors. We used two types of analysis as the students were emerging researchers and had some familiarity with Braun and Clarke's step by step (2006) analytic process, while the instructor, who had more experience with analysis, appreciated the complexities of analytic choices offered by Saldana (2021). Further, this strengthened the trustworthiness of our study as we had multiple analytic approaches that allowed for deeper probing of the data and opportunity for thicker description.

The students used thematic analysis techniques (Braun & Clarke, 2006) to develop codes and themes. The instructor used first cycle concept coding (Saldana, 2021) to develop ideas and categories. For example, the concept of metaphors is central to the first theme. This was followed by second cycle pattern coding (Saldana, 2021) to develop themes. As such, the data that referred to metaphorical thinking were organized into a category and the instructor looked for patterns in this category of metaphors. We then discussed our interpretations, not to achieve consensus, but to deepen understanding of similarities and differences, and to strengthen academic rigor.

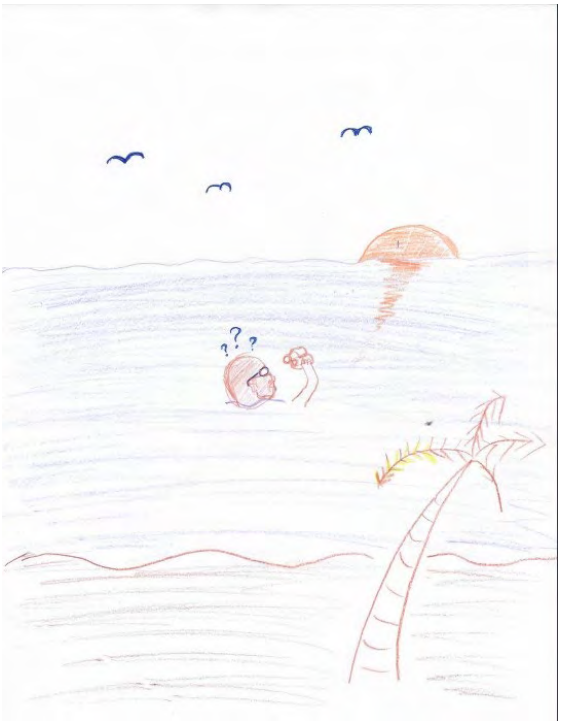
Findings

We organized the findings into seven themes, with clarification and examples. Author-participants chose to use pseudonyms.

1. **Sketching provided students with the opportunity to represent themselves metaphorically, particularly about their feelings.** Thinking metaphorically was key to the construction of meaning in most of the doctoral students' sketches as four out of the five students used metaphors in their sketches. In discussing his first sketch, Lotus explained that the depiction of himself in the sea, with only his head and hand holding

binoculars above the water, “is a metaphorical representation of my thoughts, experiences, and situation at that moment” (see Figure 1). In each of Gordon’s write-ups on his sketches he made explicit reference to his use of metaphor. For example, with his second sketch he wrote, “my choice of metaphor was inspired by one of my 6-year-old daughter’s puzzles . . . as I was thinking how to depict my doctoral journey . . . in a way different from the climbing metaphor in the first sketch”, indicating the metaphors chosen had particular meanings. Gordon added, “the importance of the support I received from my wife and daughter, and from the course instructors, one of whom is my academic supervisor, as well as my classmates is not foregrounded, but is present within the metaphor.” Jeff also made explicit mention of his use of metaphor in discussing his second sketch depicting a tree, “the fertile soil metaphorically represents support from my faculty, including support from my supervisor,” with the leaves representing the idea that he “had the required nutrients to synthesize the needed food to keep me growing and thriving in the program”. The metaphors commonly depicted the students’ feelings in relation to their sense of struggling as first year students and the support they gained from others. Sasha Diamondwala concluded with his realization that the “PhD is like climbing a mountain range - different stages will give us different kinds of thoughts and feelings.”

Figure 1
Lotus at Sea

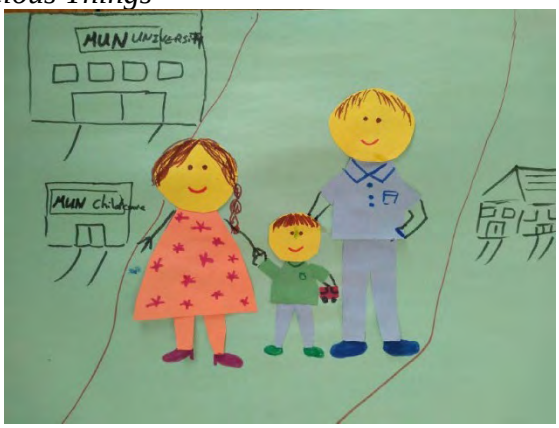


2. **Some students felt a sense of empowerment through creating the sketches, as individuals and novice researchers.** Sketching resulted in students deliberating responsibly about themselves as students and emerging researchers. In reflecting about being a student Sasha Diamondwala wrote about sketching, “the process was empowering and helped me reflect on my strengths while recognizing my personal challenges. It made me think that I have to find a strategy to fight back.” Others shared this feeling and

recognized that the sketches gave them opportunity to strategize for success. Jeff wrote, “looking at my images helped me ask relevant questions such as “What do I do to balance time for family and school?” Like Jeff, Sarah also felt empowered by reflecting on the sketches they made. She wrote, “Recording my memories of past days was an excellent way to remind me how precious the things I have now are” (see Figure 2).

The process of creating these sketches and reflecting on them helped the students to think about their positioning and research interests as novice researchers. Gordon ruminated “I think that being challenged to think visually in creating these sketches was helping me in processing my positioning and activities as a doctoral student as well as developing skills that could prove useful in my future research, especially as visual note taking forms part of my research interests”. This sentiment was echoed by the others as they were thinking about their sketching through the eyes of emerging researchers.

Figure 2
Sarah and her Precious Things



3. **Sketching at three different times helped students think about their thoughts and feelings throughout first year.** Being challenged to think visually gave students perspectives they may have not experienced with written text only. Lotus wrote, “reproducing my feelings through images made me more aware of my concerns and my situation. For instance, I realized that indeed, I am determined to pursue my academic goals but need to resolve 'unseen' and sometimes undisclosed challenges that held me back.” All students shared that sketching helped them to better recognize their thoughts and feelings.

Students also recognized that representing their thoughts and feelings over time provided an opportunity for them to compare their feelings as they progressed through their first year. Sarah wrote:

> [W]hen I started drawing the third drawing, I reviewed my previous drawings. They brought me a reminder of those days. I remembered how nervous I was at the beginning of my program and how my nervousness caused me to think about leaving the program. At the end of the second semester, I felt more confident in my journey, and I was pleased about it.

The students thought that sketching throughout the semester allowed them to come to some understandings about how they had changed or were changing, over time. Lotus described it this way, “since I started with metaphors of the sea, swimming towards a far-off goal, and resolving challenges at sea, I wanted to continue the narrative. I felt anyone following my images would find it easier to make sense of my situation”. And Sasha Diamondwala began to see beginnings and endings as he progressed (see Figure 3).

Figure 3

Sasha Diamondwala’s Sketch of a Beginning

4. **The sketches often reflected the support that students acknowledged they needed.** The students highlighted several forms of meaningful support that enhanced and improved their educational experiences and outcomes in their beginning semesters. Most identified support from the academic community (e.g., professors, classmates, committee members, and supervisors) in navigating educational challenges and offering advice, encouragement, and feedback. In Sasha Diamondwala and Lotus' second sketches, they represented support with a ladder and company in a boat, respectively. Jeff metaphorically represented his support by the fertile soil where a tree was growing and thriving. Sarah represented support from the academic community with a building labeled 'University' in the background of a sketch. Sarah described the supporting academic community as “caring people,” who helped her get a clearer idea of the program.

   Some students also highlighted the support from family members (parents, siblings, partners, and children) that facilitated them settling into the program. Gordon represented support metaphorically as the “tools, food, water, and anything else necessary” for climbing a “steep and jagged slope” of the doctoral program (see Figure 4). The benefits from the support systems formed an integral aspect of sustenance, as portrayed in the student's sketches and narratives. To this point, Sasha Diamondwala mentioned:
   “The drawing process made me identify my champions. We all need support; doctoral students certainly do – the drawing process made me realize I am not all alone in this journey.”

Figure 4
Gordon's Support

5. **Sketching sometimes resulted in students questioning themselves, particularly about balancing family life with doctoral studies.** Sketching gave students the opportunity to examine their emotions and the relationship between their feelings and possible actions. Often, this started with a vulnerability and ended with hope. Sasha Diamondwala acknowledged, "it made me question if I have what it takes and I realized -I do have what is needed to be a successful doctoral student – overcome obstacles and prepare for the next challenge." Sarah admitted that when she started her third sketch, "I reviewed my previous drawings. They brought me a reminder of those days. I remembered how nervous I was at the beginning of my program and how my nervousness caused me to think about leaving the program" (see Figure 5). However, Sarah ended her first year feeling that she was better able to manage her time and encouraged to continue.

   Several students had young children and family commitments. Lotus metaphorically represented his doubts:

   > I had so many doubts, unanswered questions, and unresolved concerns at that moment. I deliberately did not provide a complete picture of the rest of my body because that was what I felt. Actually, some weights were pulling me down under the water, and I was struggling to stay up while paddling frantically.

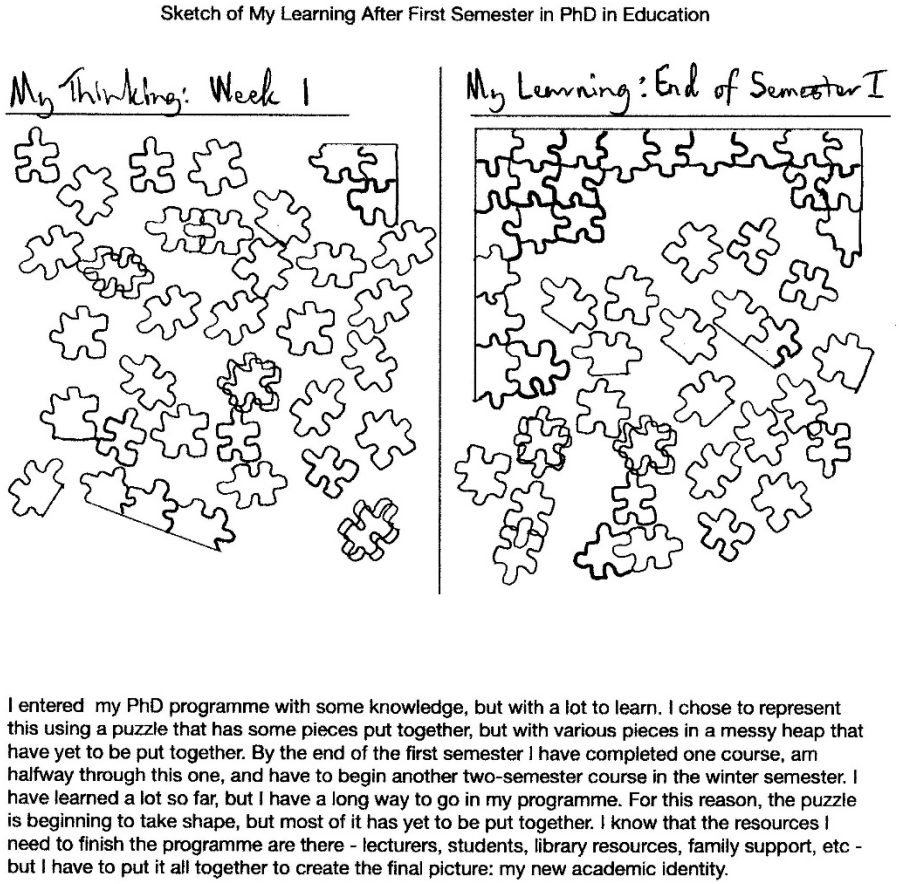
   Jeff explicitly described one of his sketches, "the drawing highlights a doctoral student looking for answers to how he can balance family life and schoolwork, how to give out his best academically without compromising on his family roles and responsibilities." And Lotus summed it up nicely, "I did realize that reproducing my feelings through images made me more aware of my concerns and my situation."

Figure 5
Sarah and Her Uncertainties

6. **Some students struggled initially with the idea of sketching, feeling somewhat apprehensive about an audience, but this changed as they began to share their sketches**. Sketching for others can induce feelings of trepidation as some may feel self-conscious and not confident about sharing their sketches with an audience. Gordon wrote, "In each of the drawings I remember I was concerned about whether I was producing something that was aesthetically pleasing." Lotus worried about whether others would interpret his visual with the same meaning he intended, "I was considering my audience, their experiences, knowledge base, and how these would influence their interpretation of my image." Jeff had a similar doubt, writing "an outsider seeing this drawing for the first time may not understand my entire doctoral experiences or feelings."

   However, once students began sharing their sketches with each other and chatting about them, the students' self-confidence began to improve. Lotus expressed it this way, "I am impressed that everyone interprets my images in a unique way but still gets the perception of my conveyed message." And Gordon, who had initially worried about the reactions of others, wrote that "when it came to viewing my classmates' sketches, I did not judge theirs for aesthetics." So, as their experiences sketching, sharing their sketches, and responding to each other's sketches grew, so too did their comfort level and self-confidence with sketching grow (see Figure 6).

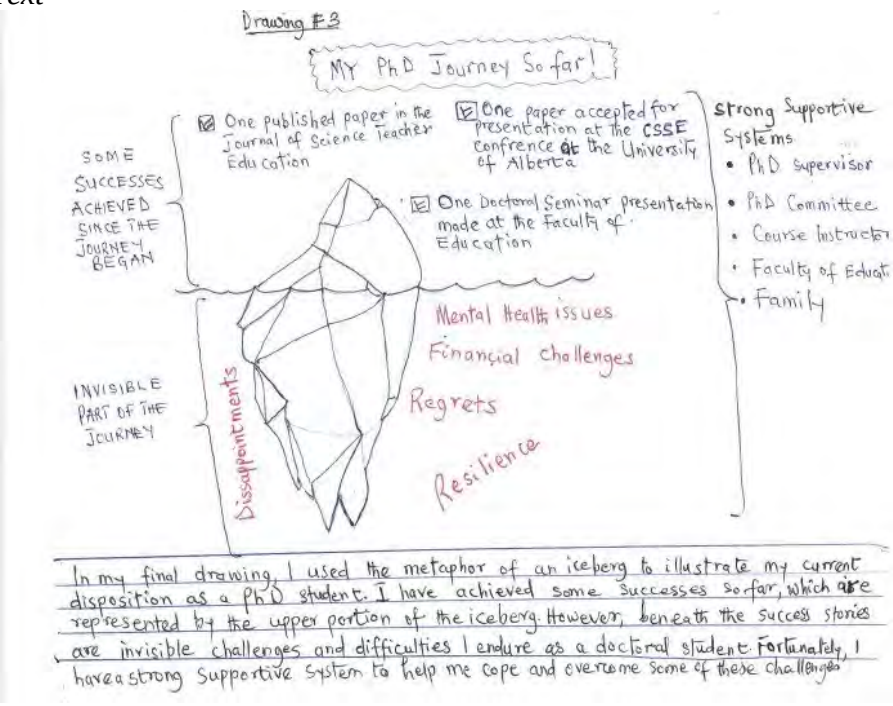
Figure 6
Gordon's Growth



7. **Some students felt the need to embed written text within their sketches.** While sketching was meant to represent these first-year doctoral students' experiences and feelings, some students were concerned about how their instructors would interpret the sketches. For example, Jeff noted, "While those images made sense to me, I was concerned about the meanings they may portray to my instructors … [A]n outsider seeing this drawing for the first time may not understand my entire doctoral experiences or feelings."

   To address this concern, Jeff felt the need to include "some form of annotations to each of [his] images" (see Figure 7). A similar concern was shared by Gordon. He remarked, "I did not want the professors' helicopter to be misinterpreted as a rescue helicopter." Therefore, "to make the meaning behind the drawing at least a bit clearer," Gordon "included brief explanatory text" to his sketches. Furthermore, Lotus decided to "put a few keywords" on his sketches, including "commitment, determination, support, direction, and focus," representing concepts that resonated with his doctoral journey and experiences. Taken together, although students understood their own sketches, they felt that adding written text to the sketches would illuminate the thoughts and decision-making process and provide a meaningful explanation of their sketches to their instructors.

Figure 7
Jeff and Written Text



8. **For both instructors, sketching is a valued, integral part of teaching and learning.** Both instructors pinpointed the place of visuals in their teaching. Bronte wrote, "drawing, sketching, representing visually in many forms is as natural to me in my teaching as using words for instruction." Milo affirmed this by emphasizing that "drawing gives us a non-linear holistic view that writing just can't provide." They agreed that having students sketch gives students the opportunity to think creatively while at the same time thinking analytically by making connections among ideas and sometimes between the cognitive and affective domains. Bronte has come to the realization that as adult learners, these opportunities do not often arise, and we sometimes approach them with reluctance, but more often than not, we end up with an appreciation for thinking visually we thought we had left behind in earlier years.

   Both acknowledged that the students were sometimes reluctant at first to draw, as they may have felt vulnerable, unsure, embarrassed, and exposed. But, with encouragement and the opportunity to talk about their sketches with classmates, they grew in self-confidence. Milo emphasized, "it's important that students share their drawings and articulate what it all means. It's sometimes only in the sharing that some aspects of the drawing makes sense."

   The instructors had their initial beliefs about the value of visual representing affirmed through this experience. Milo wrote, "we've all been surprised at what has emerged", and both concluded they would continue to include sketching in future courses with doctoral students

Discussion and Conclusions

This study highlights how the inclusion of sketching one's perspectives and feelings was beneficial for these doctoral students. The exercise challenges students to express themselves in response to the implicit questions "who am I?", "where am I?", and "how am I" through avenues that allow students to embrace being vulnerable and honest in ways that might not work as effectively if students were asked to provide only written responses. Such an exercise can also open up meaning making and give audiences (peers and instructors) insight into what individual students are experiencing and feeling, and potentially point to where support is needed.

These results support the literature that visually representing, as in sketching, can provide opportunity for students to reveal thoughts and feelings that may have been latent and not at the forefront of students' thoughts, but cause stress and affect their doctoral studies (e.g., Badenhorst, 2016; Feeney & Hogan, 2017; Forbus & Ainsworth, 2017). However, by sketching at regular intervals during their first year of doctoral studies, these sketches allowed for progression of feelings, thoughts, and actions, as expressed by Sasha Diamondwala, "the process was empowering and helped me to reflect on my strength while recognizing my personal challenges."

Similarly, the instructors who were part of this study benefited from having the opportunity to learn from the sketches as they allowed the instructors to think about the students as people, apart from the students' work they habitually evaluated. Reading and seeing, for example, student anxiety or students feeling overwhelmed with school and family responsibilities provided the instructors the opportunity to examine whether their expectations were reasonable and to adjust accordingly.

These were valuable lessons gained for teaching and learning, adding to the scholarship of teaching and learning for pedagogy at the doctoral level. We have continued to provide opportunities for sketching and other visual representations when teaching research methodology to first year doctoral students. As instructors, we have learned how students who did not previously consider themselves strong at sketching and visually representing have come to value these opportunities to think a little differently and represent themselves creatively. The doctoral journey is about identity work (Aitchison & Mowbray, 2013), and is an emotion-filled endeavor as doctoral writers endeavor to create an image of themselves as scholars who belong (Sverdlik et al., 2018).

Important learnings also came from conducting the self-study. Xu and Hjalmarson (2022) suggested that self-study may be helpful for doctoral students, and especially doctoral students in education, to examine their growth as they progress throughout their programs. Jeff noted that reading the scholarly literature about other doctoral students' experiences as part of the literature review helped to ease the challenges he faced as a student, and that "the discourse among my colleagues and course instructors was particularly beneficial." Gordon learned about analyzing visuals, which he anticipates will help him in his future research. Our findings reinforced those of Xu and Hjalmarson (2022), and highlighted how sketches, as well as words, can contribute to doctoral student growth, contributing to the scholarship of teaching and learning at the doctoral level.

References

Aitchison, C., & Mowbray, S. (2013). Doctoral women: Managing emotions, managing doctoral studies. *Teaching in Higher Education*, *18*(8), 859–870. https://doi.org/10.1080/13562517.2013.827642

Badenhorst, C. M., Moloney, C., Rosales, J., & Dyer, J. (2016). Thinking through play: "Visual" approaches to post/graduate research writing. In C.M. Badenhorst & C. Guerin (Eds.), *Research literacies and writing pedagogies for masters and doctoral writers* (pp. 335-355). Studies in Writing Series, Brill Publishing. https://doi.org/10.1163/9789004304338_019

Badenhorst, C., & FitzPatrick, B. (2018). Emerging research pedagogies: The "Dear Data project. *The Morning Watch*: *Educational and Social Analysis*, *45*(3-4), 1–5.

Bair, C. R., & Haworth, J. G. (2005). Doctoral student attrition and persistence: A meta-synthesis of research. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (pp. 481–534). Springer.

Benjamin, S., Williams, J., & Maher, M. A. (2017). Focusing the lens to share the story: Using photographs and interviews to explore doctoral students' sense of well-being. *International Journal of Doctoral Studies*, *12*(1), 197–217. https://doi.org/10.28945/3862

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Burford, J., Amell, B., & Badenhorst, C. (2021). Introduction: The case for re-imagining doctoral writing. In C. Badenhorst, B. Amell, & J. Burford, (Eds.), *Re-imagining doctoral writing* (pp. 3–28). WAC Clearinghouse/University of Colorado Press. https://doi.org/10.37514/INT-B.2021.1343.1.3

Callary, B., Werthner, P., & Trudel, P. (2012). The lived experience of a doctoral student: The process of learning and becoming. *Qualitative Report*, *17*(43), 1–20.

Campbell, T. S. (2015). A phenomenological study on International doctoral students' acculturation experiences at a U.S. university. *Journal of International Students*, *5*(3), 285-299. https://doi.org/10.32674/jis.v5i3.422

Cornwall, J., Mayland, E. C., van der Meer, J., Spronken-Smith, R. A., Tustin, C., & Blyth, P. (2019). Stressors in early-stage doctoral students. *Studies in Continuing Education*, *41*(3), 363–380. https://doi.org/10.1080/0158037X.2018.1534821

Cotterall, S. (2011). Doctoral students writing: Where's the pedagogy? *Teaching in Higher Education*, *16*(4), 413–425. https://doi.org/10.1080/13562517.2011.560381

Creswell, J. W., & Miller, D. L. (2000). Questioning validity in qualitative inquiry. *Theory into Practice*, *39*(3), 124–130. https://doi.org/10.1207/s15430421tip3903_2

Cuthbert, D., & Molla, T. (2015). The politicization of the PhD and the employability of doctoral graduates: An Australian case study in a global context. In D. E. Neubauer & K. Ghazali (Eds.), *Technology and workplace skills for the twenty-first century* (pp. 95–111). Palgrave Macmillan. https://doi.org/10.1057/9781137491923_8

Ellis, C. (2007). Telling secrets, revealing lives: Relational ethics in research with intimate others. *Qualitative Inquiry*, *13*(1), 3–29. https://doi.org/10.1177/1077800406294947

Feeney, S., & Hogan, J. (2019). Using drawings to understand perceptions of civic engagement across disciplines: "Seeing is understanding." *Politics*, *39*(2), 233–251. https://doi-org.qe2a-proxy.mun.ca/10.1177/0263395717740033

Fiorella, L., & Kuhlmann, S. (2020). Creating drawings enhances learning by teaching. *Journal of Educational Psychology*, *112*(4), 811–822. https://doi.org/10.1037/edu0000392

Forbus, K. D., & Ainsworth, S. (2017). Editors' introduction: Sketching and cognition. *Topics in Cognitive Science*, *9*(4), 864–865. https://doi.org/10.1111/tops.12299

Gonzalez, J. A., Kim, H., & Flaster, A. (2021). Transition points: Well-being and disciplinary identity in the first years of doctoral studies. *Studies in Graduate and Postdoctoral Education*, *12*(1), 26–41. https://doi.org/10.1108/SGPE-07-2020-0045

Grover, V. (2007). Successfully navigating the stages of doctoral study. *International Journal of Doctoral Studies*, *2*(1), 9–21. https://doi.org/10.28945/54

Guo, F., Ni, K., & Shi, J. (2018). Preparation for the scholar's role: First-year doctoral students in university. *Asia Pacific Education Review*, *19*(2), 169–185. https://doi.org/10.1007/s12564-018-9529-6

Hesse-Biber, S. N., & Leavy, P. (2022). *The practice of qualitative research* (2nd ed.). Sage.

Holliday, A. (2017). PhD students, interculturality, reflexivity, community and internationalisation. *Journal of Multilingual and Multicultural Development*, *38*(3), 206–218. https://doi.org/10.1080/01434632.2015.1134554

Hubball, H., & Clarke, A. (2010). Diverse methodological approaches and considerations for SoTL in higher education. *The Canadian Journal for the Scholarship of Teaching and Learning*, *1*(1), 1–11. https://doi.org/10.5206/cjsotl-rcacea.2010.1.2

Hughes, F. R. & Kleist, D. M. (2005). First-semester experiences of counselor education doctoral students. *Counsellor Education and Supervision*, *45*(2), 97-108. https://doi.org/10.1002/j.1556-6978.2005.tb00133.x

Laboskey, V. K. (2004). The methodology of self-study and its theoretical underpinnings. In J. J. Loughran, M. L. Hamilton, V. K. Laboskey, & T. Russell (Eds.), *International handbook of self-study and teacher education practices* (pp. 817–869). Springer. https://doi.org/10.1007/978-1-4020-6545-3_21

Li, M. (2016). Developing skills and disposition for lifelong learning: Acculturative issues surrounding supervising international doctoral students in New Zealand universities. *Journal of International Students*, *6*(3), 740–761. https://doi.org/10.32674/jis.v6i3.354

Matthews, A. (2021). Adapting to the transitional stage of the doctoral environment: An autoethnography of socialization. *International Journal of Doctoral Studies*, *16*, 71–88. https://doi.org/10.28945/4685

McAlpine, L. (2013). Doctoral supervision: Not an individual but a collective institutional responsibility. *Infancia y Aprendizaje*, *36*(3), 259–280. https://doi.org/10.1174/021037013807533061

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* Jossey-Bass.

Mitchell, C., Linds, W., Denov, M., D'Amico, M., & Cleary, B. (2019). Beginning at the beginning in social work education: A case for incorporating arts-based approaches to working with war-affected children and their families. *Journal of Family Social Work*, *22*(1), 63–82. https://doi.org/10.1080/10522158.2019.1546949

Morris, M. C., & Morris, J. Z. (2016). The importance of virtue ethics in the IRB. *Research Ethics*, *12*(4), 201–216. https://doi.org/10.1177/1747016116656023

Paré, A. (2017). Re-thinking the dissertation and doctoral supervision. *Journal for the Study of Education and Development*, *40*(3), 407–428. https://doi.org/10.1080/02103702.2017.1341102

Paré, A. (2019). Re-writing the doctorate: New contexts, identities, and genres. *Journal of Second Language Writing*, *43*, 80–84. https://doi.org/10.1016/j.jslw.2018.08.004

Poole, G., & Simmons, N. (2013). The contributions of the scholarship of teaching and learning to quality enhancement in Canada. In G. Gordon, & R. Land (Eds.), *Quality enhancement in higher education: International perspectives* (pp. 118–128). Routledge.

Russell-Pinson, L., & Harris, M. L. (2019). Anguish and anxiety, stress and strain: Attending to writers' stress in the dissertation process. *Journal of Second Language Writing, 43*, 63–71.

Saldana, J. (2018). *The coding manual for qualitative researchers*. Sage.

Saldana, J., & Omasta, M. (2018). *Qualitative research: Analyzing life*. Sage.

Samanhudi, U. (2021). Reflexive account of an Indonesian international student's challenges and opportunities in a UK university's doctoral education program. *Journal of international Students*, *11*(1), 144–155. https://doi.org/10.32674/jis.v11i1.1096

Samaras, A. P. (2011). *Self-study teacher research: Improving your practice through collaborative inquiry*. Sage. https://doi.org/10.4135/9781452230481

Shin, J. C., Kehm, B. M., & Jones, G. A. (2018). The increasing importance, growth, and evolution of doctoral education. In *Doctoral Education for the Knowledge Society* (pp. 1–10). Springer International Publishing. https://doi.org/10.1007/978-3-319-89713-4_1

Son, J., & Park, S. (2015). Academic experiences of international PhD students in Australian higher education: From an EAP program to a PhD program. *International Journal of Pedagogies and Learning, 9*(1), 26–37.

Sowell, A., Zhang, T., Bell, N., Redd, K., & King, M. F. (2008). Ph.D. completion and attrition: Analysis of baseline program data from the Ph. D. *Completion project*. Council of Graduate Schools.

Starke-Meyerring, D., Paré, A., Sun, K. Y., & El-Bezre, N. (2014). Probing normalized institutional discourses about writing: The case of the doctoral thesis. *Journal of Academic Language & Learning*, *8*(2), A13–A27. https://journal.aall.org.au/index.php/jall/article/view/295

Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD experience: A review of the factors influencing doctoral students' completion, achievement, and well-being. *International Journal of Doctoral Studies*, *13*(1), 361–388. https://doi.org/10.28945/4113

Weatherall, R. (2019). Writing the doctoral thesis differently. *Management Learning*, *50*(1), 100–113. https://doi.org/10.1177/1350507618799867

Xu, X., & Hjalmarson, M. A. (2022). Education doctoral students' self-study of their identity development: A thematic review. *International Journal of Doctoral Studies*, *17*, 201–225. https://doi.org/10.28945/4965

Ye, L., & Edwards, V. (2017). A narrative inquiry into the identity formation of Chinese doctoral students in relation to study abroad. *Race Ethnicity and Education, 20*(6), 865–876.

Yorks, L., & Kasl, E. (2006). I know more than I can say: A taxonomy for using expressive ways of knowing to foster transformative learning. *Journal of Transformative Education*, *4*(1), 43–64. https://doi.org/10.1177/1541344605283151

Wood, L. L., & Pignatelli, E. C. (2019). The scribble story technique: An arts-based supervision process. *Journal of Creativity in Mental Health, 14*(2), 229–242. https://doi.org/10.1080/15401383.2019.1566041

Wu, S. P. W., & Rau, M. A. (2019). How students learn content in science, technology, engineering, and mathematics (STEM) through drawing activities. *Educational Psychology Review, 31*(1), 87–120. https://doi.org/10.1007/s10648-019-09467-3

Zhang, Y. (2016). International students in transition: Voices of Chinese doctoral students in a U.S. research university. *Journal of International Students, 6*(1), 175–194. https://doi.org/10.32674/jis.v6i1.487