Are Active Learning Classrooms Authentic Learning Environments?

An Examination of Students’ and an Instructor’s Lived Experiences in an Active Learning Classroom

by

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Abstract

New reimagined higher education classrooms called Active Learning Classrooms (ALCs) have been increasingly implemented across the world in the past decade (SCALE-UP Site, 2011), providing a more engaging and lively learning environment for students as compared to traditional lecture halls (Baepler, Brooks, & Walker, 2014; Chiu & Cheng, 2017; Morrone, Ouimet, Siering, & Arthur, 2014), but are these experiences meaningful? In studies by Chen, Leger, and Riel (2015a) and Ravenscroft and Chen (2017), instructors and students have hinted that these rooms allow students to make connections between their learning and planned careers, in other words Authentic Learning could be occurring. This could mean that ALCs may not be only engaging learning environments but also authentic learning environments.

Building on the existing literature of ALCs and theories on Authentic Learning presented in Chapter 1 and 2, this dissertation uses a qualitative approach to capture, retell, and analyze the learning experiences of an instructor and 10 students in a 3rd year elective ethics course. Three research questions are addressed: (1) From the instructor’s perspective, what reasons lead to a decision to teach in an ALCs and how was a course planned and enacted in this classroom environment? (2) From the students’ perspectives, what are their learning experiences in a course taught in an ALCs? (3) Do the learning experiences in an ALCs represent Authentic Learning? If so, what influence does the learning environment have on Authentic Learning?

Data was collected through semi-structured interviews, observations, and student artifacts, and analyzed using analysis of narrative and a combination of deductive analyses (see Chapter 3). Chapter 4 presents the instructor and students’ lived experiences in a series of cases, followed by a comparison of the data to factors of the Theory of Authentic Learning (Hill, in-press) in Chapter 5, which revealed the learning experiences of students in the course were indeed authentic. Chapter
6 concludes the dissertation with implications of the findings and recommendations for educators on how they too can foster an authentic learning environment in the ALCs.
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Statement of Originality

I hereby certify that all of the work described within this thesis is the original work of the author.

Any published (or unpublished) ideas and/or techniques from the work of others are fully acknowledged in accordance with the standard referencing practices.

(Victoria Chen)

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Glossary

Active learning: is defined as any instructional method that engages students in the learning process (Prince, 2004).

Active Learning Classrooms (ALCs): are re-imagined learning environments with a flat open-concept configuration seating students into groups rather than individual seats and tables in tiered rows found in typical lecture halls. They often contain technological capabilities that increase student activity and interaction among students in the class and with the instructor.

Authentic Learning (AuL): is broadly defined as learning that takes place in the context of its use in the professional setting, with students engaging in real or realistic activities and tasks similar to one’s professionals encounter, and learning the cognitive processes and culture of the professional setting (Choo, 2007; Herrington, Reeves, & Oliver, 2014a; Hill, in-press; Woolley & Jarvis, 2007). It is “both learning that connects what is learned in school to the real-world, or the world outside of school, and learning that connects to student identity and advances their life goals. Therefore, there are external and internal aspects to authentic learning” (Hill, in press).

Lived experiences: Personal knowledge about the world gained through direct, first-hand involvement (Chandler & Munday, 2016).

Situated cognition/ situated learning: emphasizes knowledge that is learned is specific to the activity, context, culture, and situations in which it is learned (Brown, Collins, & Duguid, 1989; Hennessy, 1999). This suggests learning is most successful when it is done in the context that reflects how knowledge is used outside of school (Resnick, 1987).
Chapter 1 Introduction

Context

Classrooms can play a significant role in students’ learning experiences. It is where most of students’ learning experiences are lived, yet most classrooms in higher education can be uninspiring and promote disengaging teaching strategies (Lomas & Oblinger, 2006). There has been a growing trend to implement learning environments called Active Learning Classrooms (ALCs) in higher education institutes across the world (SCALE-UP Site, 2011), with the hope of bringing in more aesthetically welcoming learning atmosphere compared to traditional lecture halls (Cotner, Loper, Walker, & Brooks, 2013; Morrone, Ouimet, Siering, & Arthur, 2014), and can allow instructors to incorporate more student-centered teaching and learning strategies shown to shape students’ learning experiences (Baepler, Brooks, & Walker, 2014). Recent studies using large scale general surveys have reiterated these findings with students from across 306 courses reporting positive and engaging learning experiences regardless of their achievement level in the course (Chiu & Cheng, 2017). But are these experiences meaningful? In studies by Chen, Leger, and Riel (2015a) and Ravenscroft and Chen (2017), instructors and students have hinted that these classrooms allow students to make connections between their learning and planned careers, in other words, it may be possible that authentic learning is occurring in the ALCs, and that these classrooms may not be only meaningful learning environments but also authentic learning environments. This dissertation aims to capture, retell, and analyze lived experiences of students and their instructor using theories in Authentic Learning, principally, Hill, and Hill and colleagues Theory of Authentic Learning (ToAL) (Hill, in press; Hill and colleagues, 1998, 2005, 2013).
Active Learning Classrooms

Active Learning Classrooms (ALCs) are re-imagined learning environments (see Figure 1) with a flat open-concept configuration seating students into groups rather than individual seats and tables in tiered rows found in typical lecture halls. ALCs are designed to seat the same number of students as a similar sized lecture hall, yet feel much bigger because students are put into small groups of 8 per table (Leger, Chen, Woodside- Duggins, & Riel, 2014).

Figure 1. Images of an Active Learning Classroom (ALCs). Retrieved from https://cei.umn.edu/support-services/tutorials/active-learning-classrooms, still frame of video http://queensu.ca/activelearningspaces/home, and http://www.mcgill.ca/tls/spaces/tlswg

The rooms often contain technological capabilities that increase student activity and interaction among students in the class and with the instructor. As depicted in an aerial view in Figure 2, a popular design for ALCs is to place students in small groups at tables around the outer edge of the classroom. Next to each table, on the wall, there is an interactive screen that can be controlled by the students in a group. The interactive screen can also be used by the instructor to present information or by the students to present information to the instructor or to students at other tables. In some universities, projection screens might be used instead of the interactive screens at each table to lower the costs of the room.
Companies are now developing specialized classroom furniture and tools for the ALCs and describe these rooms and their furnishings as an answer to the increasing demand of a learning environment “fit for the 21st century student who lives in a technologically advanced world” (Izzy, 2015) and who “expects an equally technological advanced learning environment” (Steelcase, 2014). According to Lomas and Oblinger (2006), it is vital to match students’ habits with their preferred learning environment; and they have found that most students want to “learn by doing” and to interact with others as opposed to sitting and listening. The concept of furniture and tools fit for the student is highly reminiscent of John Dewey’s philosophical writings and his laboratory classrooms in Chicago (Dewey, 1902/2008. This is not lost on furniture companies or their university clientele. One company even calls their screens “Dewey Connection Carts”, suggesting the screens have the ability to transform any room into connection points and collaborative hubs between students and with the world outside the classroom (Izzy, 2015).

In addition to the technological tools in these classrooms, research has shown the arrangement of seating in these classrooms also has a significant impact on students' learning experiences. The circular tables enable instructors to use more active learning strategies than in
the lecture hall learning environment; strategies such as collaborative learning, team-based learning, case studies, and problem-based learning (Lomas & Oblinger, 2006; Steelcase, 2014; Walker, Brooks, & Baepler, 2011). Hence, the name “Active Learning Classrooms” has been designated to such classrooms. Active learning is defined as any instructional method that engages students in the learning process (Prince, 2004). Active learning strategies have also been shown to be easier to implement in ALCs compared to what is possible in standard seminar rooms. Chen, Leger, and Riel (2015b) conducted a study where video analyses of first year tutorials found teaching assistants and students engaged in more active learning strategies when they were in ALCs than in standard seminar rooms. The teaching assistants and students also reported that they preferred the ALC over the standard seminar rooms stating it was easier to work in groups and engage in class discussions as a result of better sightlines in the ALC.

The sightlines are the result of the flat open-concept circular configuration of the tables around the perimeter of the classroom. It is believed that this decreases the physical and hierarchical barrier between the instructor, allowing for open communication and natural interactions to occur (Baepler et al., 2014). The instructor’s podium is positioned equal distance to all the tables in the room, permitting the instructor to quickly go to different students around the room and for the students to get the instructor’s attention. Students have reported to feel more comfortable asking more questions of instructors in these rooms (Chen et al., 2015a). Instructors have stated they become more enthusiastic about teaching when they are in these classrooms (Beichner, 2014; Brooks, 2012; Thaman, Dhillion, Sagger, Gupta, & Kaur, 2013), and that attendance for classes held in these classrooms have been shown to be higher than for classes in lecture halls (Walker et al., 2011; Horne, Murniati, Saichaie, Jesse, Florman, & Ingram, 2014).
Another advantage of clear sightlines is that students are able to share their work with other students in the class, something students have indicated appears to be discouraged in classes held in lecture halls. In a study by Chen (2015a), during group discussion activities students tend to look at other groups’ screens when they were stuck on discussion ideas. Seeing ideas from other groups helped to trigger ideas and encouraged students to continue to work. In another study by Ravenscroft and Chen (2017), video analysis of an advanced music course in the ALC illustrated students use the screens to combine their individual micro analysis of music sheets and to conduct macro analysis of the music pieces as a whole, something that could not be done on individual music sheets. In both Ravenscroft and Chen (2017) and Chen, Leger, and Riel’s (2015c) studies, students reported the layout and technology of the ALC caused them to feel less pressure to compete against their peers and more encouraged to collaborate and learn from their peers in courses in ALC compared to in the lecture hall. Together, the technology and spatial configuration of these rooms generates a positive learning environment evoking the components of optimal and holistic learning (Cornelius-White, 2007).

On the surface, it appears that much is known about the positive effects of these classrooms on teaching and learning, but on a deeper level, beyond that they are better than lecture halls, little is known about the underlining reasons for why these spaces are positive learning spaces. In most of these studies, students’ learning experiences are represented through multiple choice surveys and snippets of quotes which do not begin to capture students’ complex learning experiences in these classrooms. This lack of a deeper understanding leaves instructors and students who do not have positive teaching and learning experiences in these classrooms frustrated by what went wrong. According to Weinstein (1981), learning potential is most optimized when the use of the physical learning environment is considered to the same extent as the development of the
curriculum design and content. Unfortunately, according to Goodyear (2008), the research examining the use of learning environments is very limited. Goodyear (2008) therefore suggested documenting patterns of teaching and learning practices in learning spaces in order to understand the students’ learning experiences and to pinpoint which experiences lead to facilitating and which ones limit learning. This understanding can be helpful to curriculum designers, instructors, and students when planning for learning in these learning environments. Extending on Goodyear’s (2008) recommendations, using an appropriate learning theory as a theoretical framework for examining and analyzing these documented patterns and experiences could further strengthen past and future evidence and arguments for using these classrooms.

In the study by Chen et al. (2015a) students suggested these classrooms allowed them to make connections between their learning and planned careers more so than in their previous courses that were in different types of classrooms. Instructors have also hinted at this, with many reporting writing reference letters for students because the students thought their instructor understood their capabilities in their desired careers even more than any other instructor in the same field (Riel et al., 2015). These comments by students and instructors fit with the original purposes of ALCs which was to make classrooms more fit for today’s student who is preparing for their careers (Izzy, 2015; Steelcase, 2014); in other words, it may be possible that these classrooms are fostering Authentic Learning (AuL). AuL is broadly defined as learning that takes place in the context of its use in the professional setting, with students engaging in real or realistic activities and tasks similar to ones professionals encounter, and learning the cognitive processes and culture of the professional setting (Choo, 2007; Herrington, Reeves, & Oliver, 2014a; Woolley & Jarvis, 2007). Many researchers have used Herrington and Herrington’s (2005) characteristics of authentic learning instruction to determine the degree to which AuL occurs in a course or setting.
(Anderson & Shattuck, 2012; Shelton & Scoresby, 2011). However, other researchers such as Nicaise, Gibney, and Crane, (2000), Barab, Squire, and Dueber (2000), and Hill and Smith (2005) dispute this notion, and argue it is the students who decide whether the learning is authentic to them or not. In two of these studies, the instructors viewed their course instruction and activities as authentic and motivating for students, but it was not the case for all students in the classes. Based on their findings, and those of Hill and Smith (2005), the degree to which AuL experiences are formed is determined by students rather than the instructor. In her work developing the Theory of Authentic Learning (ToAL), Hill states: Authentic learning is “both learning that connects what is learned in school to the real-world, or the world outside of school, and learning that connects to student identity and advances their life goals. Therefore, there are external and internal aspects to authentic learning” (Hill, in press).

Insert constraints

At this point, it is important to recognize that not all institutions provide instructors with the choice of where they teach their courses, and the purpose of this research is not to put blame on instructors who do not have the opportunity to teach in these classrooms or better conditions. The purpose of this study is to inspire instructors and institutions with ALCs on how they could be used, and for those without ALCs to consider implementing them into their institutions and give more instructors and students the opportunity to teach and learn in a different learning environment from the traditional lecture hall and seminar room space.

**Researcher Standpoint**

During my Master’s in Arts, I had unknowingly taken three courses in an ALC. Here, I never engaged in discussions with peers who formed a group at our group table, I never used or touched the educational technology in the room, and I could not see my instructors’ faces as they
lectured for 3 hour sessions – for an entire year. A typical class consisted of the instructor walking into the classroom fumbling and cursing at the buttons to get the projection to work, opening up the PowerPoint slides, and full lecturing. The instructors frequently used laser pointers and pointed at a single screen as they lectured and seemed to forget we were all looking at different screens and could not always see what the instructors were pointing to. To me, there was little difference being in this learning environment and being in a lecture hall, and if anything, the experience might have been worse than in a regular lecture hall. I remember expecting to collaborate with others, use educational technology that was actually from this century (most of my other courses used green chalkboards for lectures), and maybe even be able to ask the instructor questions in class, rather than through email after class— but I was left greatly disappointed.

A few years later, I found myself in one of these rooms again at another university but this time as a researcher. I explained to the manager of the project that I did not think these classrooms were worth conducting research on because they were terrible for listening to lectures, to which the manager responded “That’s right, these classrooms are terrible for listening to lectures— they are for students to engage in learning.” With that response, I began to look at teaching and learning with a new lens and questioned everything I thought I knew about ‘good and bad” teaching approaches. I participated in the planning stages of three ALCs, and was tasked with proposing research questions and methodology to study the use of these classrooms. Seeing the classroom being put together piece by piece, and having conversations with those involved on the planning committee gave me a new insight into these classrooms. I began to understand why these rooms were created, their capabilities, and how they were meant to be used.

The implementation of the ALCs at this particular university was part of the university’s Academic Plan to provide innovative pedagogies such as inquiry learning and problem-based
learning that would lead to fundamental learning outcomes undergraduate students were expected to achieve, including: effective communication, critical thinking, problem solving, information literacy, and effective collaboration, all of which are expected to prepare graduates for their prospective careers. Instructors and academic staff came to the conclusion that to enact these innovative pedagogies they required appropriate learning spaces, therefore, they prepared a plan for more flexible space. The resulting classrooms were modelled after other ALCs in North America, and were meant to, according to this university, use collaboration and innovative course planning and delivery to provide groups of students with a new educational experience.

Over the past two years, I have been the lead investigator and co-investigator in a series of research studies on ALCs, confirming what is already well-documented in the literature: (1) physical space has an impact on teaching and learning, and (2) active learning strategies and student-centred teaching and learning approaches are better enacted in ALC than in traditional lecture halls. Most of these studies consisted of video-taping classes, students completing standardized questionnaires, and post-course surveys and interviews which provided an overall picture that students and instructors had positive experiences in these spaces. But what is it about these spaces specifically that makes them positive learning environments? Some have attributed these experiences to the technological tools that allow students to communicate with peers around the room and access resources outside of the classroom (Chen, 2015a), while others state it is simply the seating arrangement of students encouraging collaborative learning (Beichner, 2014). If it is only the furniture and tools available in the classroom that lead to positive learning experiences, then why did I have a drastically different learning experience during my graduate courses in a classroom with the same tools and space? Perhaps the curriculum and activities that instructors implement have a significant impact on the success of these classrooms? Or maybe a
combination of many subtle components intertwined? Furthermore, because the ALCs research conducted thus far has suggested these classrooms have positive effects on learning, it would be worth extending the investigation to examine whether students’ learning experiences in an ALC are in fact authentic, connecting students’ learning to students’ professional goals or to professional practices outside of the classroom (for example, volunteering, academic clubs, and part-time employment). This is an important next step to understanding learning in the ALCs because research shows that learning that is authentic is more meaningful to students and students are motivated to learn (Herrington, Parker, Boase-Jelinek, 2014b; Maina, 2004; McCune, 2009; Renzulli Gentry, & Reis, 2004; Watter & Ginns, 2000). In order to do this, rather than continuing the research using large scaled questionnaires and inventories, a smaller scaled and more intimate qualitative approach was taken to capture students’ lived experiences in these classrooms.

**Statement of Purpose and Research Questions**

The purpose of this study is to examine whether students’ learning experiences in an ALC are in fact authentic, connecting students’ learning to students’ professional goals or to professional practices outside of the classroom. This was done through documentation of an instructor’s and their students’ lived experiences in an ALC. This documentation captured and retold their stories, through their voices, and made possible the determination of whether the learning experiences in the ALC was authentic. The following research questions guided the study:

1. From the instructor’s perspective, what reasons lead to a decision to teach in an ALC and how was a course planned and enacted in this classroom environment?

2. From the students’ perspectives, what are their learning experiences in a course taught in an ALC? How does it compare to their learning experiences in traditional learning spaces such as lecture halls or seminar rooms? What have they taken away from this experience?
3. Do the learning experiences in an ALC represent Authentic Learning? If so, what influence does the learning environment have on Authentic Learning?

The next chapter provides an overview of the themes and trends in the literature of Authentic Learning.
Chapter 2 Literature Review

One hundred and thirty papers were summarized to provide a scope of how Authentic Learning (AuL) is used in the current literature. The papers were limited to those published in the past two decades with the exception of papers and books seen as “pinnacle” to the development of the current literature by being continuously cited and repeatedly referred to as foundational works in the area. Duplicates of papers were removed and authors publishing different papers, but on the same study, were also removed. Based on an analysis of the 130 papers, 66% of the papers and chapters used AuL as a teaching and learning strategy, 19% as a conceptual framework, and 14% as a theoretical framework. Teaching strategies are techniques instructors use to help students become independent learners, and these strategies become learning strategies once students use them on their own to achieve learning goals (Alberta Learning, 2002; McKeachie & Svinicki, 2013). As a conceptual framework, the understanding of AuL is developed independently from AuL theories with many authors reporting they were unable to find a suitable theory (or likely unaware of existing AuL theories) that could provide a framework applicable to guiding their studies. AuL as a theoretical framework stems from the theories of learning, with the common understanding that learning should be in the context, activity, and culture of the professional setting (Choo, 2007; Lave & Wenger, 1991), as well as be personally meaningful to the learner (Andersson & Andersson, 2005; Hill & Smith, 2005; Stein, Isaacs, & Andrews, 2004). Hill (in-press), and Hill and colleagues (1998, 2005, 2013) have taken the theoretical framework a step further formulating the Theory of Authentic Learning (ToAL), which is a comprehensive theory developed from several research projects and that captures much of the views in authentic learning as conceptual or as teaching/learning strategies.
Authentic Learning

Authentic Learning (AuL) is broadly defined as learning that takes place in the context of its use in the professional setting, with students engaging in real or realistic activities and tasks similar to ones’ professionals encounter, and learning the cognitive processes and culture of the professional setting (Choo, 2007; Herrington et al., 2014a; Woolley & Jarvis, 2007). It is “both learning that connects what is learned in school to the real-world, or the world outside of school, and learning that connects to student identity and advances their life goals. Therefore, there are external and internal aspects to authentic learning” (Hill, in press). With schools increasingly held accountable for students’ learning (Herrington & Herrington, 2005), instructors are pressured to develop competencies students need in professional careers and the traditional approach to learning in a de-contextualized context is widely deemed inappropriate to attaining these competencies (Choo, 2007).

AuL is viewed as a response to the traditional de-contextualized nature of learning or even an alternative method of teaching (Meyers & Nulty, 2009), providing rich resources and situating learning in contexts of professional settings (Petraglia, 1998). Students are immersed into the culture of the professional practices, actively participating in tasks, and become competent members of the professional practice (Lave & Wenger, 1991; Newmann, Bruce, & Carmichael, 2007).

The importance of experience in learning and the types of experience needed for meaningful learning are pinnacle in the development of views on AuL, leading to questions on authenticity of learning material, how instruction should be delivered to foster AuL experiences (guided vs directed), and who determines the authenticity of the learning experience. The theory and teaching approach has been adopted worldwide from elementary to high schools (Chang, Lee,
Brief Historical Overview of Foundations of Authentic Learning

The foundations of Authentic Learning (AuL) have been widely attributed to John Dewey, for bringing forth the notion of learning in context and learning by doing (Barab et al., 2000; Herrington et al., 2014a; Hill & Smith, 2005; Knobloch, 2003; Newmann, Marks, & Gamoran, 1996; Petraglia, 1998). Learning in context is dependent on the type of instructions, which need to take into account students’ personal experience with the subjects (or lack thereof), and should be tied to how the learning is used outside of the classroom. When this does not occur, knowledge remains “inert” and confined to the instructional context (Whitehead, 1929), and is seen only useful to an individual as a student and “not as a human being” (Dewey, 1916, Ch. 12). However, learning by doing means connecting body (action and doing the task) and mind (reflection and perception of meaning) together (Dewey, 1916, Ch. 11). Students do not have to be directly involved in experiences to learn from them, they can gain value from observation if they understand the significance of what they are observing (Dewey, 1938, Ch. 6). Some experiences should also be counterintuitive and challenge student thinking because it requires students to reconstruct their ideas on a subject and leads to intellectual growth (Dewey, 1916, Ch.11; Dewey, 1938, Ch. 5). This is consistent with Piaget’s (1954) concepts of assimilation (incorporating information consistent with existing knowledge) and accommodation (forming new knowledge structures with information that does not fit with existing knowledge), which have been influential to learning theories, and teaching and learning practices (Mims, 2003).

The resurged interest in learning by doing and learning in the context of professional settings is popularly accredited to Brown et al.’s (1989) concept of situated cognition (knowledge
that is learned is specific to the activity, context, culture, and situations in which it is learned), Lave and Wenger’s (1991) concept of legitimate peripheral participation (students participating in real communities of practice), and Newmann et al.’s (1995) 3-year study on 23 restructured schools in the United States implementing curriculums with AuL (significant improvement in math and humanities scores across all age groups consistently compared to traditional teaching). The two concepts (Brown et al. (1989); Lave And Wegner (1991)) and significant findings from the Newman et al. (1995) study, have since been a springboard for studies on AuL and developing designs for curricula with AuL (Herrington et al., 2014a; Renzulli, Gentry, & Reis, 2004).

Overview of the Literature Review

Using the summaries of the 130 articles and chapters described earlier, overarching themes and trends were identified in the literature: the reasons for the popularity of Authentic Learning (AuL), issues around authenticity (real vs realistic problems), guided vs directed instruction, who determines authenticity, and the current study.

Reasons for the popularity of Authentic Learning. What is the appeal of AuL? Why would instructors want to apply principles of AuL or AuL practices in their classrooms? For the majority of articles that used AuL as a teaching and learning strategy for curricula and interventions, the common learning outcomes was to increase students’ motivation to learn.

Motivation to learn. By incorporating real or realistic activities into the learning material, it provides substantially more context that lead students to understand the relevancy of the material, be able to relate to it more meaningfully, and comprehend why it is more applicable to their lives than traditional curricula (Dewey, 1916; Herrington, et al., 2014b; Maina, 2004; McCune, 2009; Renzulli et al., 2004; Watter & Ginns, 2000). AuL bridges the gap between theoretical knowledge and practice (Ingram & Jackson, 2004), resulting in students feeling more empowered because
they gain confidence in their ability to perform and master subject areas (Murphy, Lunn, & Jones, 2007; Rule, 2006). By motivating students to learn, students are more likely to become lifelong learners, retaining the desire to continue to learn after graduation (Andersson & Andersson, 2005; Bergeron & Rudenga, 1996; Watter & Ginns, 2000).

**Integrate into communities of professional practice.** AuL can also gradually and successfully integrate students into the communities of the professional practices. AuL provides opportunities for students to have authentic experiences and become part of the professional community, and has been used in apprenticeship programs such as specialized schools and co-op programs (Hill, Anstey, Gallinger, & Penn, 2013; Perry, 2004). One example is in archeology field-schools where students are directly involved with the archeologists, actively participating in authentic tasks, and given authentic assessments such as forming their own hypotheses and testing them in the field. As a result of being highly involved in tasks and complex thinking, many students attain employment at these facilities (Perry, 2004), demonstrating that students can become successful members of these professional communities.

The process of interacting and integrating into the community is what Lave and Wenger (1991) call legitimate peripheral participation, where participation is with real communities of practice. Legitimate peripheral participation is partially derived from craft apprenticeships with highly successful students or apprentices working under the close guidance and mentorship of experienced instructors and acting as contributing members of the respective practice (Lave & Wenger, 1991). The mentor eases the students into the community of practice providing opportunities in which they can engage, starting with observations and small tasks. Initially, students are not expected to fully participate but are given space to ask questions, take on multiple viewpoints, and make sense of the activities and what it means to be in that community of practice.
Even outside of the formal school setting, the act of participating and becoming a member of a community is just as important as it is in school. Andersson and Andersson (2005) examined how adult Somali refugees formed their own learning community after failing to integrate into Swedish society through taking formal university courses offered by the government. The adult learners listened to guest speakers from the local community (rather than professors), discussed and reflected on the information presented, made links between the Somali and Swedish practices, and compared the new information to their experiences. The process is reminiscent of Piaget’s (1954) assimilation and accommodation, with the adult learners forming new knowledge structures to meld both the new and existing knowledge. According to Andersson and Andersson (2005) the formal courses offered by the Swedish government did not take into account the learners’ agency or lived experiences and, therefore, were not authentic. Whereas in the learners’ informal learning setting, new information was continuously compared and integrated to their existing knowledge and experiences, making the learning authentic. This concept of authenticity is highly debated in the Authentic Learning literature with issues on the degree of “realness” required for material and experiences to be deemed as authentic. The next section will bring to light some of the compelling arguments and ideas on authenticity found in the literature.

**Issues around authenticity: Real vs realistic problems.** Do authentic tasks and products have to be *real* to be authentic? This debate stems from arguments around the interpretation of the concept of situated learning or situated cognition. The concept emphasizes that knowledge that is learned is specific to the activity, context, culture, and the situations in which it is learned (Brown et al., 1989). Situated cognition has its origins in researchers observing the consistent didactic delivery of teaching, separating students from activities and culture that give the knowledge meaning and purpose (Brown et al., 1989). This was particularly prominent in math education with
theory and application being very distinct (Anderson, Reder, & Simon, 1996; Cobb & Bowers, 1999), causing the learning to remain inert and unusable (Dewey, 1916; Whitehead, 1929). This suggests learning is most successful when it is done in the context that reflects how knowledge is used outside of school (Resnick, 1987). The type of context and situation in which learning occurs is a central component of AuL, and this central component is hotly debated. On the one side, researchers argue the more real the problem and tasks, the more authentic the learning experience. While others state realistic problems could be more beneficial to learners and, therefore, be more authentic. Differences between the two types of problems are elaborated in the following sections.

**Real problems.** Some researchers and instructors argue for learning to be authentic; the activities students engage in must be real. For instance, when children are learning literacy, they should be provided with real literacy materials such as bus schedules, maps, diaries, and interviews which is useful for life outside of school (Bergeron & Rundenga, 1996). In other subject areas, students can be given real problems people are facing in the world related to the subject, and under the guidance of an expert, come up with a solution to the problem, thereby bridging together school and the application of school learning in the real world environment (Resnick, 1987). This has evolved to what is considered the “participation model” (Barab et al., 2000; Wenger, 1999) adapted from the concept of legitimate peripheral participation. Here, instructors and community partners work together to identify a problem faced by community partners and the students use the knowledge they gained in class to develop solutions to the problem.

For instance, Huang (2011) investigated a teaching and learning strategy using AuL and the participation model in a higher education management information systems course. Students were given the problem of patients trying to find appropriate doctors and clinics in their local area in Taiwan. In Taiwan, it is typical for patients to seek different doctors for services and second
opinions rather than a single doctor like in Canada. The problem is that Taiwanese doctors have different specialties and operating hours, making it difficult for patients to find help quickly and conveniently (Huang, 2011). Students worked with peers, the instructor, clinics, and patients to develop an accessible information system that addressed their problems. Similarly, in a study by Barab et al. (2000), Bachelor of Education students collaborated with in-service teachers to develop a website that the in-service teacher would use in his/her elementary classroom. Some students visited the classrooms to gain a better idea of the type of website that would be useful for the in-service teacher, while others had to rely on the in-service teacher to articulate to them what the in-service teacher desired in the website. In both studies, the clients were community members but not experts on the programing the students were using, therefore it was up to the students to find solutions to technical challenges. By tackling a real problem, students in both studies saw the application of the theoretical knowledge they had obtained in the classroom and experienced the process and challenges needed to create the authentic product.

However, Huang (2011) noted there is a significant limitation to the participation model, which is that students can spend too much time on unexpected tasks taking time and effort away from the learning objectives of the planned curriculum. For example, one group of students had persistent personality conflicts with group members, while others spent too much time on minor tasks and little time on the important tasks (Huang, 2011). Likewise in Barab et al.’s (2000) study, one of the in-service teachers rarely corresponded with his group of students, causing them to spend a significant amount of time attempting to contact him and leading to a poorer product.

Moreover, the size of the class can change the feasibility of taking part in these real activities. In the course Huang (2011) studied, there were only 10 students and in Barab et al.’s (2000) there were 34, but in most courses in higher education there are hundreds or even thousands
of students. Enrollment in classes are increasing and institutions are greatly constrained by costs to deliver these “authentic” learning experiences (McClean, Saini-Eidukat, Schwert, Slator, & White, 2001). One of the fields that is struggling to provide all students with hands on learning opportunities is nursing (Wolley & Jarvis, 2007). In nursing, students need practical experience in an environment under the direct supervision of a medical professional before going into clinical practice, but it is not feasible for hundreds of students to do so at once or within a reasonable amount of time (Wolley & Jarvis, 2007). For this reason, Wolley and Jarvis (2007) proposed the need to create learning opportunities that are “realistic” rather than real.

**Realistic problems.** Realistic problems are rooted in the real world, with instructors adapting real cases or even creating fictional events, but the activities contain issues that are faced in the real world (Rule, 2006). Instructors are not necessarily working with community partners as they do in the participation model to create these realistic problems or simulations. Wolley and Jarvis (2007) incorporated the concepts of situated cognition (Brown et al., 1989), cognitive apprenticeship (Collins et al., 1989), and learning technologies (i.e., DVDs, video footage), to develop an AuL conceptual framework that was applied to creating a tool for AuL in nursing. The students watched a video of nurse practitioners completing tasks in a simulation room that replicated a real operation room; this set the context and aligned with the concept of situated cognition. The teaching aligned with principles of cognitive apprenticeship: modelling, coaching, scaffolding, articulation, reflection, and exploration (Collins et al., 1989). Practitioners and instructors deliberately brought forth the *thinking* that must precede and be part of the task using the six principles of cognitive apprenticeship (Wolley & Jarvis, 2007). This helped students understand the thinking process at a more in-depth level than could be done in traditional
apprenticeships, which centre on observing actions instead of understanding the thinking process (Collins et al., 1989; Wolley & Jarvis, 2007).

Wolley and Jarvis (2007) suggested students in their study acquired more valuable knowledge and skills, and at a faster pace, than in traditional apprenticeships and participation models. They agreed with Huang’s (2011) concerns that vital information may be lost due to unexpected events in traditional apprenticeships and participation models since it is difficult to determine whether students are focusing on the “right” information. This concern is addressed in cognitive apprenticeship where significant amount of time is dedicated to developing cognitive abilities and ensuring students have a full understanding of the processes and skills (Collins et al., 1989). Furthermore, the videos were in a controlled environment and could be quickly updated and recorded with new information for future students, thereby, creating AuL material within a feasible amount of time and cost (Wolley & Jarvis, 2007).

Another advantage of realistic problems is that the problem and activities can be reduced in complexity suitable for the students’ ability level (Cronin, 1993). Both Cronin (1993) and Jobling and Moni (2004) agree that when reducing the complexity of a task, it can still remain authentic because it can help students feel they can accomplish the task. They also agree that it is a misconception for all tasks to be elaborate and complex, and never simple and straightforward. This is why Newmann et al. (2007) created a 105 page report, Authentic Instruction and Assessment, for elementary and high school instructors based on their conceptual framework outlining the basic standards to maintaining AuL (higher order thinking, deep knowledge, substantive conversation, and connections to the world beyond the classroom). The report also contained examples of instructions and assessments for each grade level and discipline, and
exemplars of students’ work that accompany the assessments. Therefore, tasks and activities can be tailored to the students’ needs and experience while still being authentic.

In the higher education literature, there has been particular interest in creating realistic problems and situations for Bachelor of Education (B.Ed.) students (e.g., Barab et al., 2000; Bain & Hasio, 2011; Chamber & Stacey, 1999; Ferry, Kervin, Puglist, Cambourne, Turbill, Jonassen, & Hedberg, 2005; Jobling & Moni, 2004; Pierce, 1996; Russell-Bowie, 2012; Yen & Huang, 1998). This interest stems from the unique nature of the B.Ed. program consisting of a practicum component where B.Ed. students are put in highly complex environments of real elementary and high school classrooms. Researchers noted that students are often not fully prepared for their practicum component, and as a result have negative experiences (Ferry et al., 2005; Jobling & Moni, 2004; Pierce, 1996).

One particular aspect B.Ed. students are often not prepared for is how to help students with special needs (Bain & Hasio, 2011; Jobling & Moni, 2004). Jobling and Moni (2004) examined a university in Australia that noticed their B.Ed. students were continuously arriving with little prior experience or knowledge on working with students with special needs. The instructors in their study used AuL as a teaching and learning strategy to plan a simulation activity with the university’s special needs program, allowing students to interact and teach students in higher education with special needs before going into their practicum. This was considered a simulation rather than a real activity because the students with special needs were in higher education instead of elementary or high school, and, therefore, the complexity and challenges, such as behavioural issues and difficulty articulating their understanding, were reduced. Under the guidance of their instructor and the special education instructor, the B.Ed. students were able to develop lessons and experiment with delivering the material to the students with special needs. The students with
special needs provided helpful feedback to the B.Ed. students on their lesson plans and their
delivery. This process helped the B.Ed. students build confidence in their ability to teach students
with special needs. Jobling and Moni (2004) were confident that if students had not gone through
this simulation process to prepare for their practicum, they would have likely developed negative
attitudes (as students have in the past) due to their poor preparations, attitudes difficult to change
later on.

**Guided instruction or direct instruction?** A prominent aspect of examples of realistic
problems is that there is considerable direct instruction from instructors. The instructors prescribe
the problems to students, and students have some freedom to explore various routes to solving the
problem. Yet, many researchers have argued that direct instruction goes against the foundations of
AuL, and that students should be exploring problems they are interested in to create the meaningful
experiences. In this section, the points made by proponents for both direct instruction and guided
instruction will be explored.

**Guided instruction.** Renzulli et al. (2004) dispute the claim that prescribed learning
strategies can lead to AuL. Their position is based on the view that problems should stem from a
person’s frame of reference, thus, motivating students to find solutions that change actions,
attitudes, and beliefs. This is rooted in the concerns of developing experiences that Dewey (1916)
raised, arguing that knowledge should be constructed by the individual rather than prepackaged
for the learner to consume (Ch. 12). In Renzulli et al.’s (2004) study, middle school teachers
developed enrichment clusters which were based on the students’ own interests. The enrichment
clusters were led by teachers in the school, community members, and parents who had knowledge
in the areas, but lessons had no predetermined content. Students asked questions and developed
hypotheses. Instructors guided student learning. Shaffer (2006) also examined a similar teaching
and learning strategy, but with the use of a computer program as the instructor. High school students explored, in-depth, a topic of their interest with no prescribed curriculum path, and developed deep and rich knowledge which Shaffer (2006) observed to be transferrable to domains outside of the original domain students studied.

Both of these studies used instruction that could be considered “anchored instruction”, an approach rooted in the problem Whitehead (1929) raised about inert knowledge. In anchored instruction, students are fully immersed into a context for long periods of time, identify and define problems they are interested in, relate the phenomenon to the world around them, and pay particular attention to their own perception of the phenomenon (The Cognition and Technology Group at Vanderbilt (CTGV), 1990). Students explore the phenomenon under the guidance of the instructor and collaborate with peers (CTGV, 1990). The focus is on the students – developing their ability to think and guiding their learning path according to their own interests – which is reflective of the type of instruction Dewey (1916) encouraged. However, it is difficult to determine whether students are attaining the “right” knowledge or achieving essential learning outcomes from the curriculum.

**Direct instruction.** Researchers such as Kirschner, Sweller, and Clark (2006) are strongly opposed to the minimally guided approach to teaching found in guided instruction, stating it ignores the architecture of human cognition and that “controlled experiments almost uniformly indicate that when dealing with novel information, learners should be explicitly shown what to do and how to do it” (p.76). Even adult learners who are novices can experience this problem with guided instruction, for instance, Slepkov (2008) investigated professional development for experienced instructors in elementary and high school who were novices in creating interactive websites. The instructors reported that the participants were not confident in their ability to learn
the steps independently, and were only willing to take part in the professional development because there would be an expert providing direct instruction and walking them through the steps to creating the website.

In addition, real problems do not guarantee students will achieve the goals of the planned curriculum (Huang, 2011; Lebow & Wager, 1994). Nicaise et al. (2000) provide a good example of this, as they discovered some students need more direct instruction than others, and a guided approach may not be suitable for them. Nicaise et al. (2000) used a grounded theory approach to collect and analyze their data on students’ perceptions of AuL in a high school aerospace course. The fifty students learned principles in engineering and aerospace over the course of eight months, culminating in a one week long simulated space shuttle mission. The activities and simulation were largely self-regulated and completed in teams with little direct teaching from the instructors. The students who were least successful in the course (almost half of the class) mainly attributed the problem to their lack of interest in the course and the lack of instructors’ direct teaching. But researchers also noted that these students felt they required the expertise and background in aerospace that their successful counterparts had, and, therefore, were disadvantaged in this learning environment. The students who were highly successful were very interested in the subject and many were in an Advanced Placement program.

Who determines authenticity? Both Slepkov (2008) and Nicaise et al. (2000) demonstrated novices may be less successful in guided instructional approaches and require more direct instruction, and according to Herrington et al. (2014a), a students’ level of expertise is what determines which type of instruction is best for them. Direct instruction for AuL may be more useful for novices as Kirschner et al. (2006) have stated, but may not be appropriate for students
who already have expertise. This brings the discussion of AuL to another theme in the literature, who determines whether learning is authentic or not?

**Instructor.** Based on the previous section, it would be assumed the instructor determines the authenticity of the learning material and experience. Instructors are the ones leading the course, setting the learning objectives, planning the authentic tasks, and determining authentic assessments. A majority of the papers and chapters using AuL as a teaching and learning strategy focus on teaching approaches and what the instructor should do to create a learning environment that is authentic. There is an abundance of steps, standards, and characteristics suggested by conceptual frameworks of AuL to guide for instructors in the creation of lessons and curriculums that incorporate AuL in their content areas. For example, Herrington, Reeves, and Oliver (2014) present guidelines for creating authentic learning environments using characteristics for AuL that were first presented in Herrington and Herrington’s (2005) framework. These guidelines are displayed in Table 1.

Table 1. Characteristics of authentic instruction and creating authentic learning environments

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Creating authentic learning environments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentic contexts</td>
<td>Provide <em>authentic contexts</em> that reflect the way the knowledge will be used in real life</td>
</tr>
<tr>
<td>Authentic tasks and activities</td>
<td>Provide <em>authentic tasks and activities</em> which are ill-defined activities that have real-world relevance, contrasts to university activities where tasks are abstract and decontextualized and well-defined by instructor</td>
</tr>
<tr>
<td>Access to expert performances</td>
<td>Provide access to <em>expert performances</em> and the modelling of processes</td>
</tr>
<tr>
<td>Multiple roles and perspectives</td>
<td>Provide <em>multiple roles and perspectives</em> in order to explore different perspectives, examine different points of view of multiple stakeholders as opposed to listening to instructor lecture</td>
</tr>
<tr>
<td>Collaborative construction of knowledge</td>
<td>Support <em>collaborative construction of knowledge</em> by having students work together to solve a problem in an authentic task or activity</td>
</tr>
<tr>
<td>Reflection</td>
<td>Promote <em>reflection</em> to enable abstractions to be formed</td>
</tr>
<tr>
<td>Articulation</td>
<td>Promote <em>articulation</em> to enable tacit knowledge to be made explicit</td>
</tr>
<tr>
<td>Coaches and scaffolding</td>
<td>Provide <em>coaching</em> and <em>scaffolding</em> by the teacher at critical times</td>
</tr>
<tr>
<td>Authentic assessment</td>
<td>Use <em>authentic assessment</em> of learning which results in seamless integration of assessment into the activities in the course, provides students opportunity to be effective performers with the knowledge they acquired in class, and moving away from competitive assessments like multiple choice tests which reveal only memorization skills</td>
</tr>
</tbody>
</table>

The literature situated in elementary and high school contexts, conceptual papers dispel common misconceptions in AuL, such as instructors must be experts and masters to provide authentic instruction or that tasks must be original, fun, creative, and ensure instructors they are able to use AuL in their classrooms (Cronin, 1993; Wiggins, 1991). Gross and Kientz (1999) encourage hesitant instructors to collaborate with other instructors and teaching staff (such as librarians) to work together to develop curricula, lessons, and rubrics grounded in AuL. This approach was derived from their study on the success of teaching staff working together to create AuL material. The assumption throughout all of these papers is that instructors determine whether or not learning will be authentic.

**Students.** Andersson and Andersson (2005) and Nicaise et al. (2000), however, would dispute this notion and suggest it is the students who decide whether or not the learning is authentic to them. As mentioned earlier, the participants in Andersson and Andersson’s (2005) study the government’s curriculum did not take into account the learners’ agency or lived experiences and therefore it was difficult for the students to learn the material. Likewise instructors Nicaise et al.’s (2000) study viewed the aerospace course and activities as authentic and motivating for students, but it was not the case for all students. The students who struggled in the course did not have a strong foundation in aerospace and therefore found themselves disconnected with the space
simulation activities. Based on their findings, the focus of instruction should be on the students rather than the instructor, with teaching material guiding students to actively and meaningfully make connections with the event and with themselves, just as Dewey (1916) had suggested.

**Connecting curriculum and students.** Herrington et al., (2014b) state there are many cases where students need to learn the material whether they are initially interested in it or not, therefore, it is up to the instructor to take the lead. So how can instructors help students make these meaningful connections?

Herrington et al. (2014b) examined this issue in a higher education context, and hypothesized that there needed to be more opportunities for students to reflect on their learning within each lesson, and the curriculum as a whole, for AuL to occur. Using their conceptual framework (see Table 1), with a particular focus on the characteristic of students’ reflection, they developed a series of evaluations for a Bachelor of Education course that incorporated student reflections, such as reflective tasks in class, personal reflective journals or blogs (a commonly used teaching strategy to help students find value in the material according to Bolin et al., 2005), and even a reflective exam. An example of an exam question is: “Imagine that a community group has offered to buy your school solar electricity panels, and the Principal has suggested that each class could create a project around the issue of sustainable resources. Describe an authentic project that your class could do using technology.” At the end of the course, students were given a survey to determine whether the reflective evaluations had an impact on their learning. A large portion of students reported the evaluations allowed them to see the bigger picture of the course, and view the course in its entirety rather than segmented disconnected pieces. Most of the students found the reflections useful because it reaffirmed their thoughts, allowed them to return to previous work,
and think about ideas in a different way. A few students greatly disliked the process and viewed it as a waste of time.

It could be argued that although the reflections were mostly a success and lead to AuL, the reflective journals and exams, as well as many other teaching strategies discussed in this paper, could be considered strictly as teaching strategy but not learning strategies. There was no indication that students would continue to use the strategies to process information by actively connecting the new information to their existing knowledge in future courses or in their life. Consequently, even though instructors initially decided on the authenticity of the learning material, it is ultimately the students who need to take ownership of the learning and deem it as authentic to them.

**Theory of Authentic Learning (ToAL).** In order to take into account the various aspects of authentic learning, the Theory of Authentic Learning (ToAL) (Hill & Smith, 1998; Hill & Smith, 2005; Hill et al., 2013; Hill, in press) presents a holistic and encompassing theory that can be used as a theoretical framework for research into authentic learning. According to the lead researcher of the theory, Dr. Ann Marie Hill, the development of the theory spans across decades and has been coined different terms depending on the context, for example, industry projects and community-based projects, before becoming the ToAL (Hill, personal communication, January 15, 2015). However, the underpinning philosophical teaching and learning approach was always focused on connecting what students learned in school to how the knowledge was useful in professional practices.

Dr. Hill began with the creation of curriculum for a design program at a Canadian college where the curricular underpinning focused on connecting what students learned in college to how the knowledge was useful in the design industry (Hill, personal communication, January 15, 2015).
This philosophical teaching and learning approach was then applied to guide future technology education teachers across a wide domain of technologies (for example, Automotive, Construction, Design, Manufacturing to list a few). Through various qualitative and comparative studies in Ontario and British elementary classrooms, the findings continuously demonstrated the importance of linking students’ learning practices to practices of professionals (Hill & Anning, 2001).

The early work laid the foundation for the ToAL, as more recent studies continued to use qualitative methods to collect data - interviews with students and instructors, journals, syllabi, and observations - and together were representative of the students’ and instructor’s lived experiences (Hill, personal communication, January 15, 2015). Re-examining both past and recent data sets led to the development of the theory. In Hill and Smith’s (1998) study, four factors (situatedness, mediation, embodiment, and distribution) and two supporting factors (motivation and multiple literacies) of ToAL emerged. The factors were later confirmed in Hill and Smith’s (2005) preliminary reporting of a three-year long study on students from three different high schools with three different technology education programs, adding four more factors to the theory (identity, career planning, human relationships, and teacher attribute). Hill et al. (2013) then examined the curricular experiences of four students with disabilities, interviewing parents, educational assistants, and administrators, in addition to interviews with teachers and students. The results of this study added two more factors to the theory (support network and program). Hill (in press) presents a summary of the work on the ToAL, and provides examples for each factor. As of today, there are 12 factors in total, see Table 2 for the full description of each factor.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situatedness</td>
<td>is from Situated Cognition Theory (Brown et al., 1989), and is a critical feature of Authentic Learning emphasizing “learning in context”. It argues knowledge is largely situation specific and little transfer occurs automatically (Cobb &amp; Bowers, 1999; Greeno et al., 1991; Lave 1988; Newmann &amp; Wehlage, 1993)</td>
</tr>
<tr>
<td>Classroom practice: Students engage in open-ended problem solving taking into account all stakeholders involved in the decision making process, making the learning situated in the real-life context</td>
<td></td>
</tr>
<tr>
<td>Mediation</td>
<td>is the use of cultural tools to engage in cultural tasks (e.g., language, computers, etc), and some cultural tools can “literally carry intelligence in them” such as computers (Pea, 1993, p. 53).</td>
</tr>
<tr>
<td>Classroom practice: Students use the tools in the same manner as employees would use the tool in the professional practice as they learn about it instead of instructors lecturing on the tool and students using the tool months later out of context</td>
<td></td>
</tr>
<tr>
<td>Embodiment</td>
<td>involves body and mind as central parts of learning, embracing cognitive, emotional, physical, and social dimensions. The factor contrasts traditional cognitive philosophies on learning which focus on the person’s mind and separates it from the body. It builds upon Dewey’s notion of “learn by doing”, focusing on the physical movements, the body interacting with the learned material just as much as the mind is.</td>
</tr>
<tr>
<td>Classroom example: Students engage in the activity in groups and test things out on their own as opposed to listening to instructors explain an activity</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td>learning is not isolated within in the individual but extends to others, for example working collaboratively with others, observing others, and guided participation (Newmann &amp; Wehlage, 1993; Pea, 1993; Vygotsky, 1978).</td>
</tr>
<tr>
<td>Classroom practice: Students work collaboratively with others to reach a final outcome and receive feedback from peers instead of only the instructor</td>
<td></td>
</tr>
<tr>
<td>Motivation (to learn)</td>
<td>is students’ internal drive and desire for achievement in given domain, including supporting students’ self-esteem (Beane &amp; Lipka 1984; Harter, 1986).</td>
</tr>
<tr>
<td>Classroom practice: Allowing students to identify problems of interest to them and problem solving in real-life contexts for solutions</td>
<td></td>
</tr>
<tr>
<td>Multiple Literacies</td>
<td>is the range of different capacities of learners according to Gardner’s (2003) Multiple Intelligences, which includes logical-mathematical, linguistic, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, naturalist and existential, emotional, spiritual, sexual, and digital intelligences, and represents multiple ways of making sense in the world and deliberately fosters them in the learning context</td>
</tr>
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</table>
### Classroom practice

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Identity</td>
<td>Personal growth and development of sense of self.</td>
</tr>
<tr>
<td>Career Planning</td>
<td>References to the future (e.g., further education, careers, etc).</td>
</tr>
<tr>
<td>Human Relationships</td>
<td>Expressions of being with others (especially peers), gaining social support from peers, and developing relationships as a result of social interactions with others (Newmann &amp; Wehlage, 1993; Pea, 1993).</td>
</tr>
<tr>
<td>Teacher Attributes</td>
<td>Facilitator, personality, and interest in students.</td>
</tr>
<tr>
<td>Support Network</td>
<td>Structure of an individual’s social relationships including family, friends, academic supports, and clubs (Anstey, 2016; Hill, in press)</td>
</tr>
<tr>
<td>Program</td>
<td>Intended, enacted, and assessed curriculum, and ways in which the curriculum is communicated (i.e., course description, syllabus). This factor includes the elements of the curriculum and their influence on the instructor and students. (Anstey, 2016; Hill, in press).</td>
</tr>
</tbody>
</table>

### Current Study

From the 130 articles and chapters considered in this literature review, a few themes have emerged: the reasons for the popularity of AuL, issues around authenticity (real vs realistic problems), guided vs directed instruction, and who determines authenticity. There is a strong trend towards developing implications of AuL through teaching and learning strategies, and although there are many consistencies in the usage of AuL, there are also differences. A noticeable absence in the literature appears to be a discussion on the physical learning environment. Although this is
often mentioned briefly in the methods section of the articles, it is rarely discussed in the rest of the article. With “learning in context” as a central component of AuL, the lack of consideration to the physical learning environment, its influence on planned and enacted curriculum, and its impact on instructors’ and students’ teaching and learning experiences is surprising.

The Active Learning Classroom (ALCs) is the ideal environment to conduct an in-depth investigation on the influence of learning spaces on AuL. It is a space shown to facilitate more interactive learning experiences than other learning spaces, and perhaps it also fosters AuL experiences. As mentioned in Chapter 1, most studies on ALCs have collected data through anecdotes and multiple choice surveys. It could be strongly argued that this is not enough to understand students’ experiences to make conclusions about whether their learning is authentic. At the location of this study, instructors have been fortunate enough to be able to choose to be in the ALCs rather than be assigned to them like at many institutions. In this study, instructors needed to demonstrate how their courses would utilize the components of these rooms to benefit their teaching and students’ learning in order to be able to use these rooms, which is done through applications before the start of the semester. So far, preliminary observations and studies I have conducted on the teaching and learning in these rooms have shown instructors and students embody many, if not all, of the themes and characteristics of AuL. However, this study formally conducts research to determine if learning in an ALC represents authentic learning. For the purposes of this study, the theoretical framework of Hill and colleagues’ ToAL was used to guide the research. Hill and colleagues’ definitions of each factor in the ToAL have been further extended using the literature review from this chapter. Table 3 is representative of the collated definitions of the 12 factors of the ToAL.
<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
</tr>
</thead>
</table>
| Situatedness           | • emphasizes “learning in context” because knowledge is largely situation specific and little transfer occurs automatically  
                          • Real (Barab et al, 2000) vs realistic contexts (Wolley & Jarvis, 2007)  
                          • Instructor provides the authentic context for students to learn in (Herrington et al, 2014)  
                          • increases learning efficiency (Huang, 2011)  |
| Mediation              | • is the use of cultural tools to engage in cultural tasks and some cultural tools can “literally carry intelligence in them” such as computers  
                          • using educational technology to convey information to multiple cohorts of students (Woolley & Jarvis, 2007)  |
| Embodiment             | • involves body and mind as central parts of learning, embracing cognitive, emotional, physical, and social dimensions  |
| Distribution           | • learning is not isolated within in the individual but extends to others, for example working collaboratively with others, observing others, and guided participation  
                          • students work together on authentic tasks and construct knowledge as a result of collaboration (Herrington, et al, 2014)  
                          • students engage in multiple roles and take on different perspectives from different stakeholders (Herrington, et al, 2014)  |
| Motivation (to learn)  | • is students’ internal drive and desire for achievement in given domain, including supporting students’ self-esteem  |
| Multiple Literacies    | • is the range of different capacities of learners and represents multiple ways of making sense in the world and deliberately fosters them in the learning context  |
| Identity               | • personal growth and development of sense of self  |
| Career Planning        | • references to the future (e.g., further education, careers, etc)  
                          • instructor can act as a link to professional practices students are interested in (Andersson & Andersson, 2005)  |
| Human Relationships    | • expressions of being with others (especially peers), gaining social support from peers, and developing relationships as a result of social interactions with others  |
| Teacher Attributes     | • facilitator, personality, and interest in students.  
                          • Instructor’s approach to teaching models expert performances, coaches and scaffolds students’ learning at critical times (Herrington et al, 2014), acts as a link to communities of professional practices (Andersson & Andersson, 2005)  
                          • Guided (Renzulli et al., 2004) versus direct instruction (Kirschner, et al., 2006)  |
| Support Network        | • structure of an individual’s social relationships including family, friends, academic supports, and clubs  |
Next, Chapter 3, Methodology and Methods, outlines how the research was framed, how the data was collected, and how the data was analyzed.
Research Methodology

A qualitative research methodology was used for the study because it generates understanding of the experiences and perspectives of individuals in a complex natural setting (Creswell, 2013). More specifically, a social constructivist framework was used to collect and interpret the data which is consistent with the methods used in the Authentic Learning (AuL) literature. The framework states that experiences do not occur in isolation but rather in our lived experiences that are composed of multiple realities and co-constructed with people with whom we interact (Creswell, 2013). Furthermore, since the focus of the study is on students’ and their instructor’s lived experiences, a narrative inquiry approach was taken, specifically in the interviews, in order to understand their experiences narratively (Clandinin & Connelly, 2000). A combination of classroom observations, interviews, and students’ artifacts were used to collect data for the proposed study.

This study was approved by the university’s ethics committee prior to the commencement of the research. Appendix A presents the letter of ethics approval signifying the study is in accordance to the university’s ethics protocol on human participants. Appendix B contains the researcher’s (my) certificate of completion of the ethics training. Appendix C and D are the letter of information and consent for the instructor of the course and students participating in the study. All participants read and signed the letters before the data collection began. The remainder of this chapter describes the research design, gaining entry, methods used to collect data to answer the research questions, strategies used to increase validity of the findings, researcher bias, the approach used for data analysis, and an overview of the context of the course.
Case Study Selection

A single case study approach (Flyvbjerg, 2004; Ragin & Becker, 1992) was used because it allowed the researcher (me) to describe a specific event bounded by time and place (e.g., an undergraduate course taught in an ALC) and within a real-life classroom setting (Yin, 2013), thereby preserving the holistic complex nature of the event (Creswell, 2013). The study was conducted at a medium sized university in Canada. The purposeful selection of the case was completed after reviewing all applications over the past two years to use the ALCs at the university, and the syllabi of these courses attached to the application. The course selected for this case study is an interdisciplinary upper year undergraduate ethics course which will be referred to as the pseudo name ETH300. The course was chosen because of the instructor. The instructor has received several teaching awards, was actively involved as a research participant on studies concerning teaching and learning practices in higher education, and taught the selected course on two occasions in an ALC before the start of the study. From my pre-study observations of a previous iteration of the course, I noticed characteristics of AuL in this course as portrayed in the literature. Core to this course, students analyzed case studies in groups using the tools and features in the ALC classroom to explore various ways practitioners address professional issues. The course took place once a week on Fridays from 11:00 am to 2:00 pm in the winter semester. The instructor agreed to allow for this study to be conducted on this course and for me to be present each class for observations so I could document the nature of learning in this classroom. This data source, along with individual semi-structured interviews with the instructor and students conducted outside of class time, and the collection of student artifacts, allowed for the triangulation of data.
Gaining Entry

The instructor allowed me to attend the first day of the course to inform students about the study and that recruitment would occur once ethics approval was obtained, which ended up being right before week 7 of the course. I described the purpose of the research, the type of data collected, and ensured students of confidentiality and anonymity should they participate in the study. With regard to interview data, I informed students that interviews would be recorded and that they would have the chance to read, review, and edit their interview transcripts. With regard to my classroom observations and notes, I assured the students that anything they said in class would not be recorded in any form unless they gave permission for it to be included in the study. After my presentation, I invited students to ask questions or express concerns they had. The instructor was present during my presentation, and the instructor further assured students that their decision to participate or not participate in the study would not be known to the instructor nor would it have any impact on their grades. Despite not having ethics approval until week 7, the instructor invited me to attend each class and experience the course structure first hand. I initially sat at an empty table away from the students but the instructor insisted I sit and participate in the class activities with the students. I developed an informal peer relationship with the students over the weeks before data collection officially began, sitting at a different table each class. This may have resulted in students’ decisions to participate in the study, as I had no difficulty with student participation when the study began.

During week 7, the instructor read and signed the Letter of Information and Consent form (Appendix C), and in class I again addressed the students. This time the purpose was to recruit students through the Letter of Information and Consent form (Appendix D). The instructor was outside of the classroom to maintain confidentiality. All students in the class had the opportunity to participate in the study on a completely voluntary basis (28 students were in class the day of
recruitment, with 34 enrolled in the course). The aim was to recruit 10 participants. I was fortunate that 10 students agreed to participate in the study on a voluntary basis. Student participants were compensated with $40 for their time after all of the required interviews have been completed. The instructor was not informed which students were participating or not participating in the study. Scheduling of interviews was done with individual emails between me and the student outside of class time.

**Data Collection**

Multiple data sources—classroom observations, interviews, and student artifacts—were used to collect data for the proposed study. The following sections describe each data collection method, and strategies used to increase validity of the findings.

**Classroom observations.** As the researcher, I initially planned to conduct unobtrusive observations to document the nature of learning in this classroom by sitting at a separate table from the students with a developed observational protocol (see Figure 3). My intent was to record, in writing, events over each class session under the headings of time, descriptive notes, and reflective notes/memos at the end of each class session to summarize overall thoughts on the observations (Creswell, 2013) (e.g., working in groups, working on screens, working individually, etc.). The observation notes would allow for triangulation of data with the instructor data, student data, and student artifacts (described in the next sections) by corroborating all collected evidence (Erlandson, et al., 1993), hence, adding validation to a holistic understanding of authentic learning in the ALCs.
As a result of the nature of the learning environment and my unofficial unobtrusive observations and participation in class since day one of the course (something the instructor had requested that I do from the beginning of class, not week 7 after ethics approval and recruitment), I became a familiar person in class. I sat with different student groups each week, participating in class activities, and contributing to the discussions. When ethics was approved and I had my official 10 participants, I completed the pre-planned observation protocols during and after class from week 7 to week 12. My role changed from unobstructed observer to a participant observer, and as such, I completed the readings and assignments to be able to understand the content and the learning experience from a student’s perspective.

**Interviews.** In addition to the observations, individual semi-structured interviews with the instructor (see Appendix E) and the 10 participants (see Appendix F) using interview guides were conducted outside of class time.

**Interviews with the instructor.** Three semi-structured interviews of 90 minutes were conducted with the instructor. The interviews took place in the instructor’s office and were audio recorded. The interview questions were meant to evoke the instructor’s experiences in designing the course for the classroom and the instructor’s impressions of students’ experiences in the classroom. The interviews were scheduled as follows:
Interview 1: Before student interviews - February 23

Interview 2: After course completed - April 6

Interview 3: After completed course marking and received USATs - May 5

In Interview 1, the questions focused on how the instructor designed the course for the new semester including any changes made from previous semesters, expectations and impressions of students’ learning so far, and impressions on how classroom facilitated authentic learning opportunities for the students. The second interview occurred after the course was completed and student interviews were completed. The interview questions focused on the instructor’s overall experience in teaching the course over the term and the instructor’s impressions about the students’ learning as a result of being in this classroom. After the final assignment was marked and USAT results were given to the instructor, a third interview was scheduled to go over the USAT results (provided in a summary format as well as individual anonymous comments) and discuss the instructor’s overall impressions of the course as a whole, including the final assignments which the instructor designed to evaluate students’ learning of the course material. See Appendix C for the Instructor Interview Guides.

After each instructor interview, I made notes to record impressions of each interview and highlighted points that could be asked at subsequent instructor interviews and student interviews. Each audio recording was transcribed before the next interview and sent to the instructor for member checking. The instructor was able to modify or remove information to increase confidentiality of their identity and the identities of the students in the class. No changes were made, but the transcriptions further prompted questions for subsequent interviews with the instructor as well as questions for the interviews with students.
**Interviews with students.** Students were invited to participate in three 60-minute interviews. The interviews took place in a quiet central location on campus outside of class time determined by the researcher (me) and were audio recorded. During these interviews, participants were asked about their learning experiences in this classroom and connections they made from their course learning to life outside of the classroom, such as future careers. The purpose of these interviews was to capture students’ voices and stories of their learning experiences in the course and the ALCs. At the end of the three interviews, participants were compensated with $40 for their time. The individual interviews were scheduled as follows:

<table>
<thead>
<tr>
<th>Interview 1</th>
<th>Feb. 29</th>
<th>March 1</th>
<th>March 2</th>
<th>March 3</th>
<th>March 4</th>
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<tbody>
<tr>
<td></td>
<td>Anna</td>
<td>Danielle</td>
<td>Felicity</td>
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<td></td>
<td>Charlotte</td>
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<th>March 15</th>
<th>March 16</th>
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<td>Charlotte</td>
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<td>Brie</td>
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</table>

<table>
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<tr>
<th>Interview 3</th>
<th>April 1</th>
<th>April 4</th>
<th>April 5</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Charlotte</td>
<td>Isabel</td>
<td>Anna</td>
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<tr>
<td></td>
<td>Danielle</td>
<td>Hannah</td>
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<td>Felicity</td>
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<td>Jennifer</td>
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Interview 1 focused on student background to establish a student profile (e.g., year of study and program), why each student took the course, their prospective careers, whether they have taken courses in ALCs in the past, and to begin the initial documentation of their learning experiences in the course and the ALC. In interview 2, students were asked about more specific activities involving the features of the classroom that influenced their learning and life outside of the course...
(in March date range). In interview 3, students were invited to think about their overall experiences in the course and classroom and connect it to life outside of the course. Participants provided copies of their artifacts (described later in this chapter), and were asked to look at what they wrote over the course of the term to remind them of any other learning experiences that had an impact on them.

After each student interview, I made notes on my impressions during the interviews, including points that stood out and/or connected to theories of AuL, terms and questions participants were confused by and should be reworded, and questions that should be asked at the next interview with the participant or other participants. The audio recording was transcribed and sent to the students for member checking. Students were asked to review it to determine the accuracy of the summary and if there is information they would prefer removed to protect their confidentiality. No changes were made, but the transcriptions further prompted questions for subsequent interviews, as well as revisions of terms used in the interview questions to match student language.

**Strategies to increase validity of findings.** Kvale and Brinkmann (2009) highlight major challenges in conducting interviews including developing a good relationship with the interviewee and for the interviews to accurately reflect the interviewee’s thoughts. In developing a good relationship with the instructor, it was important to select someone who was confident and comfortable in teaching practices in the ALCs, and was open to discussing teaching with researchers. The selected instructor was an active participant in research studies both at the university and abroad, and has previously worked on projects with me, thereby establishing a good working relationship coming into this study. Every effort was also given to ensure the study focused on documenting and reporting the instructor’s teaching practices instead of judging them
positively or negatively (McMillian & Schmacher, 2010). As for students who voluntarily agreed to participate in the study, developing a relationship may be more difficult than with the instructor of a course because they may not have an incentive to continue participation when they became busier over the term. A small monetary incentive was given at the end of the study, which may have increased retention of participants (Creswell, 2013). As it turned out, student participants willingly remained in the study and were enthusiastic to express their views and experiences.

Placing the participant, regardless of whether they were the instructor or student, at the center of the interview was also essential to demonstrate to the participants they were a pivotal part of the research. Leading questions were avoided, the interviewer’s personal impressions were withheld, and the emphasis of the interview was on the participant’s own lived experiences. After each interview, the audio recordings were transcribed and given to the participant to review for the purposes of member checking (Creswell, 2013), and to determine if there was any information they would prefer removed to protect their confidentiality.

At the end of the final interview, all participants were debriefed about their experiences in the study, in other words, they were given the opportunity to reflect and express their experiences with the interviews. The instructor commented that the interviews allowed for the opportunity to reflect deeply on the course in ways not normally attended to, and this, the instructor stated, would improve the next implementation of this course and other courses the instructor taught. All student participants expressed very positive experiences with the interviews, including how it helped further their understanding of the course by allowing them to reflect on their learning in an open and judgment-free environment. Also, students stated that they enjoyed the interviews because it was focused on them rather than asking them about their impressions of other students, and noted the less structured nature of the interviews removed the pressure on them to say “right” answers.
A number of students added that if the interviews had been highly structured and with directed questions, they would not have continued in the study. The next section describes the student artifacts collected as another form of triangulating the data.

**Student artifacts.** Since students were not interviewed until half way through the course, it was possible that earlier completed activities influenced their later learning experiences, but they had potentially forgotten details of the earlier activities when interviewed. Therefore, the instructor suggested that I ask participants if they could provide me with a copy of their exit cards from earlier activities. Exit cards were located on the reverse side of their name tags and are not graded or tied to their marks. They were meant to give the instructor an idea of their experiences during each class session, and challenges they were facing with course content and assignments in order to help the instructor adjust the course structure to improve students' learning experiences. All participants agreed to share the early activity exit cards with me, and were reminded at the end of the second interview to take a photo of their exit cards during class break of the final class and email them to me. The instructor was outside of the room for this research activity. During the final interviews, students’ digital images of their exit cards were used to elicit additional dialogue in their interviews. Therefore, the exit cards were treated as part of the transcripts.

**Addressing Researcher Bias**

Having had my own learning experiences in an ALC, it was important for me to keep an open mind, listen, and retell the participants’ own personal experiences instead of interpreting them based on my experiences. For instance, during my graduate courses instructors only lectured in the ALC and I found this to be an inadequate use of the space. I needed to be open to what students may say in interviews, even if they were talking about lectures in an ALC. In addition, by engaging in numerous research projects on ALCs over the years, I become increasingly exposed
to various perspectives and lenses to the world that I had not used in reflecting on my own experiences. With this new wealth of knowledge, I had to be even more cautious about unintentionally projecting expectations from previous projects on to this study. To attend to potential bias in data collection and analysis, several precautionary steps were taken throughout the study, including my role during classroom observations, pre-planned observational protocol, member checking, and triangulation of data.

I initially planned to take the role of an unobstructed observer but ended up as a participant observer in the class, a testament to how difficult it was to not be a participating member in this learning environment. The prolonged engagement and persistent observation in the learning environment aimed to “built trust with participants, learn the culture, and check for potential misinformation that stems from distortions introduced by the researcher” (Creswell, 2013, p. 251).

A pre-planned observational protocol was developed before the observations to record the time of events or activities, document descriptive notes, and write reflective notes. This protocol was used from week 7-12. The notation of time provided a record of events during each session by noting the length of time spent on each activity or event. The descriptive notes documented what was occurring in the class (activity or event), what the instructor was doing, and what the students were doing (e.g., discussing in groups, working independently on paper, using the screens to record answers, etc.). The reflective notes documented my interpretations, perspective lens, and biases that may influence what was observed and what lens was used during each observation and interview. This increased the likelihood that biases would be acknowledged during data collection and was taken into account during data analysis and the summary of the findings (Creswell, 2013).

Member checking was used to help ensure accuracy of the interview data by presenting the transcripts of the interviews for participants to review. According to Lincoln and Guba (1985), this
is “the most critical technique for establishing credibility” (p. 314) of qualitative research. It allowed participants (instructor and students) to “play a major role in directing as well as acting in case study research” (Stake, 1995, p. 115), especially in this study where the instructor and students’ lived experiences were crucial components of the research. The technique enabled participants’ voices to be heard and increases the accuracy of the study, and further reduced potential researcher bias (Creswell, 2013).

Triangulation of data was used in data analysis to corroborate evidence from different sources (Miles & Huberman, 1994) and to form a holistic understanding of the learning experiences in the ALC. According to Erlandson et al. (1993), the greater the convergence and overlap attained through triangulation suggests greater confidence in the gathered information and interpretation of findings. The multiple sources of information enhanced meaning and provide description of the events in the classroom and perspectives from the participants. Each step of data collection and data analysis was documented using memos to keep an audit trail of the research process (Erlandson et al., 1993) and this could highlight potential researcher bias throughout stages of the research (Creswell, 2013).

**Data Analysis**

In order to address the first two research questions – (1) From the instructor’s perspective, what reasons lead to a decision to teach in an ALC and how was a course planned and enacted in this classroom environment? (2) From the students’ perspectives, what are their learning experiences in a course taught in an ALC? How does it compare to their learning experiences in traditional learning spaces such as lecture halls or seminar rooms? What have they taken away from this experience? – an analysis of narrative was used to analyze the data of each individual and present each individual as a case. Since “experience happens narratively” (p. 19), the aim of
the data analyses was to illustrate each participants' unique lived experiences, to “show rather than tell” (p .20) the experiences (Clandinin & Connelly, 2000). Analysis of narrative takes the participant’s narratives (i.e., the interview data) and draws out common elements or themes in the narratives to make them accessible to readers, and for readers to then apply the themes to their own contexts (Polkinghorne, 1995).

**Analysis of narrative.** In order to draw out the themes from the data, data sets were created for each participant in isolation of other participants. These data sets were composed of original transcripts, students’ exit card (student artifacts), the course USAT summary, and observation notes made during interviews. Since the observation notes of the class sessions did not document behaviors or actions specific pertaining to a specific student but more generally described the activities of each class session, they were kept in a separate data file and referred to when more information was needed, such as description of a specific activity. The data sets of each participant were coded for emerging themes using the following steps.

1) Data from each participant was compiled.

2) Data set of each individual participant was read thoroughly.

3) Interview observation notes were read thoroughly.

4) Initial coding: In the second reading of each participant’s data set, ideas in segments of the data were summarized or condensed into descriptive codes. This allowed for repetitive patterns to emerge, ideas to be linked, and retold more sequentially than in the original data collection process (Saldana, 2015). Figure 4 on the next page provides an example.
5) Grouping/recoding: Repetitive patterns were identified, codes were grouped together, and codes then were recoded as necessary to make sense of the ideas (Brune & Clarke, 2006).

Figure 5 provides an example.
6) Searching for themes: The list of codes for each individual participant was then compiled together and sorted based on their relationship with other codes, with the aim of finding potential themes through collating relevant codes and further categorizing larger more encompassing themes and sub-themes (Braun & Clarke, 2006).

7) Reviewing themes: The set of themes for each individual participant was then reviewed and refined (Braun & Clarke, 2006) with the aim of having 3-5 themes per case.

8) Cross reference system: Quotations that demonstrated the richness and uniqueness of the student’s experience were incorporated. A reference is provided after each direct quote indicating the location of the quote in the transcript. The location of direct quotes and quotes from artifacts were noted for purposes of being able to cross reference the data. See Table 4 for the data coding protocol that was used.

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Cross Reference System</th>
<th>Example</th>
</tr>
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<tbody>
<tr>
<td>Interview</td>
<td>1/2/3, participant ID, line number(s)</td>
<td>Interview 1, student A, line 5-7 would be: (1A: 5-7)</td>
</tr>
<tr>
<td>Exit card</td>
<td>C, participant ID, and date</td>
<td>Exit card, student A, Jan. 29 would be: (CA: Jan. 29)</td>
</tr>
</tbody>
</table>

9) Reporting: Pronouns referring to the instructor were removed and replaced by “the instructor” or “the prof” to protect the instructor’s identity. Pseudo names replaced all real names in the narratives. Each case (participant story) begins with a paragraph describing the participant and an overview of the themes that emerged from the analysis of their data set, followed by an exploration of the themes, and a concluding summary. The cases are presented in Chapter 4 beginning with the instructor’s case –part 1, then the 10 students cases A-J, and closing with the instructor’s case –part 2.
To address the third question – (3) Do the student learning experiences in an ALC represent Authentic Learning? If so, what influence does the learning environment have on Authentic Learning? —a deductive analysis approach consisting of classic content analysis, componential analysis, and constant comparison analysis was used. These approaches are commonly used in qualitative data analysis and each offers a different way of inferring meaning from the data. Classic content analysis focuses on the number of times each code is used which may be helpful to determine which concepts are important or not important to the participants, while componential analysis uncovers relationships between codes (Leech & Onwuegbuzie, 2007). Constant comparison analysis then examines content analysis and componential analysis together to provide a larger picture of the data, leading to addressing overarching questions such as “Do the student learning experiences in ALC represent Authentic Learning”, by utilizing the entire set of data (Leech & Onwuegbuzie, 2007). Leech and Onwuegbuzie (2007) suggest using at least two types of data analysis tools as this will improve the rigor of the data analysis. Each analytic tool has its own strengths and offers a slightly different vantage point that allows the researcher to extract more meaning from the same data set.

Due to the volume of data, a computer-based qualitative analysis program called NVivo was used to maintain accuracy and transparency in data analysis process (Leech & Onwuegbuzie, 2007). NVivo allows the researcher to keep a record of codes used in analysis from earlier transcriptions to ensure consistency in coding procedures for remaining transcriptions, thereby increasing the reliability of the analyses (Creswell, 2013; Leech & Onwuegbuzie, 2007). The program also has the capability of creating reports on the frequency in usage of each code (i.e., classic content analysis) within each data set and across the entire data sets, as well as matrices showing overlapping coding (i.e., componential analysis). As Hill’s, and Hill and colleagues ToAL
was used as the theoretical framework that guided the study for the determination of whether learning in an ALC is authentic, the 12 factors of ToAL from Hill, and Hill and colleagues (see Table 3, p. 32), were entered into the program as “nodes” which is NVivo’s term for codes. For each node, the definition of the node was added into the program to ensure coding would remain consistent. All the cases were then uploaded into the program as separate files.

After the coding of each data set (individual participant case) was completed, the coded portions were reviewed and refined for consistency. In some cases, definitions were expanded to include new ideas not in the original definitions. In these cases, the new definitions were added to the node’s definition and all previous data sets were recoded to include the new definition. More than one node could be applied to a single sentence or idea. Reports were then created on frequency of usage of each code within the narrative and across all the narratives (i.e., classic content analysis). A matrix analysis report was also created to look for frequency of overlapping coded content (componential analysis), which helped to refine the definitions of each factor. Taking both analyses into account, constant comparison analysis was then used to amalgamate the findings in Chapter 5.

The next section provides an overview of the curriculum for ETH300, the context, the structure of the course and each class, and brief descriptions of the participants.

Context

Description of the Course. The context of the study was a third year interdisciplinary ethics course, named ETH300 for the purposes of this study. It took place on Friday afternoons from 11:30 to 2:30pm in the winter term of 2016 in an ALC. There were other courses scheduled before and after ETH300 as a result of the popular demand for the ALCs. For all the students in ETH300, this was their last course each week, making the thought of dropping the course or
skipping classes for a longer weekend very appealing to students. The course was not required for any program. Instead, it was opened to all university undergraduate programs and was an elective course for students. The only prerequisite was that students needed to be in the third or fourth year of study. Most students took ETH300 as an elective or to add to their requirement of an upper year course.

**Course Structure.** The structure of ETH300 was largely case based and highly interactive, with each class session focused on at least two ethics cases. The first half of the course focused on theories in ethics in order to build the foundational knowledge students needed to later apply to cases with ethical issues. In the first half of the course, the instructor lectured more frequently than in the latter half of the course, but the lectures remained short (no more than 10-15 minutes) and were followed by cases or hypothetical scenarios to demonstrate the theories in practice. The second half of the course was composed of mostly case-based learning and little to no formal lectures. In one of the classes, the instructor showed a movie which highlighted many of the ethical issues discussed in class. This viewing was tied to one of the assignments.

Students were evaluated based on class engagement (30%), four short written assignments which were spread throughout the course (40%), and a final take home exam (30%). Class engagement included evidence of pre-class preparation such as reading and responding to the case studies, completing weekly reflections on the back of their name cards, contributions during small group discussions, and the nature and content of contributions in large class discussions. The instructor emphasized valuing one or two highly well-directed comments to move the discussions forward over lots of comments with less focus. The four short written assignments asked students to write: a summary paper highlighting three important points from a historical book documenting ethical issues in the 18th century, a reaction paper to a movie students had to watch outside of class
time, a memo on the implementation of an ethical document in students’ selected workplace, and an op-ed piece defending a pre-assigned side of an ethical issue. The final take home exam gave students the opportunity to find a recent case dealing with ethical issues in the context of the course. Students could write the case in any format they wanted, but most followed a case study format similar to the ones they learned about in the course.

**Case Studies.** The case studies were typically four pages long and were considered “armchair case studies”. This means that they were based on a real case containing an ethical issue, with factual information on relevant stakeholders, framed using a fictional character highlighting their job and stance on the ethical issue, and concluded with questions asking students to identify the ethical issues and to suggest what the character should do to resolve the issues. This is in contrast to a field case study where cases are written based on on-site interviews with stakeholders and require the organization’s approval to move forward with writing about the case (to read more about the different types of cases see [http://www.hbs.edu/faculty/research/Pages/case-development.aspx](http://www.hbs.edu/faculty/research/Pages/case-development.aspx)). The case studies in ETH300 were written by the instructor and research assistants following case study guidelines from Anderson, Schiano, & Schiano (2014), Ellet (2007), and Leenders, Mauffette-Leenders, and Erskine (2001). The instructor explained during the instructor interview that engaging with field case studies would be very interesting, but it was not necessarily adding substantial value, “The outcome of this course was steps to thinking ethically. To me using cases already done works because they can evaluate it. A lot of this stuff happening in the states on transgender washrooms is on religious freedom. If it happened 3 months earlier we could have had that conversation for more of the semester but there is no solution yet. It’s hard to know and design a course around that” (In3: 109-113).
**Class Structure.** In most classes, students arrived having read and responded to the case studies posted on the learning management system for the course. Students often sat anywhere they wanted in the classroom, but most gravitated towards sitting at a table with students already seated, occupying about 6 to 7 tables out of the 10 tables in the classroom. Occasionally, the instructor had students sit at tables based on the colour of their name card. There were six colours, therefore six tables of students.

At the start of a class session, the instructor provided a brief overview of the activities and cases. Sometimes the instructor would start with a short lecture on theories in ethics using a PowerPoint presentation projected onto the screens, or else went right into the case studies. For the case studies, students worked in their groups at the tables to respond to the case questions or asked a different set of questions pertaining to the cases. Students discussed, in groups, their opinions of the case and recorded their responses on the smart board using Word, or writing on the interactive screen using the whiteboard function. The instructor would circulate to each group listening in, asking questions, or answering questions students asked. For some cases, instead of answering the questions, the instructor suggested students use Google to search for the answers. Students used their laptops or interactive screens to look up their inquiries or to find more information about the cases.

The instructor provided a concrete goal for all of the small group discussions, and a time limit of 20 to 30 minutes. Following the small group discussions, the instructor opened the discussion to the whole class, allowing each group a turn to discuss their solution or list one out of their three points. The group’s screen would be projected to all the screens so other groups could see their responses. After a group shared their thoughts, discussion was opened to the class for other groups to respond, or the class activity moved on to the next group. At the end of the class
discussion, the instructor often provided additional information about the case, such as the results of the actual case, the ramifications of the results on to other cases, and current cases in the media. After a short class break, another case was discussed following the same procedure. The class concluded with a discussion on how the two cases were related, a comparison and contrast of the ethical principles in the two cases, how the cases represented ideas and knowledge learned in the course, and a brief discussion on the next class session’s topics.

**Assignment discussions.** In class sessions where an assignment was due, students were expected to submit a copy electronically prior to class through the learning management system and to bring a hard copy to class. Instead of beginning these classes with the cases, the instructor had students talk about their responses to their assignments at their group tables by referring to their hard copies. In groups, students would need to come to a consensus on at least three important points from their assignments or answer a new question putting the ethical issue addressed in the assignment in a new context. Following the discussion in small groups, a large whole class discussion allowed each group to share the main points from the small group discussions. For some of the assignments, the instructor had students write comments, reactions, or reflections from their small group discussions on the back of their assignments before handing it in.

After a short break, the class session resumed engaging in a case given as a pre-reading for the class time or given as a handout to quickly read over. The same discussion procedure followed described earlier was used to pack the second case content. At the end of the class session, the instructor concluded by highlighting connections between the assignment and the cases, and how they linked to course content. At the end of each class, students wrote a few sentences on the back of their name cards referred to as exit cards, where they reflected on what they took away from the class. The instructor read each card after the class and provided brief comments to students inquires
or reflections on the name cards. If many students provided the same comment or inquiry, the instructor often shared this at the start of the following class. The name cards were not graded but contributed to the evaluation of their overall class engagement.

**Course Schedule.** An overview of the course schedule is provided in Table 5.

Table 5. Course schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Case Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>January 8</td>
<td>Introductions for instructor and students, introduction to real workplace cases and types of ethical issues that can arise</td>
</tr>
<tr>
<td>2</td>
<td>January 15</td>
<td>Fictional ethical scenarios- introductions to ethical principles, fun “pop quiz” on student’s own ethical principles and stood next to score written on the smart boards, more fictional ethical scenarios</td>
</tr>
<tr>
<td>3</td>
<td>January 22</td>
<td>Unpacking Adam Smith (ethical theorist) assignment</td>
</tr>
<tr>
<td>4</td>
<td>January 29</td>
<td>Furniture company case, religious fast food franchise</td>
</tr>
<tr>
<td>5</td>
<td>February 5</td>
<td>Unpacking movie students watched at home</td>
</tr>
<tr>
<td>6</td>
<td>February 12</td>
<td>Impact of depicting religious figures/ having controversial symbolisms at work</td>
</tr>
</tbody>
</table>
| 7    | February 26| Memo assignment discussion and mindfulness movement                          *
| 8    | March 4    | Fashion industry cases including clothing franchise case                     |
| 9    | March 11   | Watched movie during class                                                   |
| 10   | March 18   | Unpacking op-ed assignment, and bribery case                                 |
| 11   | No class   | Good Friday                                                                  |
| 12   | April 1    | Fast food case                                                               |

**Description of Participants**

**Instructor.** The instructor is a tenured professor in the School of Religion at a mid-sized university in Canada and was the Director of the department at the time of the study. The instructor
taught at the institution for the past 18 years and is one of the early adopters of the ALCs. Considered among many students and faculty as one of the institution’s best instructors, the instructor, to date, has a teaching career of 36 (18 of which were at this institution) undergraduate and graduate courses, has been awarded a number of teaching awards and honors, and is actively involved in student service and departmental groups on campus. Excelling in both teaching and research on teaching, the instructor has written numerous journal articles and notes on teaching and learning practices in higher education, contributed to the scholarship of teaching and learning, and won teaching grants. The instructor is widely recognized as an expert in the research content field through numerous professional affiliations, and in the field of teaching and learning. As such, the instructor is frequently invited to present workshops and sessions on pedagogies in higher education at the institution, other institutions, and international conferences.

In regard to the ethics course examined in this study, the instructor developed and taught the course at another institution for four years prior to teaching it at this institution for another four years, two of which were in an ALC. The course has received the Responsible Leadership Course in the Arts & Science Responsible Leadership Certificate Program, which ensures the content taught in the course prepares students for the workplace. According to the instructor, this course has changed significantly over the years as a result of the physical classroom environment. In the narratives, the instructor describes that these changes are due to the influence of the classroom environment, the students, the instructor’s lived experiences, and the changes the instructor makes in each iteration of the course.

**Students.** Demographics from the 10 students in the study, including their program, year of study, career path, and prior experience learning in ALCs, are outlined in Table 6. Following
the table is a brief description of each student deemed from my initial impression and interactions with each student.

Table 6. Students’ demographics

<table>
<thead>
<tr>
<th>Name</th>
<th>Program</th>
<th>Year</th>
<th>Career</th>
<th>Prior experience in ALC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna</td>
<td>Nursing</td>
<td>3</td>
<td>Nurse</td>
<td>Yes</td>
</tr>
<tr>
<td>Brie</td>
<td>Religion studies</td>
<td>3</td>
<td>Kindergarten teacher or teaching</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>English abroad</td>
<td></td>
</tr>
<tr>
<td>Charlotte</td>
<td>Law</td>
<td>3</td>
<td>3-international student</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Global company, or newspaper</td>
<td></td>
</tr>
<tr>
<td>Danielle</td>
<td>Life Science</td>
<td>4</td>
<td>Law</td>
<td>Yes</td>
</tr>
<tr>
<td>Elsa</td>
<td>Concurrent Education</td>
<td>4</td>
<td>Elementary Teacher</td>
<td>Yes</td>
</tr>
<tr>
<td>Felicity</td>
<td>Religious studies</td>
<td>3</td>
<td>High school teacher and eventually principal</td>
<td>Yes</td>
</tr>
<tr>
<td>Grace</td>
<td>Religious Studies</td>
<td>4</td>
<td>Government agency- foreign affairs</td>
<td>No</td>
</tr>
<tr>
<td>Hannah</td>
<td>Religion studies</td>
<td>3</td>
<td>Spiritual counsellor</td>
<td>No</td>
</tr>
<tr>
<td>Isabel</td>
<td>Religion studies</td>
<td>3</td>
<td>Law- Public Relations</td>
<td>No</td>
</tr>
<tr>
<td>Jennifer</td>
<td>Psychology</td>
<td>3</td>
<td>Human Resources</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Details of the themes that emerged from each student case are discussed in a subsequent chapter, and are briefly mentioned below in the demographics of each student.

*Case A: Anna.* Anna was very nervous about taking a course outside of her discipline, especially in an ALC where she knew she would be expected to talk with the course’s discipline majors. After the first class, she realized the class was not about having better answers or more complex responses than her peers; it was about learning from her peers where the diversity of perspectives added to her and her peers’ learning experiences. Five themes emerged from Anna’s
case: Learn from peers in other disciplines, Classroom design, Instructor’s teaching approach, Rethinking a nursing case study, and Advice for teaching and learning in ALCs

Case B: Brie. Brie had taken courses with the instructor in the past and absolutely adored the teaching style. With her desired career as a teacher, she took great notice in how the instructor created an inclusive and safe classroom atmosphere where students could grow and flourish. Five themes emerged from her case: Classroom configuration influences instructor’s teaching, Classroom furniture enhances class activities, Articulating thoughts, Impact on teaching career, and Advice for teaching and learning in ALCs

Case C: Charlotte. Charlotte was an international law student on exchange from Japan for the school year, and until ETH300 was greatly disappointed by the lack of “Canadian” learning experiences. She nearly dropped the course to have Friday off, but after the first activity she was hooked. ETH300 gave her the “Canadian” learning experience she was looking for. Six themes emerged from Charlotte’s case: The “Canadian” learning experience, Discussion based course, Instructor sets up discussions, Diverse perspectives, Need ALCs in Japan, and Advice for teaching and learning in ALCs.

Case D: Danielle. This was Danielle’s final semester before, hopefully, going to Law school. She had been looking for a course like this one, full of discussion, non-forced participation, and an instructor who guided and facilitated the discussions instead of lecturing the class on the material. Five themes emerged from Danielle’s case: Looking for discussion based courses, Comfort contributing to discussions, Productive discussions, Discovering her ideal career, and Advice for teaching and learning in ALCs.

Case E: Elsa. Planning on being a teacher herself, Elsa was very observant in how the instructor made use of the classroom to create a welcoming and safe environment for all students
in the class. The learning environment reminded her of a kindergarten classroom, with students seated together in small groups, and encouraged to interact with one another. Five themes emerged in Elsa’s case: *Space set up for participation, Educational technology facilitates collaboration, Instructor’s teaching (realistic discussions), Benefits to faculty of education,* and *Advice for teaching and learning in ALCs.*

*Case F: Felicity.* Felicity was a very (and perhaps the most) outspoken student in the class. She had strong opinions and was not afraid to challenge ideas before anyone else in the class had a chance to speak. But over the course of the term, something changed and she revealed how the classroom environment (especially the educational technology) impacted how she contributed to discussions. Five themes emerged from Felicity’s case: *Learning to listen, Space for discussions on controversial issues, Interactive teaching, Learning to be a facilitator,* and *Advice for teaching and learning in ALCs.*

*Case G: Grace.* Grace hated being talked at and dreaded lectures and seminars. In an ALC, she explained it was a big change as people talk to one another, and she thought the environment strongly mimicked workplace environments where she had worked. At the end of this study, she even recommended to the head of the department that more courses should be taught in ALCs. Six themes emerged: *Space for talking to students vs talking at students, Space for group discussions, Space for discussions on controversial topics, Space mimics workspace, Advice for this instructor,* and *Advice for teaching and learning in ALCs.*

*Case H: Hannah.* Hannah had the most unique career aspiration, a spiritual counsellor, and was drawn to this course because of the content and how it would likely help her with her intended career. To her surprise, she learned a lot more from the interactions with her peers than from the lectures from the instructor. Five themes emerged from Hannah’s case: *Instructor and ALC,*
Motivated to share ideas, Becoming open minded, Applying learning to job context, and Advice for teaching and learning in ALCs

Case I: Isabel. Isabel had never taken a course in this classroom before and came into class on the first day confused about how this class would function. How could a lecture occur when students were facing each other? Right away she experienced a very different type of learning, one which she embraced and felt the classroom environment encouraged. Five themes emerged from Isabel’s case: Ascetically appealing classroom, Space for discussions, Space to discuss assignments, Different methods of learning, and Advice for teaching and learning in ALCs.

Case J: Jennifer. Jennifer was tired of lectures and was taking a break by studying abroad in Germany in the next term hoping to find inspiration in learning. However, once she took ETH300, she wondered if she had had more courses an ALC, maybe she would not have needed the planned break. Five themes emerged from Jennifer’s case: Learning with peers, Instructor’s teaching approach and circular classroom, Realistic learning experience, Advice for teaching and learning in ALCs, and Peers appreciated learning experience.

The next chapter, presents the data, case by case, and addresses Research Questions 1 and 2, and then Chapter 5 which addresses Research Question 3.
Chapter 4 Instructor’s and Students’ Experiences: Addressing Research Questions 1 and 2

This chapter presents data sets for the instructor’s and students’ experiences in the form of a series of cases. The focus on the reporting and analysis in this chapter is on research questions 1 and 2. Alignment on the themes to factors of Authentic Learning which address question 3 will be discussed in the next chapter.

1. From the instructor’s perspective, what reasons lead to a decision to teach in an ALC and how was a course planned and enacted in this classroom environment?

2. From the students’ perspectives, what are their learning experiences in a course taught in an ALC? How does it compare to their learning experiences in traditional learning spaces such as lecture halls or seminar rooms? What have they taken away from this experience?

The first case is part one of the instructor’s case illustrating the instructor’s perspectives on what reasons led to a decision to teach in an ALC, and the course ETH300 that was planned for this classroom environment, an ALC. This case is followed by the 10 student cases, labelled Case A to Case J, which explores the 10 students’ perspectives on their learning experiences in an ALC and how it compared to their learning experiences in traditional learning spaces. The chapter concludes with part 2 of the instructor’s case as the instructor reflected on the enactment of the planned course in the ALC, taking into account the perspectives of both students in the study and the feedback the instructor received from students in the course.

Instructor’s Case Part 1

Students and faculty at the university in this study have described this instructor as a true gem. The instructor consistently expressed the desire to provide students with the best learning environment in which they could flourish and succeed. The instructor explained that this was done by
incorporating best practices in the scholarly literature on teaching and learning in higher education and by experimenting with new approaches in sometimes unconventional ways—from engaging students in debates on the top movies about Christianity to demonstrate the process of how stories were selected for the Bible, to the instructor walking on top of a desk and almost falling off to illustrate the possible illusion of how Jesus may have appeared to walk on water. The instructor wanted students to understand and see the relevancy of the course content to their lives. Although students continued to give the instructor high scores on teaching evaluations, the instructor admitted becoming less experimental with teaching approaches over the last few years. This was mainly because of increasing class sizes forcing courses to be moved into larger lecture halls. This meant it was harder to do group work and debates, and easier for the instructor to give “lively performances” and lectures to convey information faster and to keep large number of students engaged. The Active Learning Classrooms (ALCs) were a welcomed change for the instructor as teaching in an ALC helped the instructor put the onus of being engaged with the material back on the students and allowed the instructor to once again experiment with various teaching approaches.

On a cold February afternoon in the instructor’s office, the instructor reflected in a two-hour long interview and this section, representing the instructor case, part 1, presents three themes that emerged:

- Influence of space on the evolution of ETH300
- A more realistic learning environment
- Potential misalignment between instructor and students’ perspectives

Influence of space on the evolution of ETH300. The instructor explained that ETH300 was initially created for an Ivy League business school in the US and took place in a U-shaped lecture hall, which is illustrated in Figure 6. In this U-shaped space, students sat in long tiered
rows facing the instructor and other students. The long tables connected students with their peers next to them and made it easier for students to form small groups of 4-6 working in a shared space to discuss their weekly case studies. Within each group, at least half of the students would be in a different tiered row, but the tiers were relatively shallow and students could still engage with each other without any severe obstruction. However, because of the tight proximity of the tiered rows, the instructor could not reach groups seated in the middle of the rows nor engage with them until the whole class discussions. Students also told the instructor that it was difficult to hear students seated further away from the group during the whole class discussions, causing the instructor to reiterate the responses.

Figure 6. Example of U-shaped lecture hall. Retrieved from Google images of “U-shaped lecture hall”

A few years later, the instructor taught ETH300 again, but in a lecture hall at another university. The first iteration of the course at this university had seven students, and the instructor sat with the small group of students and talked about the cases in a very casual way. The instructor thought the lecture hall configuration had little to no effect on student learning because the group was so small. However, in the second iteration 60 students enrolled, and the instructor remembered, from past teaching experience in a lecture hall, that it was hard to motivate students to form into small groups for discussions in such a learning environment. Without separate, shared
tables for groups, it was difficult in this second iteration of the course to coordinate a space for
students to work together, and with so many students in the class, students could not easily form
small groups without a bit of chaos, unlike in the first iteration of the course where the class size
was small. In subsequent years, the course continued to increase in enrollment and to be assigned
to a lecture hall. The instructor continued to think of ways to get students into groups using empty
spaces around the classroom, “One year I was lucky enough that there were 3 rooms around me
with no body in them, so I had them break out into groups but there was a lot of movement. They
had to gather their stuff to move, and gather their stuff to move back, so a lot of time was wasted
in just the logistics of moving” (In1: 16-20). With disgruntled students reluctant to move, the
instructor began to replace small group discussions with more lectures, and slowly, the course
became more lecture-based. In this interview, the instructor expressed, “It’s really easy to enter
into a lecture mode and a Q & A because everyone is looking at me in a lecture hall” (In1: 78).

The instructor remembered being approached by a teaching staff member in the fall of 2013
who was employed the university’s Centre that examined teaching and learning in higher
education, “[The teaching staff] was telling me about [these new rooms] and said you would be an
ideal person to put in there. I had a bit of background in pedagogical literature, of why it mattered
[to be in that type of space] and I was committed to turn my courses into more interactive courses”
(In1: 46-51). The classrooms (ALCs) had not yet been built but only existed in conceptual
drawings: “I saw the designs and I knew it was better and more suited for group work with cases.
Secondarily, the smart part of the classroom allows the students to not only prepare but also present
[to the entire class]” (In1: 7-10). “I already knew I was going to apply for it [teaching in the new
environment for the winter term 2014] before it was even finished because of what [the teaching
staff] was telling me. I was considered an early adopter” (In1: 53-56).
In preparing for the transition from lecture hall to the new ALCs, the instructor recalled rethinking and redesigning teaching approaches, combining the early use of case studies and group work as well as newer material from the lectures, “How can I turn this lecture material into discussion based material? Finding that balance between information I wanted to give them so that they can have a discussion as opposed to me downloading the information to them. So it kind of went full circle” (In1: 136-140). The instructor explained reverting back to some of the teaching approaches used in the earlier version of the course, such as giving students the opportunity to read or do work before the class and then further analysis the content during class. This format of learning allowed students to come to class prepared for the topic, ask peers questions about the material, ask questions of the instructor, debate, and do further research on the material collaboratively. It also for the instructor to provide further information based on students’ interests and responses to the material.

A more realistic learning environment. The instructor described the look on students’ faces as they walk into an ALC for the first time, immediately noticing the small group tables and large screens, as excited and a bit confused. Hence, the instructor chose to explain to students on the first day of class why the course was in an ALC, and the type of learning that would occur, such as case-based content and interactive/ collaborative learning. The instructor further explicated that this type of learning experience was realistic to the type of interactions students would experience in their careers after graduation:

I tell the students, it can’t be like it is in most academic discussions, it could be this or this. You have to do this, what is your call? That’s something they will encounter as a workplace skill. Not waffle around, but put into a group and having to come to some kind of agreement.
and consensus on what the next step will be even if that means no one is happy. (In1: 273-284)

The instructor noted this was very different from discussions in other courses where there are no guidelines or a set structure, “In the past its just been too open-ended, discuss this for 20 minutes and tell me what you discussed without a clear and you must come up with a solution. And even if you are wrong that’s better than being waffling around” (In1: 285-287). As students became more confident sharing their thoughts, the instructor was able to push ideas back at students and have students challenge one another, “I’m better at pushing it back and getting them to interact with each other. I don’t think I set out to do, but because they are no longer sitting and looking at me I can do that. They can actually argue with each other, and that’s a big change as part of the interactive classroom and environment” (In1: 79-83).

With the desire to continue enhancing ETH300 into an interactive course, the instructor decided for this iteration of the course to introduce in-class discussions on the assignments: “That’s another innovation I didn’t do before. This year I had more focus on them coming to class with their assignments completed and talking about their assignment in class for a good chunk of the time and comparing their answers with each other” (In1: 160-164). “They are seeing what I was trying to design for which is the paper themselves are an integral part of the ongoing classroom conversations” (In1: 207). “And I’ve had a lot of positive feedback from students on that—how much they learned that they hadn’t thought of from their peers, probably way more than learn from me writing feedback on their paper” (In1: 160-166). This was an unexpected payoff for the instructor, “So in some ways it means I don’t have to write as much feedback because they’ve had an hour to talk with others who wrote the same paper and talk about their ideas and discuss their own ideas and I like the way that works” (In1: 167-170).
As a result of students engaging in so many discussions, the instructor saw that students were developing critical thinking skills,

We talk all the time about critical thinking skills, and everyone will say that’s what their course does, and I’m sure they do, but this iteration is testing their critical thinking skills with their peers by trying to articulate a defensible position around their table…whether it’s based on what they wrote for their assignments or … their written answers for their cases. So presenting an argument they have to defend that they thought about ahead of time career wise is going to help them. No matter what kind of work they are doing, they are going to have to come up against people and try to get support on their ideas. (In1: 291-301)

Despite the abundance of positive experiences created in the ALC, the instructor still experienced resistance in getting students on board with the type of learning they experienced in the ALC. The instructor thought this was especially evident in the lower enrollment compared to a lecture style course:

If it was lecture based, I would have gotten more students [enrolled]. Some see how much is demanded of them in participation and don’t want to come. It’s easier to take a lecture course because if you miss it, someone can give you the lecture notes… I had a student email me this week to get the lecture notes for last Friday, but I don’t have any, it was a case the whole time. If you miss it, it’s not an information dump, you miss the process, that’s more important than the content. (In1: 241-249)

**Potential misalignment between instructor and students’ perspectives.** With this different format of teaching and learning, would students recognize that their learning experiences would benefit them in the future, as the instructor had intended? The instructor wasn’t very sure.
The instructor thought back on the department’s last cyclical review which revealed instructors and students had a mismatch in what the instructor intended for students to learn and what students actually learned, “What I thought me and my colleagues do, students don’t realize we are doing it” (In1: 311). For instance, students rated learning opportunities for presentation skills in the department as very poor:

I think they took presentation skills as giving a formal presentation, whereas I take it as presenting at your tables as a more realistic way to ask to do presentations in your career. So they are learning how to present their ideas to a broader group beyond than just writing, which is what the writing based courses do. They are learning to articulate verbally their arguments…I take to be this kind of thing, you can present an argument to your group and present to the whole class and apply it to working at a donut shop as a manager and know how to summarize what the group has been talking about and capture it in 2-3 points and put it back to them and test it. But seeing a direct correlation between taking [this course] and managing a donut shop, there is a big gap. (In1:311-335)

In order to help with the alignment, the instructor decided to use parallel processing during the mini-lectures to help walk students through the underlying purposes of the teaching and learning approaches, “I do a lot of parallel processing—This is why we are doing this, this is why I’ve asked you to do this kind of assignment, this is what you will learn. It’s part of helping them in the process” (In1: 331- 342). With the use of parallel processing, the instructor saw that it helped students to see the alignment between their learning and their life outside of school, “I had one young woman who was on [a school club], there was a very sticky situation, and she said let’s look at this from one point of view and another. She said she had the skills to talk about the issues and facilitate the discussion because of the course” (In1: 348- 351). The instructor also had students
who experienced for the first time talking out loud in their undergraduate years: “One woman last
year wrote she had never spoken out loud in a class before and she was in 3rd year… And someone
put on their evaluations this course gave them more confidence to speak up in class” (In1: 362-
367).

At the time of the first instructor interview, student feedback was positive and to the
instructor’s surprise, students were more articulate about learning to become more open minded:

This year I’m seeing more I still held my opinion but I now see there is validity in other
people’s position as well. They are recognizing it’s not just my way is right and yours is
wrong, but my way is right and yours is right too. They are finding that balance to say I
can understand you but that doesn’t mean I agree with you. (In1: 369-373)

As to whether students saw alignment between their learning experiences and their careers, the
instructor recalled how all students shared on the first day of class how they hoped the course
would help them in their career paths, “They seem to think it will [help]. They seem strategic about
taking the courses. It takes a lot to sign up for a course mid-day on a Friday... We’ll have to see!”
(In1: 483-485).

Summary. In the first instructor interview, the instructor revealed how classroom space
has greatly influenced the way the course was taught over the years. From a U-shaped classroom,
to a lecture hall, to an ALC, the instructor was continuously evolving and adapting teaching and
learning approaches to fit the space. The instructor witnessed the enormous benefits students could
gain from group discussions to help them in their future careers, and the ALC allowed students to
take full advantage of this type of learning experience. With the potential for misalignment
between the instructor’s perception of what students gained from the learning experience and what
students’ reported gaining, the next 10 cases explore the students’ perspectives of being in
ETH300. Each case reports on and analyzes the data set for each case in the context of research question 1 and 2.

Case A: Anna

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<tr>
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<td>Career</td>
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<tr>
<td>Prior experience in ALC</td>
<td>Yes</td>
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Anna was a shy nursing student in the third year of her program and was one of the few non-arts students in ETH300. She had a busy schedule packed with 8-hour nursing practicum shifts at the local hospital. Between her shifts, she was able to sneak away for the interviews where she shared her learning experiences in the course and learning in the ALC. She emphasized her enjoyment of the small group discussions experienced in the course, her new appreciation for learning from peers in different disciplines through such discussions, and how such interactions with peers from different disciplines led her to become more open minded. On a superficial level, it appeared that having small group discussions was all Anna needed, but throughout the interviews Anna revealed much more about the complex dynamics of the learning environment. This case explores Anna’s experiences in the learning environment and what impact it had on her future career as a nurse. Five themes emerged from Anna’s case:

- Learning from peers in other disciplines
- Classroom design
- Instructor’s teaching approach
- Rethinking a nursing case study
- Advice for teaching and learning in ALCs

**Learning from peers in other disciplines.** In the nursing program, Anna was required to take electives in other disciplines in order to broaden her horizons, but this was very difficult to
do when her availability to take courses outside of her practicum shifts was limited to early Monday mornings and Friday afternoons. Luckily, ETH300 was scheduled on Friday afternoons, “It was just spur of the moment, I saw it [on the university’s registration system], it fit my schedule, and I emailed the prof and told [the prof] that I haven’t had courses [in this discipline] at [the university]. [The prof] said it would be fine” (A1: 16-18).

Anna initially felt uneasy taking a course from a discipline other than nursing, even though being an upper year student was the only prerequisite: “I felt a little intimidated against the [discipline] majors and they keep using these crazy words and I [felt] like my ideas are so simple compared [to theirs]” (A1: 29-31). But after several small group and whole class discussions Anna saw things a lot differently. She explained that the class was not about having better answers or more complex responses than her peers; it was about learning from her peers where the diversity of ideas added to her learning experience: “It’s helped me see different perspectives on the same concepts! Especially this past [week’s discussion]” (A:175). Anna described the discussion in which students read a real proposed declaration document on implementing universal guidelines for all workplaces and had to decide whether the university should adopt the guidelines: “My initial opinions were it’s not going to hurt, but then other people in my group said its discriminatory… I hadn’t thought of that. It’s really cool to hear what other people are thinking, their knowledge, and bringing it up on a common subject” (A1: 177-179).

Anna quickly developed a great appreciation for learning with and from her peers in different disciplines and who had different perspectives from her own: “Originally, I thought well why wouldn’t everyone have the same opinion as me? But once two or three people agree with another perspective, they try to sway you one way or the other” (A2: 45-48). This was a common theme throughout her interviews which she also documented in her exit card: “It’s interesting
seeing how different the perspectives of students in religion/arts are compared to my own [nursing]. The discussions really show how different faculties are trained to think” (CA: Feb 23).

This learning experience lead Anna to become more open minded: “I’m from a smaller area and everyone’s a white Catholic so you don’t really think about that, to see people from other backgrounds. It was really beneficial to be in [ETH300] and hear the prof talk about the different perspectives and to hear it from the students in the class. It was an eye opener” (A2: 75-79). “I have two girls who are majors [in this discipline] at my table and they help to relate it to other contexts and other courses. I’m now getting it in a little lump sum— tidbits from everyone else, so it’s great!” (A1: 186). “It really opened up my mind” (A2: 80).

Classroom design. The classroom design was very important to Anna, noting how certain features of the classroom influenced her learning experience, such as the large interactive screens and the group table shape. The size of the interactive screens that students used made Anna feel more included in the group and more willing to add to the group’s ideas because she could see the ideas being documented on the screen as they evolved: “Rather than just one person writing on their laptop, we all get to see it and read it again, and say you should add a certain word to make the point clearer” (A1: 75-76). Also noteworthy to Anna was the sheer number of screens in the classroom. She explained that in the typical lecture hall, there would be one very large screen at the front of the classroom. Here, she often sat at the back of the lecture hall and easily became disengaged. But in this ALC, with 10 large screens around the classroom, one per table per group: “You have to look at it and pay attention. You can’t avoid it” (A1:142).

Another important aspect of the classroom design was the shape of the group tables. Anna took a nursing course in a larger ALC down the hall with a seating capacity for up to 124 students. This larger ALC was set up a bit differently, with two smaller screens at the end of each rectangular
In this room [current course ETH300 in the smaller ALC], the circular tables make a difference. In the other room [the larger ALC with rectangular tables]…if you were at the corner you would never speak to the other person at the other corner ‘cause you’ll be yelling over people. Or even the people who are on the same side as you, you gotta turn to see them. Now that I’m thinking about it that made more of a difference than I thought it did. (A1: 96-100)

She added: “Even though the class sizes were different [in the different courses and ALCs], the number of students per group was actually the same with around 5-8 per table. If you sat in the center [of a rectangular table in the larger ALC] you were fine, but in the corner you only talked to the person next to you or across from you” (A1: 102-103). The circular tables in the smaller ALC allowed Anna to feel more included in discussions and more likely to share her thoughts: “It’s influenced me to share my opinion more. I’m not the kind of person to raise my hand during class, but in the small group exercises, I argue my side more and I can see and hear everyone in my group” (A2:57-61).

Figure 7 illustrate a side-by-side comparison of the smaller and larger ALCs. Anna explained:

Figure 7. Side by side comparison of two ALCs. The photo on the left is the ETH300 smaller ALC and the photo on the right is the larger ALC.
Instructor’s teaching approach. In addition to the classroom design, Anna recognized how the instructor’s teaching approach influenced her learning experience. The instructor allowed students to speak during class in group discussions, to become more independent learners, and was involved in group discussions. Anna expressed how the instructor’s willingness to allow students to speak made her feel: “It’s so refreshing! You can [speak], you can back yourself up, and it’s nice to be able to have an opinion in class” (A2: 64-65). She compared this to how instructors in her other courses do not incorporate opportunities for students to share their thoughts during class:

In this classroom it’s cool to have—I’m not used to that—having discussions and people get angry and other people’s points, or build off of someone else’s points, otherwise it’s just answer the question and it’s done. It’s a different way to learn. (A1: 107-111)

Anna also noticed that the instructor genuinely wanted students to explore different ideas instead of forcing all small group discussions to be the same. She liked how the instructor sat down with groups and engaged with them, “If [the prof] came up with a certain topic for one group, [the prof] would focus on it and only focus on it with that table” (A3: 36). She preferred this over instructors leading all groups down the same path and asking the same question, “I just liked that ‘cause if you were not at that table then you sort of thought of your own idea” (A3: 37-38).

Anna appreciated the instructor’s teaching approach because it prompted students to become more independent learners. Instead of providing the answer directly, the instructor often prompted groups to do a bit of research and find the answer for themselves. Anna recalled a discussion on a clothing store’s unauthorized use of an Aboriginal group’s sacred print: “We had a comment on how are they still opened after these unethical situations. As [the prof] came to our group, [the prof] gave us the spark of why do you think they are still opened? And that made us do some research on the screen. It made us see both sides of the issue” (A2: 98-100). In another
discussion, Anna asked the instructor what was the consequence of people eating beef products when their religious faith did not allow it: “[The prof] had me Google it instead of answering the question. It was a good teaching method. Frustrating but effective. Cutting your head off [was] one consequence” (A3: 83-85).

**Rethinking a nursing case study.** While Anna reflected on her learning in ETH300, she began to think about a case study in her nursing program. Here, she extended her experience of learning from peers in ETH300 to the topic of taking patients’ opinions into account in medical decisions – a case in a nursing course. The case study involved the issue of whether nurses should give blood transfusions to people who refuse the procedure due to their religious faith. In the first interview, Anna explained this was the only case she had encountered in her nursing courses: “Jehovah’s Witnesses, you can’t give them other people’s blood. It’s interesting but that’s about it,” because as Anna exclaimed the answer was always the same, “Just give them the blood!” (A1: 167-168). She indicated that the case was not explored in depth and contrasted it with her experiences in ETH300: “Here [in ETH300] we do a lot more case studies. It’s interesting to learn of the different perspectives, and why you shouldn’t just accept something because it’s our norm but not yours. Now doing my placements I look for these things on the back of patients’ charts to see if they have a religion requirement in case something sparks” (A1: 168-172).

By her third interview, it seemed Anna’s learning experience in this course began to make her rethink the Jehovah’s Witness case in her nursing course:

Remember when I said in the first interview that I would hear about the Jehovah’s Witness in all my classes and I hate that case with a passion- just give them the blood! But now I see the other consequences where you can get your head cut off for eating a cow, and some people think deeply about their values and you have to respect them. Putting all these case
studies [and discussions] together has given us examples of how in real life they happen. (A3: 121-125)

Instead of engaging in a battle on whether medicine is right and religion is wrong with patients and having a potential lawsuit, Anna now wanted to have a genuine conversation with her future patients and understand their perspectives. Perhaps there were alternative medical methods that could be used to save the patient while respecting their religion. Although Anna became more open minded to perspectives different from her own or that she received in her nursing education, she clarified that she still held on to her own opinions and knowledge: “I will still stay strong to my morals but I am able to see other people’s side. So I just feel like I have become more opened to [other people’s] thinking” (A3: 115-117). “Like in health care, physician assisted suicide, palliative care, and people’s perspectives on that” (A3: 120).

Advice for teaching and learning in ALCs. Based on her learning experiences in different learning spaces and from different instructors, Anna offered some concrete advice for future instructors using an ALC space. She wanted instructors to: “Let people speak! Make sure to do the small group and [whole class] discussions. I liked that [the prof] kept the tables at around 6, so it wasn’t loaded, it was spread out. I loved the small group discussion” (A3: 172-174). While students engage in small group discussions, she recommended instructors engage with all groups explaining her other instructors did not do this, “She didn’t really come around to the groups... If she did, she did that really creepy little I’m going to be silent and just watch you talk even though the conversation is probably done by now” (A3: 156-158). This was very different from what the ETH300 instructor did, “[this prof] would come around and engage with students and give opinions. That kept the conversation going and I liked that. Be with your students. Don’t just have that divide there all the time” (A3: 156-163). Lastly, she recommended instructors to occasionally
change the seating plan so students can interact with other peers in the classroom: “I like the days where [the prof] changed the groups up. I would encourage that, so you aren’t always sitting beside your best friend” (A3: 163-164).

For future students taking courses in an ALC classroom, Anna stated students should expect to speak in class: “They might not speak to the whole class but speaking to 4-5 people is not intimidating. Just listen and you will realize people are genuinely nice and encouraging. You are not going to get ripped apart” (A3: 204-205). She emphasized this was a very different experience from participating in a lecture hall: “You aren’t putting up your hand in a lecture hall and having 100 people stare at you—I hate that! Just go for it. I really appreciated this course; regardless of what faculty you are in you learn” (A3:211-214). “I was a Frosh leader so I’ve been talking to all my girls who are in 2nd year to take this one. It is so beneficial, for opening your mind and your thinking” (A3: 17-20).

Summary. Case A described Anna’s learning experience in ETH300 in an ALC, highlighting the themes of learning from peers in other disciplines, the impact of classroom design, the instructor’s teaching approach, how this led her to rethink a case study in the nursing field, and concluded with advice she offered to others using the ALCs. The next case, Case B, describes Brie’s learning experience.

Case B: Brie

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<td>Prior experience in ALC</td>
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Brie was a 3rd year Religion Studies major and a huge “fan” of the instructor: “I had this prof before and I just adore [the prof]. [The prof]’s so quirky and funny. [It was] a mandatory course – it was a super dry course and if [the prof] could make that fun [the prof] could do anything” (B1: 14-16). She described the instructor as someone who genuinely cared about students’ learning:

It helps that [the prof] is very involved, [the prof] is the department head and [the prof] is on [undergraduate society] assembly too. You can tell through [the prof’s] teaching [the prof] actually cares about the students learning and doing well. [The prof] makes it known [the prof] is there for the students not just a paycheck. (B3: 122-124)

Throughout her interviews, Brie drew comparisons in the instructor’s teaching approach in different learning environments, and she strongly suggested the ALC brought out the best in the instructor’s teaching. This case explores Brie’s learning experience in ETH300 and her perspectives on how this instructor’s, as well as other instructor’s, teaching approach can be limited or enhanced by the physical learning environment. Five themes emerged from Brie’s case:

- Classroom configuration influences instructor’s teaching
- Classroom furniture enhances class activities
- Articulating thoughts
- Impact on teaching career
- Advice for teaching and learning in ALCs

**Classroom configuration influences instructor’s teaching.** Brie thought that despite any instructor’s genuine intention for students to learn and excel, the physical configuration of the classroom had an influential role in limiting or enhancing an instructor’s ability to implement more student-centered teaching and learning approaches. She explained that even instructors like the ETH300 instructor fell into the default mode of lecturing when in a lecture hall: “I like my profs but when they are in the front of the room they can have a bit of a power trip - it’s inevitable-
nothing against professors, but the class is not built for discussions” (B1: 113-114). She contrasted the instructor’s demeanor in the lecture hall to the ALC:

These ALCs enable the prof to be in the middle of the class and be on the same level as students. You don’t have an entire classroom pointed at you. It’s a circular type of thing, and it feels more inclusive. It makes [the prof] give that feeling off of ‘I’m here for you, not for my job’ when [the prof] walked around and talks to each group, which [the prof] can’t do in the lecture hall. [The prof] could only talk to groups close to the aisles. (B1: 115-120)

Brie extended her comments on the impact of classroom configuration on the instructor’s demeanor to students’ willingness to participate in class: “It’s a struggle for profs to get a discussion going [in lecture halls]… Some [profs give] like 20% for participation, but they might have only one or two hands go up” (B1: 176-178). To Brie, the problem was not the incentive of participating in discussions but whether the environment was set up for discussions: “It’s just intimidating to participate in the lecture hall. Everyone looks at you and if you are wrong, like no one really cares if you are, but it goes through your mind when you are going to talk. The [lecture hall] is not set up for that” (B1: 180-184). She contrasted this to how students are more comfortable engaging in discussions in an ALC: “It’s easier to get your viewpoint out in more than one sentence to a group of 5 than 30 people. That’s the best part. It makes it easier to understand the concepts and theories because you can actually have a say and an opinion” (B1: 50-54).

**Classroom furniture enhances class activities.** For Brie, the round circular tables and large interactive screen adjacent to each table enabled and enhanced small group discussions: “The round tables are more inclusive, like I can see everyone in my group easier. The smart boards are so helpful because each table has one- able to collaborate more” (B1: 70-72). “I love being able
to write ideas on the board… because when you have a discussion going it’s easy to forget about what the first person said. So it’s nice to write down your main points or type them on Word” (B1: 136-138). By keeping track of ideas: “you know your ideas will be shared with the class whether or not you are the one sharing to the class. Your ideas were part of the class discussion, so for me it’s so inclusive compared to the lecture hall” (B1: 145-148).

Brie acknowledged small group discussions were not just successful because of the furniture, but also because the instructor strategically incorporated them to enhance students’ learning. She explained the instructor did not have to provide opportunities for group discussions but by doing so, “allowed us to learn through each other… instead of here is a case study, read it and I’m going to lecture you on it. [This prof] allows us to teach ourselves… you get the other students’ opinions and make conclusions… It gives us freedom” (B3: 111-116). She added the classroom furniture helped to facilitate the discussions, “This classroom allows for more opposite discussions. In a lecture hall it’s easy for the super outgoing person to be like this is what I think and everyone goes sure let me just add on because you already started it” (B1: 216-218). The small group tables helped even out the playing field, “In a table of 5 it’s easier to rebuttal someone’s point or play devil’s advocate and then you can actually get different opinions and solutions out there without having to only build off the first person who talks” (B1: 216-220).

Brie recalled one instance where she completely disagreed with her peers: “I remember people saying there were so many different opinions about some case…I remember having that feeling of I totally thought this was okay, but you didn’t WHATTTT!!! It takes more time because you have separate discussions, but I feel like it’s a lot more beneficial” (B3: 85-89). With more time to discuss, Brie explained it was easier for students to talk through their thoughts and clarify responses that may be misinterpreted: “Sometimes you say something and you didn’t mean it to
be rude or discredit someone but it happens. In a large group you don’t get a chance to talk it out, while in a small group you can… to figure out what everyone means” (B3: 64-68).

Articulating thoughts. With the majority of the class sessions devoted to discussions, Brie noticed how important it was for the instructor to provide students with preparatory work before class so students could effectively think about the issues and more clearly articulate their ideas: “The prof gives us a full case study to read and what happened, while in other classes it’s not so straightforward – it’s more like he or she introduces the content as we do the case during class. In this class, it’s clear where things are going and the prof ties in course material into the cases, but the other classes just jumps around so much it’s hard to follow at times” (B2: 25-29). She explained that although other instructor might also expect students to do the readings before class, they don’t give any incentive for students to do the work when they just lecture the exact same material. The routine of having discussions on the cases and assignments in ETH300 made Brie feel more accountable for doing the readings and think about the cases because she knew her efforts would be paid off during class.

Brie also recognized that students’ responses were consistently validated by the instructor, which helped students continue to feel comfortable articulating their thoughts. This occurred during small and whole class discussions: “[The prof] doesn’t just stand there and listen to us, but [the prof] comments and doesn’t argue with us but pushes us to go further and teases out our points. It sucks when a prof just lectures or just makes you guys talk- and it’s like okay we don’t know if we are on the right track, give us something” (B3: 279-282). She added: “[The prof] doesn’t give you the answers but the means, the tools, to get to the answer. [The prof] also doesn’t say what the “right answer” is, when something affects thousands of people you can’t just say what is the right answer” (B3: 124-126).
As a result of having opportunities to articulate her thoughts, Brie felt more comfortable and confident in talking about sensitive and sometimes controversial issues: “Learning how to talk about [un]comfortable or controversial issues in an effective manner is important in the real world. You want to be able to articulate yourself, discuss in a constructive manner, and know how to ask questions to understand [people’s] perspectives” (B3: 238-240). “[ETH300] developed conversational skills about actual topics not like the dinner we are going to or the dress we will go buy. It’s so easy to have small talk, but on controversial topics you don’t want to offend people” (B3: 234-237). She also became more open to perspectives different from her own: “It’s forced me to be more open minded and consider all the options (B1: 240-241). It’s easy to say that’s your opinion and I don’t agree with it, or I respect your opinion and then turn a blind eye. As soon as you understand why they think that, you are on the road to finding a solution” (B3: 217-224).

**Impact on teaching career.** Hoping to become a kindergarten teacher in the future, Brie extended the lessons she learned in ETH300 to a teaching context: “In teaching you are going to run into situations where you have to make decisions and deal with people, deal with kids, their families. They aren’t like teens, they are 4-5 year olds and you have to contact their parents” (B1: 232-234). “That’s what I would take away the most for teaching- that I have to think about all the options before doing it and that it involves more than one person” (B1: 240-242).

She also wanted to use the ETH300 instructor’s teaching approach of pushing responses back at students to help them think more deeply about the issues:

It’s nice when you say a point and no one refutes you because you think you did a good job arguing it, but it’s not real life… If you say something and [the prof] will say have you thought about this and pulls you in a different direction, or pushes back a little bit and forces you to think about things in a different sense. (B3: 297-300)
For Brie, this teaching approach was applicable in daily life: “You will be dealing with people who are not going to agree with you or just argue with you... So doing it in the classroom gives you the foundation for respectfully backing up your arguments. That can take you far” (B3: 303-306). She wanted her future students to have the opportunity to develop strong conversational skills and open mindedness just as she did in ETH300, and she felt very fortunate to have experienced it first hand from this instructor.

**Advice for teaching and learning in ALCs.** Reflecting on her experience in ETH300, Brie had some advice for future instructors and students. She thought instructors using an ALC should be willing to design the course with the classroom space in mind: “I feel like it would have to be a certain class or a certain professor to appreciate it. Other profs are okay here’s my lecture, here’s my notes, now peace out- so they wouldn’t be good in this class” (B1:162). To her, instructors should take advantage of the features of an ALC: “Use the screens! It was nice to be able to lay out your points. So when you have 7 points you can put them all on there, so if another group said your point you can be like oh ok let’s pick that one to share” (B3: 285-287). She also loved having the small group discussions at the table and then having the whole class discussions: “It’s a more in-depth way of learning because you are able to talk about everything under the sun as opposed to like a lecture hall where we talk about that one point that one student brought up” (B3: 258-265). For Brie this type of discussion was, “more realistic of the kinds of groups you will deal with later on. It gives everyone a chance to speak. If you don’t have the chance, you get thrown into the real world where you have to learn how to speak” (B3: 317-319).

Brie recommended students take courses in these types of classrooms before judging whether it is for them: “My go to is just sit in the first class, it’s only 3 hours of your life, you will be fine” (B3: 32). She emphasized participating in the ALC for ETH300 was very different from
students’ previous experiences in participating in lecture halls: “Realize if you are super anxious it’s not like you are talking to 50 people at once, it’s only 5” (B3: 38-39). “[This learning experience] builds communication skills and life skills in general. Even if you work in a cubical you have to deal with people, so stuff like this helps with any aspect of your life” (B3: 25-29).

**Summary.** Case B examined Brie’s perspective on how a classroom’s configuration and furniture can impact teaching and learning approaches, students’ comfort in articulating thoughts, and a student’s career aspirations and corresponding development as a professional. She provided advice for future instructors and students on how to use and embrace an ALC to enhance their teaching and learning. The next case, case C, explores Charlotte’s perspective on how ETH300 impacted her as an international student.

**Case C: Charlotte**

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<tr>
<td>Prior experience in ALC</td>
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Charlotte was an international student on exchange from Japan with a dream of having a career in a company that worked globally with other countries. She had studied in many countries during her undergraduate degree in order to give her a more global perspective, but mostly she looked forward to her abroad experience in Canada after hearing wonderful things from her peers who studied at Canadian universities. Unfortunately, up until ETH300, her experience at the institution was very disappointing and she had contemplated returning to her country early. Her friend suggested she take ETH300 as he took it the year before and loved the interaction and discussions. Charlotte explained she was still skeptical and considered dropping the course before it began: “I
took this other course the day before and it was SOOOOOOOO bad! I [was] going to drop this next one too [since] it's Friday until 2:30… but it was too good and I need to take this!” (C1: 12-16). This case explores Charlotte’s experiences in ETH300 and how it gave her the learning experiences she had wanted. Six themes emerged from Charlotte’s case:

- The “Canadian” learning experience
- Discussion-based course
- Instructor sets up discussions
- Diverse perspectives
- Need ALCs in Japan
- Advice for teaching and learning in ALCs

The “Canadian” learning experience. Charlotte expressed her view of Canada as a place where people were valued for their individuality and autonomy and she wanted the “Canadian” learning experience she heard so much about. Her friends who studied in Canada told her students were different in Canada than in Japan: they had opinions and were encouraged to express them which was not always the case in other counties. She described her courses in Japan as huge classes, with hundreds of students in each class facing the instructor and transcribing the instructor’s lectures word for word. Coming to Canada, she expected discussion-based courses that invited students to share their opinions and to learn from her peers and the instructor. But instead, she had an entire fall semester of purely lecture-based courses with no interactions with the instructor or her peers. To Charlotte, this was very odd as the class sizes were much smaller here and yet the courses she took were strictly lecture based. She explained: “I always feel like it’s just a waste when you have all these students in the classroom but you don’t know what they are thinking or the kind of people they are” (C1:21-26). So what changed Charlotte’s mind about dropping the class? She exclaimed: “It was interactive! I like how it was practical and full of discussion” (C1:21).
Discussion-based course. The discussion-based format of ETH300 gave Charlotte the kind of experience she had hoped to have in Canada:

The biggest advantage of a discussion-based course is that you think. [In] lectures, you don’t really, you take notes. You don’t realize you are not thinking. But when you are forced to read the case before coming to class and talk about it in class, it really cultivates you to think more. It would have a different impact on you [than listening to a lecture].

(C1: 175-178)

By thinking more about the content and issues presented, she explained: “It’s a good exercise in thinking- so when you see the news you won’t just take it in, but have an opinion yourself or a question. It’s good to have this human trait of being inquisitive and to think” (C1: 178-182). In addition to being able to think more while engaging in discussions, Charlotte liked being able to work collaboratively with other students: “By having many people work together, we have a bunch of different perspectives to consider. The individual would not be able to come up with so many things on our own” (C2: 84-85). Adding how she enjoyed the challenge of working with others because it was realistic, “[I like] the difficulty of it too, not just coming to a consensus but the process of coming to a decision itself. In real life it’s the same process, we have to discuss about the issues and then come up with one conclusion, one statement, or one policy” (C2: 84-92).

Instructor sets up discussions. Charlotte reflected on how the instructor for ETH300 set up discussions differently from her other courses, such as providing case studies before the class and facilitating class discussions. She described her experiences last term with other instructors: “One prof always wrote the lecture in full sentence form and read it. She didn’t post it and no one could follow her… then she would be like what’s your opinion on this and no one [could give] an opinion” (C1:201-203). In another class she found students would offer opinions but were not
directly on the topic, “There are students who are just saying stuff but not answering the question-just saying stuff!” (C1: 211).

Charlotte contrasted this to ETH300 where the instructor provided cases before the session allowing her to have more time to form her thoughts and look up words or terms she was not familiar with: “My opinions are more constructed this way. Especially for me, English isn’t my first language, I have time to look up words. Like if there were Canadian references – like [restaurants / clothing stores] – I never heard of them” (C1: 79-83). Moreover, she liked how the instructor actively facilitated the discussions to keep them meaningful and on track: “[The prof] was really good in engaging everyone’s opinion but [also] rephrasing it and putting it into the context of the class too” (C3:26). “Students tend to veer off and talk about things that are not relevant but [the prof]’s really good in paraphrasing and bringing it back, gathering them and facilitating it, maneuvering that sort of classroom with discussions” (C1: 28-31).

**Diverse perspectives.** Despite hearing students share their thoughts, Charlotte debated whether she was actually hearing diverse perspectives or a single perspective, repeated slightly differently by different students. Over the course of three interviews, Charlotte’s view on the diversity of perspectives changed from initially seeing no differences in perspectives to seeing many unique perspectives. In the first interview, Charlotte compared the course to a smaller commerce course she was taking with other international students which she thought was more diverse. In the commerce course, each student had a name card similar to the name/exit card in ETH300, but it indicated their country of origin. This made her categorize the students’ opinions according to the country they were from, for instance if Robert was from Spain, she viewed his opinions to reflect how Spanish people thought. In ETH300, students’ backgrounds were not
written on the cards so for Charlotte: “It’s hard to place where they are coming from- so I keep putting them in this Canadian folder so to me it’s not a distinct opinion” (C1: 160).

A few weeks later, the instructor seated students according to their name card colour group, and the discussions in the new group changed Charlotte’s initial opinion on the lack of diverse perspectives “Everyone is more indecisive in my [normal] group… but the name card group have totally different perspectives!” (C2:29-30). She elaborated:

Most of the time when I do the readings I think about the [instructor’s guiding] questions in advance, I always think [the answers are] quite obvious. But one guy in the group always says THE opposite perspective and then the girl next to him has the same perspective. The girl next to me has a similar one as me. The one guy always goes first and I’m like wait, just wait!” (C2: 11-17).

In this group, Charlotte saw a clash of perspectives and was shocked that her peers would think so differently from her; they were all Canadians, but Canadians did not always think alike. Without the name cards identifying the students’ backgrounds, she explained it took longer for her to notice the diverse perspectives that existed in the class, but once she did she was pleasantly surprised. She stated that it made her more excited to come to class to hear what others had to say, and even if they were opposite to her thoughts it was always a respectful discussion: “People are very accepting of opinions and express that. Not just saying yes and nodding, but saying that’s a perspective I didn’t have and that’s awesome, tell me more. It’s a good trait and is partly because of the classroom” (C2: 18-22).

**Need ALCs in Japan.** After experiencing the positive effects of having a discussion-based course, Charlotte reflected on whether this type of learning could occur back in her home university in Japan, to which she quickly concluded it would not because of the differences in the structure
of the classrooms. She explained courses in the lecture hall gave the sense of divide between the instructor and students: “It’s the prof at the front and everyone else- there is a sense of one vs the all” (C1:107). “It’s very significant where the prof is and where the students are” (C1: 112). This was very different from the ALC as she described: “This classroom is different (gesturing a circular configuration), the classroom’s shape it’s more holistic” (C1: 37). “Here [the prof] is in the middle so there is a more inclusive atmosphere, and it makes the prof more friendly” (C1: 107-110). “The prof walks around and talks to all the students and the groups” (C1:113).

Charlotte also noted other features of the classroom that made it inclusive, including the circular tables and interactive screens. The small circular tables helped students feel they were in a group and made it easier to have discussions because they faced each other. There were no obstructions to block students from seeing each other and students did not need to physically move into groups. The large interactive screen helped her group keep track of their ideas and share their ideas during the whole class discussions. She found it easier to understand other group’s points because she was able to read them on the screen while they presented. Without this type of classroom structure and configuration, Charlotte explained she did not think instructors in Japan could recreate the inclusive and holistic atmosphere, and she recommended all universities to invest in such classrooms.

**Advice for teaching and learning in ALCs.** In concluding her interviews, Charlotte provided some advice for future instructors and students using ALCs. She recommended from the perspective of an international student, for instructors to consider the potential cultural barrier of the case studies used. One example was the use of the clothing franchise case with the controversy of using an Aboriginal print on their clothing which was an issue that she was not familiar with: “When I first came here I was really surprised by how sensitive that topic was. Well people talk
about it in a way that we need to respect it, it was really surprising” (C3: 35-38). “We are derived from Aboriginals [in Japan]. They are our ancestors, so we are related, but here it’s separate. When I come to think of it, it’s kind of weird” (C3: 41-42). With a discussion-based format, she asked her peers about the cultural aspects of the case and she described how they were more than willing to explain to her. However, in a lecture hall, she did not think she would have been comfortable asking anyone for clarification, fearing humiliation, and would have nodded along and not understood the case. She suggested for future instructors to take international students’ potential lack of cultural knowledge into account in their lessons, and either provide a bit of background on the issues to help these students or encourage students to ask their peers questions as she did in ETH300.

As for future students, Charlotte acknowledged some might be less comfortable and less willing to engage in an interactive learning style but she strongly expressed the need for students to learn to interact with others in order to have a happy life: “Honestly you just need this in the future if you want to live a happy life” (C3: 133). “There is so much you can learn from people. Learning to be open is a really important characteristic of being a good person. So even if you hate it, you should take a class here to change yourself as a person” (C3:134-138). “Like ultimately you can’t live alone…I don’t think that life would be as happy as being able to interact with others” (C3: 142-144).

Summary. Case C examined Charlotte’s perspectives on her learning experiences in ETH300. She came to this country looking for the “Canadian” learning experience and fortunately experienced it in this discussion-based course attributing the success to the instructor’s set up for diverse perspectives to be conveyed. She attributed her experience to both the instructor and the ALC, and recommended her home university invest in such classrooms as well. She concluded by
providing suggestions to future instructors and students using an ALC. The next case, Case D, explores Danielle’s experience in ETH300 and how it led her to find her perfect career.

**Case D: Danielle**

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<tr>
<td>Year of study</td>
<td>4th year</td>
</tr>
<tr>
<td>Career</td>
<td>Law (now Health Law)</td>
</tr>
<tr>
<td>Prior experience in ALC</td>
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Danielle revealed that after completing three years of Life Science studies, her interests had diverted away from how to treat patients and towards how to change the way medical professionals treat patients, leading her to apply to Law School. In the first interview, she was not sure which kind of law she would be practicing but while preparing for an assignment for ETH300, she discovered a career path in Health Law which combined her interests in medicine and law policies. Case D illustrates Danielle’s experiences in ETH300 and how it led her to find her ideal career. Five themes emerged from Danielle’s case:

- Looking for discussion-based courses
- Comfort contributing to discussions
- Productive discussions
- Discovering her ideal career
- Advice for teaching and learning in ALCs

**Looking for discussion-based courses.** Danielle’s journey in finding her ideal career began when she was looking for discussion-based courses: “I’ve been looking for a course like this one. I’m actually quite upset it’s only available once you get into the upper years. You should have them at the 200 level so people are comfortable talking to other people earlier on … by 4th year it’s a little too late” (D1: 169-173). She elaborated: “This is my first course that does that and
that’s probably why I like it so much. It’s not here are the definitions write it down, and have a test on it. It’s much more discussion based which I love and [they] are not forced” (D1: 43-45). It was important to Danielle that the discussions were not forced, like in her other experiences: “In my science classes, we are marked for participation in a way that is not the best, for example based on how many questions we answer…While in this class, if you have something to say you can but you are not forced to which I really like” (D1: 45-49).

**Comfort in contributing to discussions.** Danielle attributed her comfort in contributing to discussions to the physical classroom and the instructor’s teaching approach, which complemented the classroom environment. She described the classroom as: “a different build…the look of it is like we will all sit down and have a discussion rather than watch a lecture (D1: 210-211). The classroom made me more comfortable in participating. I don’t know if that makes sense. It makes me more comfortable sharing with 3-6 people than 20 people looking at me” (D1: 58-61). She explained classroom configuration was more important than the class size, as she had another course with even fewer students enrolled but felt much less comfortable participating in that course: “[I have] classes right now [that] are seminars and are smaller [than ETH300]. They are 3 people per table. But it is the instructor at the front, students at the back. It’s not a circle environment like how we have” (D1: 52-54).

Danielle thought the instructor’s teaching approach complimented the classroom environment by keeping the focus on the students’ thoughts and experience of the discussion process instead of finding the “right” answer: “[The prof] tells us what happened, the background, and allows us to discuss it before revealing the results of the case. [The prof] prompts us first to think about it… asks what would you do, and gives an unbiased thought process” (D1: 32-35). She explained, if she knew the ending of the case, she would not have explored the other options, “If I
knew the case and how it ended and the company lost profits, then I would be more likely to find solutions to make profits, but instead I was thinking what’s more morally and ethically right” (D1: 36-40).

Moreover, Danielle thought the instructor was “very open to all the different kinds of areas of study” (D2: 48), and demonstrated this by encouraging students to share their opinions using their discipline’s lens, instead of focusing on the discipline in which ETH300 was based. This was uncommon in other elective courses that she had taken. As illustrated on her exit card, “It was surprising to see how other members of our group interpreted the text. I found that many interpretations revealed what areas/ programs of study my classmates were in” (CD: Jan.22). This made her feel more confident in sharing her ideas, as did her peers, because the different interpretations would be embraced: “I noticed more students say opposing opinions. Someone would say something and someone else would say well if you look at it from this side- and I really like that…I don’t see it offensive here like it would be in a lecture hall” (D1: 203-205). She explained why sharing opinions was important: “If an academic setting is not a place to share your opinion, you kind of glaze over it with this politically correct kind of way. But in this course…it was easier to share your opinion in a non-judgmental environment. I’m more confident in sharing and talking now” (D2: 55-58).

**Productive discussions.** In addition to being more comfortable contributing to discussions, Danielle viewed the discussions in ETH300 as more productive than in her other courses: “I find that our discussions in [ETH300] are much more concentrated and towards the subject matter being taught” (D1: 73). “There is less time doing [small] group talking and then we share as a class so that’s more productive than other classes” (D1: 79-80). She described how discussions in her other course were less productive: “The prof leaves us to do our own thing. We trail off and start talking
about other things. She gives too much time. The rest of the time spent is just talking about non-
school related things” (D1: 74-77). Not only were the discussions more productive in ETH300, Danielle stated, “I’ve learned the most from the part of the discussions in which [the prof] regroups
and every group says their opinion they discussed” (D2: 55-56). At her group table, she felt the
ideas often converted to a single shared opinion by the end, “but when [the prof] opens it up to
different tables, we gain a perspective we never thought of which is very good” (D2: 57-58).

Danielle explained why the overall discussion experience was realistic to professional
settings: “It’s because of the arrangement of the classroom. We were sitting in a circle table and
in a work place you would be sitting at a conference table sharing ideas” (D3: 87-89). She
continued: “You need to be able to take your stance rather than just agree to a fact because that’s
not really realistic which is what we do in most classes [in university]” (D1: 198). “If you stand
for something, have good background, evidence, or context for why you think that should be the
case then you can be really successful” (D3: 79-81). She gave an example, “Specifically, when
there is a large group of people like in a corporation and they are doing something that is not
ethically okay and you want to say something you won’t have that fear- this class helped me
overcome that” (D3: 82-85).

Discovering her ideal career. With the expectation of attending class to contribute to
discussions, Danielle explained that she was motivated to do more thorough research for her
assignments than in her other courses. One particular assignment, the memo assignment, helped
her find her ideal career. Students researched a company they were interested in and had to write
a memo to the company explaining why they should or should not adopt an interfaith workplace
guideline. She described how her research for the companies unexpectedly led her to finding a
career path in health law:
While writing the [memo assignment], I was researching companies I could do, and one of them was [the local hospital] and I was looking at what legal jobs a person can have at the hospital. I actually found a legal counsellor for a company. That got me really interested and merging my interests together. I got really excited. I never knew a job like that existed so by researching [the local hospital] legal stuff I found it. I talked a lot about it during the assignment discussion” (D1: 142-147).

She reflected: “If this was a lecture course I definitely would not have done that and found the job. I would have just [gone] through it quickly and submitted it” (D1: 147).

Another motivating aspect of the assignment Danielle emphasized was that it was on real companies and a real interfaith document. She explained that students were not asked to imagine a company and make things up; they needed to do the research, identify a real company, look at its policies, and write a memo. She deeded that this type of document was much more useful than an essay: “No one writes 25-page essay in the real world. Putting things into concise forms is important like in [this] assignment. People don’t have time for long documents but that’s the only type of writing we do [in university]” (D2: 88-95).

Advice for teaching and learning in ALCs. Danielle offered some advice to future instructors and students using the ALC. She suggested that instructors engage students in rich discussions by letting students talk without interruption: “I really like how the prof let us have little small discussions without interfering. It’s difficult to learn when a prof interferes in the discussion, kind of lead, holds your hand throughout the whole thing. Some instructors literally stand over you” (D3: 93-95). She preferred, “when it’s you and your peers… because sometimes it’s difficult to see your prof and communicate your feelings without feeling intimidated... It’s hard not to do in lecture halls, but here it was really effective” (D3: 100-106).
Being from a different discipline, Danielle wanted students to know that discussions can be inclusive of all backgrounds, and not just of the discipline’s majors which makes the course even better: “I remember thinking I’m from a Life Sci background the majors have an upper hand in this, but I found it no problem. It was helpful to have different disciplines and adding my own discipline into it and what I have learned” (D3: 112-115). She encouraged students to share their thoughts, “Even if your opinion might be totally different from someone else’s, it actually makes the discussions much more interesting to have people with different opinions than everyone agreeing on the same point” (D3: 117-119).

**Accepted into law school.** Following the interviews, Danielle revealed she had been accepted into the Law School of her choice. At the time of the interview, she intended to move in the next few days to begin her new life and school in the Fall. Danielle shared her gratitude for ETH300 and how it opened doors for her as she would have never found if she had not taken the course, especially the position of legal services in hospitals. As a result, she was now aiming to specialize in Health Law.

**Summary.** Case D examined Danielle’s experiences in ETH300 as she reflected on her desire for finding a discussion-based course, exploring factors that led her to be more comfortable contributing to discussions, and how the discussions were productive to her learning. The discussions motivated her to conduct research to prepare for her contributions to the class conversation, and this led her to discover her ideal career in Health Law. The case concluded with advice she offered to future instructors and students on using the ALC, and revealed she had been accepted into the Law School of her choice and would be aiming to practice in Health Law. The next case, Case E, investigated how Elsa intended to apply her experiences in ETH300 to her future teaching career.
Elsa was in her final undergraduate year of the concurrent education program, and had experienced practicum teaching placements in elementary classrooms during her program. She expressed great enthusiasm for learning in an ALC and explained the parallels between an ALC and the K-12 classrooms she had worked in: “[The ALCs is] like being in elementary and high schools – the way it’s run; you are in small groups. In university, you don’t have that opportunity-so maybe it’s the familiarity to that way of doing education that makes me like it so much” (E1: 122-124). She reflected: “You sort of associate lecture with the formal and professional” (E1: 127), “but if it was a lecture course or in a lecture hall I wouldn’t have taken it. I took it because it’s in an interactive classroom and really enjoyed that in the past” (E1: 176-178). She explained, “There is responsibility that you have to come in and talk in class, [but] I find that I learn and it’s more beneficial and that’s how I would teach my [future] class” (E1: 178-180). Case E looks at Elsa’s learning experience in ETH300 as it influenced her learning and her teaching career. Five themes emerged from Elsa’s case:

- Space set up for participation
- Educational technology facilitates collaboration
- Instructor’s teaching (realistic discussions)
- Benefits to faculty of education
- Advice for teaching and learning in ALCs

**Space set up for participation.** Elsa described herself as a very shy person and was not comfortable participating in traditional classrooms. However, she participated easily in the ALC
explaining: “It’s because of the classroom structure” (E1:110). “By putting people in small groups I feel more inclined to or more comfortable to speak to others. Once you create that safety people are more inclined to talk to the whole class” (E1: 112-114).

She thought the classroom set up fostered a different type of participation: “Some people like me might not like the participation normally but that’s because they see it has a seminar or lecture style rather than this interactive setting” (E1: 181-182). “In tutorials, you are in a square and you are looking at each other but it’s the whole class” (E1: 110-111). “In the lecture hall if the prof showed a video clip and then say turn to your partner to talk- you don’t have that face to face. Here we are in circular tables. It’s more conducive for conversation” (E1: 70-73). Providing further comparison to her learning experiences in an ALC, Elsa stated, “Even in a tutorial setting… it’s like you are competing in what you are saying instead of focusing on what you are trying to learn. Everyone has to say a point and you are thinking more about when it’s coming to you to say a point instead of participate when you can. I find this a safer environment [in an ALC] to learn and to think because of the way it’s set up” (E1: 103-107).

By having a set up safe for sharing her ideas, Elsa found it improved her learning: “For me, I process things sometimes when speaking, so talking about things I remember them better. And I find I have a better in-depth understanding of things than in a lecture because of the small group table discussions” (E1: 30-32). This included sharing ideas that oppose and contradict what others have said: “You know it’s not a personal thing. You are able to say your opinion because you have the intent of further understanding the content. You have more opportunities to play the devil’s advocate which is a cool way to learn” (E1: 147-149). She was also more likely to ask questions: “In lectures, I’m not comfortable to ask questions because I’m going to be interrupting the prof. I
find in this class it’s very student led and if we have a question you can ask it, which is the whole reason why we are here- to learn!” (E1: 91-93).

**Educational technology facilitates collaboration.** In addition to the small group tables, Elsa emphasized that the educational technology in the classroom facilitated her learning experience, especially for collaborating with peers: “Using the educational technology as visual representation of what you are doing was a huge part [of my learning experience]” (E1: 31-32). “When we use the whiteboard [function] we are able to write down things and you are almost put in the position of a teacher. It’s helpful because you need to know what you are talking about” (E1: 34-36). “Also I have [used the screens] when we look for definitions” (E1: 36). She stated that the size of large interactive screen played a role in working with her peers and sharing the ownership of the work: “I like being able to share one screen instead of a laptop. It’s just sort of less intimidating. You are still responsible for your own work but you are working together and you can do projects together. Sharing the responsibility” (E1: 50-51).

**Instructor’s teaching.** As a future teacher, Elsa learned a lot from watching the instructor’s teaching approach in ETH300: “I have enjoyed the class interaction and the prof does a great job in making the class interactive and you want to be there” (E3: 14-15). She described a few approaches that stood out to her, including the use of the name/exit card, which she stated helps, “you know people’s names and it’s more personal” (E3: 18), and how the instructor encouraged students to share their ideas: “[The prof] would accept your answer as is rather than shutting down your answer and say it’s wrong or that it’s not what they were looking for. But rather using what you are saying to construct the conversation” (E1: 163-165). “[The prof] does a really good job [of that]. Even if what you are saying is not on topic, [the prof] will bring it back on topic which helps everyone” (E3: 20-22). Another approach Elsa highlighted was that the
instructor gave mini lectures which helped to set up the parameters for the discussions: “I’ve been to the large [ALC] for a [blended learning course] and everything in class [was] group work. There isn’t any lecture time. In this course there is a brief lecture and we discuss. I like that” (E1: 76-79), “because it anchors the topic so you are on track” (E1: 85-88).

Elsa noted that ETH300 was the first course she had in an ALC where she did not know her peers, and by getting students to jump right into discussions on the first day, the instructor helped her become comfortable talking to people she did not know: “I didn’t have any friends in this class but the prof had us work with new people right off the go” (E2:94), “and a question working towards common goal it” (E1: 135). “It builds opportunities to have people discussing in groups- and improves confidence from the start” (E2: 96). She also liked when the instructor changed up the groups so she continued to work with students she wasn’t familiar with in the class: “Sometimes the prof switches it up by seating people by the colour of their name tag, so you get to know people in the class-- it makes it more comfortable to talk” (E3: 19-20). She explained how this was realistic to the workplace, as students might not know the people they will have to work with: “This is precedent in the workplace wherever you go. You have to work as a team and you might not know them at first- you can’t always work with your friends. [But] you realize you have other people to talk with to figure out how to approach the situation and that’s good!” (E1: 136-137).

**Realistic discussions.** Elsa explained that the instructor’s teaching approach allowed her to experience a realistic discussion process: “It’s more realistic than in other courses where you sit and listen. I imagine there are jobs where you are trained to listen but for [most] there are interactions with people. I am learning how to interact and collaborate with coworkers, to be mindful of other people’s opinions by listening, but also forming opinions and being aware of how
I stand on them” (E2: 72-74). “It’s kind of like talking to a co-worker at a business meeting about
how you would approach a case or situation, and different perspectives come up. You create and
brainstorm together all the different viewpoints” (E2: 67-71).

She extended the lessons she learned to how she would teach them to her future students:
“It’s helped me think about me becoming a teacher” (E3: 26). “[The prof] doesn’t shut down
people or their answer right away but rather listening and fueling discussion than stopping it or
being directive about it. Sometimes the value of discussion is the discussion itself not the answers
of it” (E3: 28-30). She described how she would apply it to her own class: “In my own classroom,
I can see small group table being beneficial for group work and interactive times. I’ll be teaching
elementary school and this style would be beneficial. I’ve been in classrooms too where you have
groups and the teacher places students who are struggling with those who are doing well in the
same group and it works really well” (E3: 82-88).

Benefits to the Faculty of Education. As Elsa reflected on how she would apply the
instructor’s teaching approach to her future classrooms, she thought about how beneficial it would
be for education courses to take place in ALCs. She stated that although education classrooms
were mostly pre-arranged in small groups, students could still benefit from the updated version in
ALCs: “They don’t have the computer screens at the tables. It’s nice to have that, the educational
technology. I guess they have the tech rooms but they are just two screens for the profs, not for the
students. It’s better to have the individual screens for the students. The whole of teacher on the
side instead of the sage on the stage is true” (E1: 190-194). “Let students be the focus, that’s how
we can become better teachers. The ALC would help with that” (E3: 200).

Advice to teaching and learning in ALCs. Elsa expressed the need for instructors to use
all aspects of the classroom: “Utilize it to its full capacity; not be afraid to use interactive things.
There are so many great tools and resources, like the educational technology, allowing students to look up things” (E3: 94-95). She added, “Sometimes I wonder if profs don’t deem educational technology as intellectual. There seems to be a stigma to using it but it is really beneficial. A lot of people don’t learn through just verbal… but through different means, like talking it through with someone or looking at it visually” (E3: 94-99).

She recommended future students to, “not be afraid to enter into discussion. Also be willing to listen to peers around them, not like dominate the conversation. Take this opportunity as one to learn. The space encourages students to learn rather than achieve a high mark as much” (E3: 104-106). She explained it was a different experience from what students may be used to: “It’s a different form of competition in this class. Competition isn’t always bad, but it’s more of a safer environment to let you learn. You can try things out” (E3: 107-110). “I’ve had positive group work in this class; everyone contributes in some way. In other classes that are not interactive you don’t talk to classmates unless you know them” (E3: 110-112). “I’ve told a lot of people to take courses in this classroom” (E3: 126).

**Summary.** Case E explored Elsa’s learning experiences in ETH300 and an ALC. She explained how the classroom was set up for students to participate in, how the educational technology facilitated collaboration with her peers, and how the instructor’s teaching approach influenced her future teaching. Her positive learning experiences led her to encourage instructors and students to embrace teaching and learning in this classroom. The next case, Case F, looks at Felicity’s learning experience in ETH300 and how the experience taught her the importance of learning to listen to others.
Case F: Felicity

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<td>Prior experience in ALC</td>
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Case F looks at Felicity, a confident outspoken individual who came into the first day of class ready to play the role of devil’s advocate in order to push the conversation forward. She was not shy in speaking her mind and often took the leadership role in small and whole class discussions. After a few weeks into the course, things seemed to change. Felicity, who normally was the first to put up her hand to challenge an idea, began to allow others to talk before she spoke. This case examines what caused Felicity to make this shift and what she took away from this learning experience for her future career in teaching. Fives themes emerged from Felicity’s case:

- Learning to listen
- Space for discussions on controversial issues
- Interactive teaching
- Learning to be a facilitator
- Advice for teaching and learning in ALCs

**Learning to listen.** Felicity described herself as being very outspoken, which was a trait that worked very well for her in lecture courses as she stood out among her classmates, but this began to change in ETH300 when she started to listen more and speak less. She recalled the case that led her to learn the value of listening to others. The case involved a company that allowed all employees to display their religious and spiritual symbols in their work spaces. A new employee brought in a religious symbol that resembled the Swastika, causing other employees who negatively associated the symbol to force the employee to remove it even though this was against the company policy. Felicity stated she strongly agreed with these employees because:
In Grade 12, I went to Poland and Germany for a month to study World War II and the Holocaust… So when [the prof] started talking about that symbol, I started to think how that still affects how people communicate and treat each other in the workforce and what’s right from wrong and it didn’t matter that it was a religious symbol for that guy but it offended everyone else- that’s wrong. (F1: 28-36)

Her personal experience with the topic made her passionate about it and she explained how she was about to speak out until the discussion went a different way:

The discussion stood out to me because I wasn’t expecting it to go the way it did. It might be because of the structure of the classroom. You get to see everybody’s ideas [on the screens] and I was reading around on the screens, and the way people were talking and things they wrote made it seem like this could happen again. (F1: 41-47)

Felicity explained she thought of the case as an isolated incident and her solution was to remove the symbol because it offended others, but everyone else was thinking about the case as a larger issue: “So what I understood from the class was people didn’t want to necessarily solve this particular case with the Swastika but make sure it does not happen in the future again [for any religious symbol]. So not thinking about the case individually or in isolation, but rather more abstractly and why or why shouldn’t it happen again” (F1: 44-47). She listened carefully to the conversations: “When people were bouncing ideas… I never really thought about that because coming in I thought well that is wrong and that’s it… But then we started talking about the Catholic cross, so not isolated to just this case but the wider ethical issue” (F1: 41-51). Felicity stated what she learned from this experience: “I have learned to be respectful, to listen to others, be well spoken, and offer more questions than my opinion” (F1: 254).
Space for discussions on controversial issues. Felicity attributed her learning to listen to the features of the ALC, and she compared this to her experiences in other courses with highly controversial discussion topics explaining how the lecture hall was the wrong space for these discussions: “I’m in [bio ethics] class [in a lecture hall] and we talk about health care, death, euthanasia, and mental health. You see people’s faces get red. Things can get very very heated” (F1: 123-126). “A lot of people leave opinions in their head they haven’t explained. [They] don’t want to feel judged. If someone says something hurtful my friends will just walk out and leave. It’s not the space or place to say how they feel” (F1: 143-148). She explained even if her bio ethics instructor had students talk in small groups, the lecture hall environment was not suitable for that type of arrangement: “I’ve done small group discussions in lecture halls and you can but you have to get up, move around, write it down on a piece of paper, and people have to stand up to present—which makes it intimidating when everyone is looking at you” (F1: 94-96).

Felicity contrasted the intimidating and frustrating feeling her and her peers had in the lecture hall to similar activities in an ALC: “In a lecture hall I get very nervous and it’s like there are too many cement walls and you don’t feel comfortable. But I really enjoy this [ALC]. It’s a good way to end the week and start the weekend” (F3: 147-151). She loved the warm orange wall in the classroom, comfy chairs, interactive screens, and small group tables, noting:” [This classroom is] better in terms of our body gestures and body language around the tables. We are more open to the screen and each other’s ideas both physically and emotionally” (F1: 218-219). “Also in the circle I can see my friends on the side of my eyes. So I’m talking to the prof but at the
same time if I don’t know if what I am saying is correct, one of my friends will help, or if one of my friends is stuck I’ll help” (F1: 164-165). See Figure 8 for a seated viewpoint of the classroom.

![Viewpoint of ALC taken from student's seat.](image)

**Interactive teaching.** In addition to the arrangement of students’ seating in an ALC, Felicity expressed the importance of the instructor’s position in the middle of the classroom, instead of the front leading, which fostered more interactive teaching: “In this classroom, the prof is in the middle and close to us. It’s good because the prof can give you full attention when you are talking. [The prof] is very receptive and feeds off what you are talking about so you can feed off of each other” (F1:160-163). She continued: “It’s been one of the most interactive classes I have ever been in because in other classes you don’t interact. The prof gives us a lot of time to discuss in class and intervenes appropriately” (F2: 9-11).

Felicity praised the instructor’s teaching approach which allowed students to further their thinking and learning: “Instead of having the prof tell us what we need to know, we interpret it and we throw it back. Then [the prof] will say ok now what do we do with this?” (F1: 85-87). She liked how the instructor gave them the opportunity and time to collaborate, “because I feel like education is much more than telling you right from wrong, or what a theory is... The power from
this classroom is really unique because it helps us. It doesn’t hinder people’s ability to explore education in a different way” (F1: 89-91)

She also picked up on the instructor’s subtle body language in encouraging students to interact: “You can be in a group but the prof looks at you individually and sees what you respond. So if I don’t say something or I don’t contribute, my group is going to slack and I’m going to slack. It made me more accountable to my group” (F3: 79-82). “I really like when [the prof] approaches the group and doesn’t call out people. [The prof]’ll ask a question and whoever is comfortable can answer and say oh the group talked about this instead of I think this. So creative thoughts can be fostered in the round tables” (F3: 88-91). She stated this was much better than when instructors, “look at you and say “So what is the answer?” Or they say “Oh so I heard someone talk about this”, but you were the only person who talked about it, so it’s obviously directed at you. I like how here, it’s more of an open approach, not singling people out” (F3: 94-98).

**Learning to be a facilitator.** In ETH300, Felicity expressed how she learned to listen and learned a lot from watching how the instructor taught and interacted with students. She admired the instructor and planned to emulate in her future classrooms what she learned in ETH300:

I’m going to be a high school teacher and this prof is my inspiration, my role model. Students learn a lot when the teacher is receptive. When [the prof] looks at you [the prof] is trying to understand what you are saying and makes you feel you are on the right track, like you are serving your purpose as a [university] student. Your time is not wasted and you are valued. I don’t want to be a student number; I want to be me by my name. (F1: 268-273)

She recalled, before coming into ETH300, that she had expected to be a teacher who told students what they needed to know and what was right from wrong. However, after this experience she
wanted to nurture what students’ wanted to know: “I can be the resource to help facilitate their education and assess them, just like how our prof is in this class…I want to be that good balance between resource and life outside the classroom” (F1: 250-265). “This classroom setting has made me more aware of individual wants and needs and asking them how they would like to learn” (F2: 64). “Know your students comfort levels but also encourage them to learn in different ways…because when they go into the workforce they are not only going to be reading or writing, it’s oral communication, it’s continuous development” (F2: 59-62). After experiencing discussions on cases like the Swastika one, Felicity learned that: “Nothing is ever black or white, it’s always grey. It opens up a whole can of worms…It’s taught me to have opinions rather than certain answers” (F2: 46-51). This was a lesson she hoped to pass on to her students as well.

**Advice for teaching and learning in ALCs.** Felicity recommended that instructors explain to students on the first day of class that learning in a course in an ALC would be different from previous learning experiences, and address misconceptions they may have about participation and discussions. She also advised instructors to give students time for discussions, and although it may be awkward at first to still give the time for students to get used to it and perhaps, “put on some music or something because sometimes people feel awkward to talk when it’s silent” (F3: 131).

Based on her own experiences going from speaking more to listening more, she suggested that students normally very outspoken in lectures take a step back: “You should never go into a situation thinking ‘I know’. You should go into it offering opinions or suggestions to better understand what the heck is going on. This class really helped me with that” (F3: 167-169). “I learned how to listen to others” (F3: 171). She explained: “Your opinion is safe in this environment. Take advantage that you get to talk about such cool cases and topics in such a creative
and innovative space. Be thankful it’s not all textbook readings, it’s more experiential from each other. Be appreciative and take the opportunity to do really well in this course” (F3: 156-160).

**Summary.** Case F looked at Felicity’s learning experience in ETH300 and how it led her to learn to listen to others. She explained that she learned this lesson because of the classroom space and the instructor’s interactive teaching approach. As a result of her learning experience, she intended on using the same teaching approach in her future classroom, and provided advice for instructors and students on teaching and learning in an ALCs. The next case, Case G, explores Grace’s experience in ETH300 which led her to advocate for more courses to take place in ALCs.

**Case G: Grace**

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Until taking ETH300, Grace described her undergraduate learning experience as uninspiring and disappointing: “I walk away from lecture classes feeling unfulfilled. Maybe [I] walked into that class feeling something and had something to say, and then walk out of it and feel like nothing happened. I feel disappointed, especially if it’s a topic I was really interested in and come out thinking that wasn’t great” (G1: 155-160). Going from one class to the next, she asked herself: “University is a place where you are supposed to prepare yourself for employment, like employers look for people who have university degrees. But why is it that universities don’t prepare you? All you learn is to listen and write long essays” (G2: 9-13). But after the first day of ETH300, she called her mom excitedly yelling: “Oh my god mom I loved it! I actually had to think!” (G1: 51-52). She attributed a great deal of her learning to the classroom setting, “These
classrooms should exist more! I wish I had a lot more experiences in them” (G3: 203). At the end of the interviews she exclaimed:

I was at my forth year department dinner and the undergrad chair of [the department] sat in front of me. [The department chair] was like I need to make the program better for incoming students, what would you suggest? And we were all like we really like the active learning classrooms! [The university] needs more of them, and we need to have more classes in them. [The department chair]’s like I definitely agree with you. (G3: 206-211)

This case explores Grace’s perspective of her experiences in ETH300, and more specifically how the ALC played such a profound role on her learning. Six themes emerged from Grace’s case:

- Space for talking to students vs talking at students
- Space for group discussions
- Space for discussions on controversial topics
- Space mimics workspace
- Advice for this instructor and others teaching and learning in ALCs

**Space for talking to students vs talking at students.** Grace reflected on her undergraduate experience: “I have been here for four years and I have had very little experience to actually talk to people in my class” (G1: 22). She recalled not speaking to anyone during lectures and was only invited (for forced) to speak during presentations: “We only get experience talking in front of a big group in presentations and that is terrifying to me. You talk for 10 minutes and get no response. It’s awkward and doesn’t help… What was the point in that?” (G1: 92-97). She described these presentations as basically small lectures with students talking at her instead of the instructor: “I don’t like being talked at like in lectures and presentations. I don’t think that works. That’s not how I learn, I need to talk to someone about the material” (G1: 85-86).

In an ALC environment, Grace explained she was able to talk to students about the material, which enhanced her learning. She liked that each class had discussion portions: “The
discussions lasted the entire class so it felt like- well if you ever performed before, you feel really nervous at the beginning but once you get into it, you feel more comfortable doing it. That’s how I felt here” (G3: 192-196). She added: “Near the end of the class or semester, I was like this has been one giant discussion and I feel comfortable now” (G3: 198). “Whereas in a lecture hall, the prof is like you are being marked on participation and how often you speak, I’m thinking oh my god I have to think of 3 thoughts and throw them out today! So you say something completely useless” (G2: 122-129). “The prof is kind of just prodding you to say things but it’s not building towards anything. You aren’t talking together. I never understood that sort of discussion- like what are we doing?” (G1: 126-129). “It’s not a conversation- it’s verbal diarrhea, it’s not a good time” (G3: 203).

**Space for group discussions.** It was important to Grace that intended learning experiences occurred in the right space, and the layout of the ALC was ideal for discussion-based courses. She explained the large circle formation of all the tables around the room provided clear sightlines, making whole class discussions engaging. For small group discussions, having the right furniture and proximity to group members was essential for successful group interaction. She compared the group discussions to group work she was doing in another course stating how much she hated the group work and discussions: “because of the classroom… I love the content of that course so I wish it was different. It’s in a giant lecture hall and I can’t talk to my group members… they are like a mile away on the way on the other side of the room” (G2: 148-152).

She explained the instructor of her other course noticed students could not work in the lecture hall so allowed them to work in the hallways, but this did not work for Grace: “She says you can leave the class and go somewhere else but then people are like okay I’m just going to go home, we can talk on Facebook later. You aren’t given the space for it!” (G2: 157-159).
Grace elaborated on why group work needed to be done during class and in the course classroom: “Working outside of class, it’s very disconnected. I could see that group work [I did in the other course] work very well in our [ALC]. You could actually talk about the content while you are with your group but you can’t do it in a lecture hall” (G2: 153-155). With the disconnect in both time and physical space, Grace stated the work produced in her other course was poorer in quality than if it was done face-to-face in the classroom: “If you do it over Facebook or outside of class time, you are checked out…people will ask questions at 2 am… But if you are in class, you are there to learn, to contribute, and that’s just like at work” (G2: 182-187). She realized how this would be unacceptable in a workspace: “Like imagine you were at work and you were in an environment I just described and people are like okay we can talk about it when I get home because we don’t have a space to work at now” (G2: 160-162). “Not be given the time or space to do it, it doesn’t make sense” (G2: 164). Grace concluded: “[ETH300] is the first time I have ever experienced group work and discussions positively in 4 years!” (G2: 167). “You need to be given the right space, opportunities, and time! You don’t hate the people sitting at your table. It’s very different” (G2: 168-171).

**Space for discussions on controversial topics.** Grace thought about the discussions on controversial topics she had in ETH300, and wondered how her experiences in other courses with sensitive topics would benefit from being in an ALC:

In a lecture hall, the prof is at the front of the classroom talking about this intense issue and students would be like OH MY GOD – and then no discussion. You feel helpless. You could put up your hand and be like yeah me too, but that’s about it. You don’t want to be that person … where you are just interrupting the lecturer, and it’s out of place and not constructive to the conversation- even though it is really important. (G2: 68-77)
In the ALC, she thought the space allowed the instructor to foster discussions: “It makes it feel natural” (G1: 125). She added, “[The ETH300 prof] sets it up in a way where it feels good to share…that really helps you had time to think about it. A lot of time you are put on the spot in classes and you can’t gather your thoughts properly, but in this class I thought really hard about it and this is what I think and I’m proud of my answer” (G1: 237-241). She liked that students were able to have discussions with smaller groups of students and the instructor helped to build the smaller discussions into one larger discussion with a common goal, “The way its set up and the way [the prof] guides the conversation definitely eliminates the awkwardness of controversial topics” (G1: 133-135).

**Space mimics the work space.** During the interviews, Grace revealed she was in the process of going to job interviews which made her think, “This classroom mimics the workplace but is still educational, and that makes a lot of sense that we learn in this environment” (G2: 9-13). She explained how she had been asked in every interview what did she learn in her degree that she could apply to the job. She indicated that “It’s more than saying I have a university degree so I should be able to work here, but it’s really what did you learn? You learned how to listen and regurgitate information, which is useful to a certain extent, but we shouldn’t just be only learning that” (G1: 252-255). Grace had worked in many office settings for summer jobs and found the round tables used for group discussions very similar in both settings: “Comparing the environment in the classroom to my past work experience, yeah, it does feel the same! So it makes more sense to me that this classroom is like a real life setting than a lecture hall setting” (G1: 250-251). “I have meetings at work, and I worked in groups and having conversations. No one is talking at me, we sit around a table like in a boardroom and everyone is talking. Maybe my boss would give us
Grace recalled an instance at work where one employee was petrified of talking even in small group settings:

Last year we were having a meeting and one girl burst into tears. She’s like oh I’m sorry, I’m just really bad at speaking up for myself in a group setting like this. She’s like this make me very anxious. She was disagreeing with what other people were saying but she didn’t feel like she could because she wasn’t comfortable with it. So if she would have had experience in this class maybe she shouldn’t feel so anxious. (G1: 104-110)

Looking at her peers in other courses, she thought the same thing could easily happen to them in a workplace environment if not given opportunities to practice talking to their peers: “I want to reiterate, this classroom mimics the workplace, the teamwork. You don’t get to experience it very often in school but it’s so important” (G2: 188). “In most classes it’s people throwing information out there. What use is it to just throw out random thoughts? An employer won’t be like okay great, they want to know you were working together and building an idea or something” (G3: 114-121).

Grace explained that in her next job interview she intended to bring up her experiences in ETH300:

When they ask about experience in teamwork or a time you dealt with an issue, I can bring up examples I had in this class. Or when they ask a time you showed initiative and I can talk about when I had to take a leadership role and guide the discussion. You normally don’t think about school in a job interview but really you should! (G2: 193-196)

Advice for this instructor and others teaching and learning in ALCs. Grace offered a suggestion for the ETH300 instructor to use more features of the educational technology in the ALC in the next iteration of the course. Since the case studies were on real businesses, she
suggested the instructor encourage students to “do our own research on the screens as a group on the company” (G3: 146), or show videos of “CEOs speaking about the company” (G3: 147), or a recording of a “news story about the issue, just to get more of a feel of what we were dealing with ... It would give a different perspective. It would work really well in there” (G3: 150-153).

Grace also gave some advice for future instructors and students using ALCs. She cautioned against instructors going into the classroom with the same mind frame as in lecture hall: “You need to build your course to the classroom. I know this prof did that, [the prof] told us at the department dinner... It makes sense that’s what made the course so good. It was appropriate for the space, that’s important” (G3: 127-132). For future students, she described it was a different environment from what they are used to: “You’re not going to be forced to discuss, it’s not awkward. You’re sitting in a smaller table with your peers who might also feel nervous... When the conversation opened up not everyone had to speak. Don’t feel stressed about it” (G3: 186-190).

Summary. Case G examined Grace’s experience in ETH300 and the ALC. She explained how the classroom space had a profound influence on her learning experience in this course. It provided her with an environment where she was being talked to instead of talked at, engage in group discussions, and have constructive conversations on controversial topics. She emphasized how much the ALC mimicked the workspace and that students should have more opportunities to learn in these classrooms. The next case, case H, examines Hannah’s learning experience in ETH300.
Case H: Hannah

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When Hannah began her undergraduate studies, she envisioned herself going into Law School because everyone in her family had done that, but then she took a course with a young instructor who was a spiritual counsellor and her desired career path changed. According to Hannah, a spiritual counsellor provides therapy to clients by listening to them and providing them with concrete advice on how to enhance their spirit and overall well-being. She was immediately drawn to this new career path and looked for courses that would prepare her for a Master’s in Spiritual Care and Psychotherapy. Reading the ETH300 course description, she knew the course topics would align with her career path and came into class thinking she would gain knowledge from the instructor in a lecture format. But when she walked into the ALC she felt confused: “My first impression of this classroom was like whoa what is this? I’ve never been in here. I was curious as to how it was going to work. Like how are we going to be taught in here? Everyone is spread out everywhere. How are we going to learn from the prof?” (H3: 124-126).

To Hannah’s surprise, the course was very interactive and she learned more from her peers than the instructor, including learning about different perspectives and developing an open minded. These were skills essential for a spiritual counsellor, but she admitted: “I probably would have still taken the course if it was in a lecture hall, but I would not have enjoyed it…because we wouldn't get to talk to each other and it wouldn't have opened my mind to other people’s perspectives” (H1: 166-188). “This class has really emphasized to think about every single person’s perspective before you make a decision or add your own bias to it. I wouldn't have learned that in a lecture and
it is really important as a spiritual counsellor!” (H1: 125-126). Fives themes emerged from Hannah’s case:

- Instructor and the ALC
- Motivated to share ideas
- Becoming open minded
- Applying learning to job context
- Advice for teaching and learning in ALCs

**Instructor and the ALC.** Hannah described having a very different learning experience from what she anticipated. Instead of listening to a lecture, she actively engaged in discussions with her peers explaining: “It’s because this prof allows for it to happen—the discussions. [The prof] seems to really want discussion to happen a lot of the time” (H1: 43-44). “When we are all in discussions, the prof comes around and listens and gets involved” (H1: 58-59). She also attributed part of the interactive nature of the classes to the ALC: “A lot has to do with the arrangement. We aren’t all in individual desks lined up in rows. We are all in a big circle to communicate with each other. It’s easier to communicate in a circle. There isn’t a lot of moving, which makes a difference, and it is helpful we are in a circle talking” (H1: 51-54).

She contrasted group discussions in the ALC to the lecture hall: “You can’t get into a group in a lecture hall. Everybody has a desk and you can’t move” (H1: 70-71). “Some of my classes [in the lecture halls] the profs might try to get discussions going” (H1:44), “but you would only be able to talk to the person beside or in front or behind you. It’s awkward and there will always be someone left out” (H1: 168-170). “How this classroom is set up is just more comfortable- the circle tables and circle room” (H1: 80-83). “Everyone is included. No one is sitting alone, and everyone can talk” (H3: 67-72).

In addition to feeling more comfortable interacting by sitting in a circular formation, Hannah stated the interactive screens helped as well because everyone could write ideas on the
screen, “It’s really interactive. Normally in a group there is always one person who continuously talks and not let anybody else share… so this is helpful. Everyone gets their opinions out. Someone writes it all down and we shout at the board” (H1: 63-67). Hannah noted one discussion where her group used the interactive screens extensively: “It was the [clothing franchise] case, and it was such a fun way to do stuff with it in that classroom” (H2: 41). “In my group we kept googling it on the large screen altogether. Then we looked up more on our own laptops and then plug it into the screen for the group to see. It was really fun and we got to interact with each other a lot” (H2: 53-57).

Motivated to sharing ideas. With lots of interactions with her peers, Hannah thought she became more confident in sharing her ideas: “I became more confident in this class. Actually, last class I was the one who didn’t agree with what everyone else was saying!” (H2: 89-90). The discussion was on the clothing case and Hannah’s group assumed the company used the Aboriginal print by accident, to which Hannah replied, “I think that’s so false! Like the holocaust one, there is no way you didn’t know a striped shirt with a triangle was what people wore in concentration camps. We were all debating about it and whether it was ignorance” (H2: 53-55). “I was so strongly opinionated about it, which was good. This class has really helped me out with that a lot” (H2: 90-91). She explained how different this experience was from her other courses: “I’m able to give input…share my opinion with different people. It’s let me be more vocal... Normally I would never talk in class…but in a small group…it’s a lot easier and made me more social. I’ve made friends in this class” (H1: 86-89).

Hannah continued the conversations on the cases with peers outside of the classroom, which helped her to continue to build her confidence in sharing her thoughts: “I never heard of these things before. I asked my mom…and she’s like yeah I heard of them. Why haven’t I? Just
talking to her about these things which I normally wouldn’t” (H1: 25-28). She also told her roommates and friends about the cases and together they continued to research on the cases and have in-depth discussions.

**Becoming open minded.** Hearing the various perspectives in her group discussions helped Hannah become more open minded: “This class has opened my mind. Sometimes it has really changed my mind…You have your own opinion and you hear others” (H1: 100-106). “It’s helped me listen to everyone’s opinion… Even in the big group discussions, I come in thinking one thing, but I hear someone else’s opinion and think oh yeah I never thought of it that way. So it can be taken to outside experiences as well” (H2: 82-87). The outside experiences Hannah referred to extended from daily life to her career path specifically: “I want to go into pastoral studies, so being able to work with other people, this class has helped a lot with. Like a lot of the issues have many sides” (H2: 12-16).

**Applying learning to job context.** Although becoming a spiritual counsellor was still a few years away, Hannah was applying for summer and part-time jobs in the meantime, “I have learned [from ETH300] to appreciate other people’s opinions and be able to include other people when I’m making decisions” (H2: 17-18). Learning to listen and consider other people’s thoughts was important for Hannah in the real world because, “Some people might be presented with the situation and automatically do what they think is best for them because this is how I feel so I’m going to do this. But at the end of the day, it’s best to hear everyone’s perspective before you just come to conclusion” (H2: 74-77). “This whole course was a good way to interact with other students, to hear other people’s opinions. I learned how to cooperate with other people and take into consideration everyone else’s opinion, and point of view” (H3: 14-18).
Advice for teaching and learning in ALCs. Walking into the ALC, Hannah knew she was about to have a different learning experience because of the learning environment. In her third interview, she expressed that instructors should take advantage of ALC: “It is a nice learning environment. It was brand new so it was clean. I liked that there were windows, natural light. Students will like being there” (H3: 127-129). She suggested instructors incorporate the layout in their curriculum, “Like try and base your class like how our prof did with lots of opportunity for discussions and group work. If you are going to be in the classroom you might as well take advantage of it…Use the smart boards and interactive stuff” (H3: 91-96). She advised instructors to emulate the way the ETH300 instructor taught the course, “[The prof] stands in the middle, and we get a chance to talk, and [the prof] walks around” (H3: 98-99). It was important to her that the instructor ask questions to students to prompt them to talk, “[The prof] is not talking at us, it’s always what do you guys think? What would you do in this situation? That was really effective” (H3: 100-102).

Hannah explained the ALC as a different environment from the lecture hall where: “no one is willing to talk or discuss for a long time” (H3:111), “because it’s just people talking at you” (H3:120). In the ALC, “You hear everyone else’s opinions and you won’t learn as much if you just sat there and said nothing. You feed off of each other, in other classes you might be like okay that was nice, but here it’s like oh yeah yeah I heard that too, and you keep going” (H3: 28-34).

Summary. Hannah came into the course knowing it would be helpful for her career, but was surprised how much she learned from her peers in addition to the course material presented by the instructor. She appreciated how the instructor allowed students to learn from each other by taking advantage of ALC layout. As a result, she felt more motivated to share her ideas, became more open minded from listening to others, and saw direct application of what she learned in the
course to a job context. Case I is the next case and it examines Isabel’s learning experience in ETH300 and the ALC.

**Case I: Isabel**

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<td>Career</td>
<td>Law School- Public Relations</td>
</tr>
<tr>
<td>Prior experience in ALC</td>
<td>No</td>
</tr>
</tbody>
</table>

Isabel walked into an ALC for the first time in ETH300. She was initially confused by the space: “It was weird at first because I was like what’s with these round tables- how are we supposed to do things in here?” (I1: 168-169). But Isabel embraced the new and different environment quickly and felt motivated to learn by being in this space. She saw similarities between the ALC space and the work environments she had been in over the years. Case I examines Isabel’s experiences in the ALC and how they paralleled her workplace experiences. Five themes emerged from Isabel’s case:

- Aesthetically appealing classroom
- Space for discussions
- Space to discuss assignments
- Different methods of learning
- Advice for teaching and learning in ALCs

**Aesthetically appealing classroom.** Isabel described how important it was to be in an environment that was aesthetically appealing and visually encouraged learning: “I’m a visual learner and in some classrooms things are falling off the walls… It’s a sterile classroom… When you are in a place that doesn’t make you feel welcomed, you don’t want to learn there.” (I1: 159-163). She recalled how different this was compared to environments in elementary school: “I miss schools with pictures on the walls… A lot of lecture halls are just chairs, desks, blackboards… But
the interactive classrooms remind me of those features in kindergarten and elementary school” (I1: 164-166). “In this classroom even the carpet and chairs are comfortable. I like being in an ascetically appealing room…You want to learn because you are in a nicer environment” (I1: 159-164).

**Space for discussions.** The interactive features of the classroom included small group tables and interactive screens which Isabel thought enhanced group discussions. The ALC, “helps with group discussions. I’m the type of person who needs to talk through my ideas in order to clarify them. The group discussions are very effective” (I1: 28-32). “Rarely do I talk in other classes…I’m afraid of being wrong” (I1:51-52). “Here I am able to talk and not necessarily have to talk to the whole class but a group of 4-5 people. I really like that” (I1: 36). “We’ve had a lot of small group discussions and moved around a little bit - it feels like a very safe environment because now I know the people, and that’s a huge thing!” (I1:43-45).

Isabel then described how the screens helped with the discussions: “to be able to see things on the board, even when other groups are presenting, to be able to see the words written on there-it’s something to focus on because you can easily drift off” (I1:72-74). “It’s kind of like you can’t escape it. You look around and it’s everywhere” (I1:78). She found this course even more engaging than “classes that are in more convenient times. I’m more active throughout the entire class and I have very few moments where I’m looking at my phone or the internet. The technology keeps you engaged and I switch between [looking at different] screens... I’m not always looking at the same screen” (I1:79-84). She emphasized that the success of incorporating the educational technology into the class sessions was because the instructor knew how to use it: “I’ve talked to people about this classroom and they had a class where the prof didn’t know what they were doing. That really takes away from trying to learn when the prof is like does anyone know how to use this?” (I1: 63-
She explained that in most courses she would submit an assignment and then not think about it again until she got her grade back: “Usually profs don’t discuss an assignment after you’ve handed it in” (I1:119). “You do them, you hand them in, and you forget about them, and all people care about is what grade they got on it. You won’t even think twice about what you actually learned from that assignment” (I1: 132-133). “You get your grade back a month later and you don’t understand why you got it because you don’t know what other people have said. You find out afterwards that you missed the point or something like that” (I1:120-122).

She contrasted the experiences in other courses to ETH300 where the instructor incorporated discussions on assignments right after students submitted them. This gave her the opportunity to articulate her thoughts to someone else verbally, hear what others wrote on their assignments, and think more deeply about the concepts,

To be able to come to class and say oh you wrote that? I wrote that too! Or you’re sitting at the table and someone used the exact same quote as you. It’s comforting to know other people are on the same page as you. You aren’t totally missing it. It makes it meaningful and the prof asks us to write down ideas we had after the discussion and takes that into account in our marks” (I1: 111-117). But regardless of what I got on the assignment, being able to discuss it [made me] genuinely care about the topic and you learn a lot more (I1:132-133).
Isabel thought about how similar the process of discussing an assignment was to doing work in a workplace environment: “In a job, you would be discussing situations in a team and coming up with solutions all the time…just like here…In the real world you don’t write a 25 page essay and submit it” (I2: 41-43). She gave an example from her own work experience:

This past summer, I worked at an e-commerce company… I was the contact between the other stores and head office…That position didn’t exist before I came, I had to create it, so there was a lot of getting together with members of the head office and discussing ideas and how to make something that’s been a concept into an actual role in the store and what that role entails and how to train people. That’s what I meant by doing a lot of discussions (I1: 146-151).

She added how strange it was that in school students only get once chance to complete an assignment, “It’s like you had one shot and you screwed up. That’s what I don’t enjoy school” (I1: 126), while in the real world, “they send you back to do it again and do it until you get it right” (I1:125). She found her experiences in ETH300 were more closely aligned with the real world, “That’s why I loved the assignment discussions. At one point I gave an idea I had thought of because of the discussion that I didn’t write in my assignment. So new ideas come up even after you’ve done something” (I1:127-131).

**Different methods of learning.** Altogether, Isabel felt engaged throughout the entire course because, “there are different methods of learning that you can use in the classroom” (I3: 13). She gave examples, “like the screens, the prof lectures in small increments… looking at different multimedia like short videos [the prof] shows or long videos, pictures” (I3: 13-15), as well as the case studies and small and whole class discussions. “There are a number of things used
and it’s not all textbook readings and lectures. It offers a variety of ways to learn and is great for anyone who has different styles of learning” (I3: 16-18).

She explained that the instructor “created a lot of balance throughout the class” (I3: 21), allowing both students and the instructor to lead parts of the class.

[The prof] will present an idea, and then we talk in our groups and hear everyone else’s ideas. [The prof] still comes around to the small tables and listens, and if we need something clarified [the prof] does. And then [the prof] brings the ideas together or corrects something if needed. It’s not lost in translation like hearing from just other students. I have a seminar class where it’s just presentations for the entire class or another class is just students speaking the whole time to each other. (I3: 24-26)

She liked that the instructor was very present during the entire class which kept the class on track, “When [the prof] is facilitating a discussion and it’s not going anywhere. Sometimes classes can become rants. But [this prof] keeps the discussion going even when it’s drifting off a bit, or going in the wrong direction” (I3: 28-31).

**Advice for teaching and learning in ALCs.** Isabel thought instructors coming into ALCs may be tempted to change teaching approaches to strictly group discussions because of the layout of the classroom, and she recommended instructors create a balanced teaching and learning environment to keep class engaging:

Definitely have a balance between student discussion and prof talking, and not one to like be more than the other. Also switch throughout and not just one with the prof talking for half the class and students talking to other half. That’s when people zone out…So when it’s an engaging discussion, make people feel comfortable to express their ideas and the classroom functions really well. (I3: 136-140)
She also added, “I would say use the technology more, like the other functions, there was a mind-mapping function? We mostly used PowerPoint and whiteboard. So really utilize the functions these systems have” (I3: 147).

Isabel suggested for students to: “be engaged, put your phone and laptop away. I know sometimes it can be like I’m just going to check Facebook quickly but next thing you know it’s been 20 minutes and you’ve watched like 7 dog videos” (I3: 159-162). She also gave a personal account of becoming more confident speaking in class by starting with the small group discussions, “The more I spoke, the more comfortable I got, and then the more I spoke. Communication is one of the most important things for work environments... You will have to collaborate with other people” (I3: 171-173).

Summary. Case I examined Isabel’s experiences in ETH300 and an ALC. She found the ALC an aesthetically appealing environment which motivated her to learn, provided space for discussions on cases and assignments, and allowed the instructor to implement different learning methods that made the course engaging. She gave some recommendations to future instructors and students regarding the best use of an ALC. The next case, Case J, is the final student case and explores Jennifer’s experience in ETH300.

Case J: Jennifer

<table>
<thead>
<tr>
<th>Program</th>
<th>Psychology</th>
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</thead>
<tbody>
<tr>
<td>Year of study</td>
<td>3rd year</td>
</tr>
<tr>
<td>Career</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Prior experience in ALC</td>
<td>Yes- not in 333</td>
</tr>
</tbody>
</table>

Jennifer had one year left for completion of her psychology degree, but decided to take a break and do a year abroad in Germany because she was tired of the heavy theory-based courses in her department: “The last three years were all lecture-based courses and I was starting to
disconnect from my academics and the learning experience. It was get in and get out with my piece of [degree] paper” (J2: 60-61). “I really love learning, but I’m not good at it” (J1: 56), describing herself as thriving on only applicable content, “If something is relevant to real life…I take it home and think where can we apply this? If it’s only lectures or theory my brain doesn’t connect with it” (J1: 57-59). But when she took ETH300, the experience caught her off-guard: “I thought it would be lecturey. It was a surprise but a good one” (J1:29-30). “It’s probably my favourite course I have taken all university which is a heavy statement. The prof is welcoming and inclusive, and I love the style of course” (J1:19-22). Her experiences in ETH300 had changed her:

[ETH300] helped me appreciate school more” (J2: 59). “Now I’m feeling more included in the learning experience. It’s important to have students feel part of the process and that they have a role in their learning experiences versus they are just that number handing things over to a person over a glass wall. If I had more courses like this one I wouldn’t have felt the need to take a break. (J2: 62-66)

This case explores Jennifer’s experiences in ETH300 and how it led her to appreciate school and experience learning with peers instead of just sitting next to them. Five themes emerged from Jennifer's case:

- Learning with peers
- Instructor’s teaching approach and circular classroom
- Realistic learning experience
- Advice for teaching and learning in ALCs
- Peers appreciated learning experience

**Learning with peers.** Jennifer described how learning with her peers changed her outlook of learning in university:

It was the experience to learn with people. The small class environment, the small table discussions, and then the larger discussions between the tables and sort of being spurred
on by the prof to think about new things that wouldn’t have been brought up. It didn’t necessarily have to do with the content but just how to do that, how to make it work, how to be a good team player. When you don’t hear someone talking, ask what they are thinking or what their perspectives are. It was just more applicable life skills. (J3: 14-21)

She elaborated on what she meant by life skills:

Like how do I participate in a group of people I don’t know very well? I learned how to deal with strangers, how to elicit discussions, how do we come to something if we don’t all agree on the same thing, how do we compromise, how do we take that time to understand what someone is thinking. To me these are life skills because I can transfer them to situations between friends, family, and most importantly in your occupation and career search. (J3: 22-26)

She noted that the course content was not necessarily about learning these life skills, but used life skills to learn the content, “You are practicing it in class. It’s not a course on how to work in a team environment but you are practicing it. You are using those skills and having to apply them because that’s what the class’ organizational structure is. It can be very artificial in other classes that say it’s on team work” (J3: 27-34).

Through practicing team work and communication skills in class, she stated that it allowed her to be reflective of her actions: “What elicited positive discussion? What did I stray away from? What I found myself not doing? Sometimes I think about myself as a leader, but with this experience I became a really big listener” (J3: 107-109). This was transformative to Jennifer, “I would say my opinion and step back and listen to everyone, and restructure the way I saw myself coming from. Then I provided a new opinion that might be different from my original one” (J3: 109-111). She explained this was important because in most classes students do not have the
opportunity to speak and “you never get to think about what your style is… someone is just speaking to you… then you go to a team environment how am I supposed to use my voice? … How do I listen to other people’s voices when I don’t agree with it?” (J1: 163-168). In this environment, Jennifer found it forced students to listen to other people with whom they may not agree, “I’ve been in situations where someone says well that is so controversial because that’s demoralizing. But okay take a step back and think about this—and the person’s like oh that is true” (J1: 169-171).

**Instructor’s teaching approach and circular classroom.** After the first class, Jennifer wrote on her exit card praising the instructor’s teaching approach, “Your approach to academia and teaching is unlike other profs I’ve had at [this university]” (CJ: Jan. 8). She described in her interview: “This prof is a gem in this type of learning style, [the prof] is the exemplary prof” (J3: 218), adding the instructor’s teaching approach was perfect for an ALC, “In lecture halls there is a real distinct hierarchy that reinforces that intimidation factor” (J3: 129). “[In the ALC] we are on the same level ground and [the prof]’s in the middle and [the prof]’s not speaking down on you. The structure and physical nature of the room really changes that dynamic. I looked forward to the discussions” (J3: 134-135). She discussed the importance of the circular formation of the classroom facilitating the instructor’s teaching approach: “Looking at it aesthetically, it makes it easier to see people across the room. Also the circle tables, allows you to see everyone’s face and put a name to them” (J1: 105-106). It’s a natural conversation than to be put on the spot. It’s not like ok now you talk, you talk, you talk. You don’t have to put up your hand necessarily to contribute, you decide when you want to talk” (J2: 13-16).

Jennifer talked about the different impact the small group and whole class discussions had on her, explaining they offered different types of learning. “The internal table discussion you can
voice your opinion right away… and we have gathered a bunch of really diverse perspectives” (J2: 33-35), but then during the large group discussions, “suddenly someone else from a different table throws something else out and it’s like wait how did you think of that? How did you get there? Why didn’t we?” (J2: 37-39). She enjoyed this process, “It’s kind of cool… you have gone through all there needs to be discussed but then something new comes up. Even the mix of the two, just having the one might not have been enough” (J2: 40-41).

In addition to the different types of discussions, Jennifer especially liked the way the instructor responded to students throughout the class, “[The prof]’s really good at saying this was the response, but I really agree with what you are saying and I can see how you came to this conclusion—making people feel welcomed” (J1: 139-141). “I also love that when you say a response, right away instead of letting the class go on, [the prof] challenges it” (J1: 63-64), because this made the discussions more fruitful and natural explaining, “if the prof waited until the end to challenge it I would be like I don’t care I’m over it” (J1: 63-68).

She emphasized the need for instructors to be involved in the discussions as she recalled her experience with another instructor in the larger ALC: “She doesn’t even need to be there and the course would go on…I find it’s too independent…where it’s like why are you here and why are you getting paid? Because I’m doing all this learning all by myself” (J1: 71-80). Adding, “It’s like I miss you, come back to me! It’s the opposite of a lecture!” (J1: 95). Jennifer appreciated the balanced teaching and learning approach in ETH300: “You have thought patterns and talk about content and getting the feedback right away from the prof…It's more balanced… whereas the other class you get feedback only after you hand in the assignment, and it’s not very personalized” (J1: 84-85).
Realistic learning experience. Jennifer thought her learning experience in ETH300 was very realistic to her workplace experiences. This led her to develop a greater appreciation of the course experience:

Since I was 16, I have been in an office environment, insurance business, and the last couple of years I’ve been at Blackberry. Those experiences have been very beneficial because when we get into group discussions I relate this course to how I deal with coworkers- I loved that. I wonder if I didn’t have that real world experience if I would appreciate this type of learning as much. (J1: 209-213)

She explained that knowing how to work in groups was essential to being successful in the workplace: “Very seldom in the work environment you come to a conclusion without any deliberation… that’s what the university system is like. You spend 4 years in lecture and don’t contribute, and then suddenly are asked to… and don’t know how” (J2: 45-50). “You need those experiences in class because they can elicit that work or team environment, and how to work with others, when to speak, when not to speak, and learning how to do that with a balance” (J2: 51-53).

Moreover, Jennifer stated that before entering the workplace, students needed to pass the job interviews which ask about group work experiences:

In every interview they ask, what are your strengths in a team environment? How would you handle this if you are in a team environment, if you are on the same level as someone else and this came up, if someone is not talking?... It’s all stuff you can only speak to if you have the experience. It’s hard to make it up out of nowhere- I’ve tried!...I’m glad I took this course. (J2: 80-86)

If you were to ask me an application question on leadership or team work, after completing this course, I can speak to this class because of the lay out… the structure, and interactions
with people... Usually I relate those workplaces or clubs, so it's neat to be able to use this as an academic reference to that type of environment. (J2: 90-96)

**Advice for teaching and learning in ALCs.** Jennifer was cautious about recommending that all instructors teach in an ALC explaining: “Sometimes, not that I think this prof did this at all, you have profs come in and apply their normal teaching style and then blaming it on the technology or the environment” (J3: 140-143). She wanted instructors to be willing to encourage discussions, “This environment won’t benefit students if it’s a lecture style. You need to have the table discussion to make this type of environment productive” (J3: 155-157). Adding how important it was for the instructor to come and engage with all the tables, “[The prof] came and asked a question, and if someone stated something strongly [the prof] would say well what if?” (J3: 155-161).

In order to ease students’ anxieties about learning in an ALC, Jennifer joking suggested: “Just put a sign up that says you are in the right place” (J3: 184). She explained: “Because right now this isn’t the norm, there is going to be a little bit of a worry or caution entering this room” (J3: 185). “I told everyone I know to take this class! Like 50” (J3: 208-209). She added, “It should be mandatory for students to take a course like this…it doesn’t have to be a pre-requisite for your program maybe an elective… It’s super valuable” (J3: 197-201).

**Peers appreciated this learning experience.** Throughout her interviews, Jennifer expressed her appreciation for her learning experience in ETH300 and explained that she thought her peers also had the same appreciation:

I remember looking at people’s reactions and how they left [on the last day of class]. Everyone came up to the prof to thank [the prof] afterwards. This says something about the prof, but also what the environment allowed the prof to do. You really need to elicit that
type of environment and relationship for all your students to come up to you and say thank you at the end. That doesn't happen in a lecture hall” (J3: 202-207).

**Summary.** Instead of seeing ETH300 as just another course to get through to complete her degree, Jennifer learned valuable life skills that she thought she would be able to apply in her future. She was able to learn with her peers, appreciated the instructor’s teaching approach and an ALC, had a realistic learning experience, and thought her peers did as well.

**Instructor’s Case Part 2**

After ETH300 and the student interviews were completed, the instructor reflected on the enactment of the course in the ALC in a second interview. This case presents data from the second interview, but also ties data from the second interview to similar results found in the first interview. Four themes emerged from this second interview:

- Importance of the ALC Space
- A Realistic Learning Environment (Learning to listen)
- Alignment between Instructor and Student Perspectives
- Advice for teaching and learning in ALCs

**Importance of ALC Space.** The instructor reiterated from the first interview, the importance of space on enacting an interactive and meaningful teaching and learning strategies: “I hope I never get kicked out of this classroom! But I am sure I will as more people want to start using these rooms more and more” (In2: 27). Over the term, the instructor presented the course’s curriculum at scholarly conferences and frequently referred to the influence of the classroom space as key to the success of the course. Despite the popularity of ALCs across institutions around the world, the instructor found that many of his peers may not have ALCs at their institutions or, more likely, are not aware that their institutions have them. Therefore, the instructor showed photos of students engaging in discussions during conference presentations when explaining the course:
Everyone was like we need classrooms like that! What I do in that room I’ve done it in tiered lecture halls and I don’t think it works as well. It’s hard if there is a group in the middle to get close enough to them to hear what they are talking about. It’s a lot harder for participation marks to figure out in those settings. (In2: 18-26)

In addition to the influence of the configuration of the classroom on teaching and learning, the educational technology played a role as well, although the instructor admitted to not using it to its fullest in ETH300. Since the student interviews were completed at the time of the instructor’s second interview, the researcher shared with the instructor some of the advice regarding the use of an ALC that students gave in their interviews. For example, Grace’s suggestion to use the media capabilities in an ALC to present news clips that highlight reactions of the cases to help students better understand the impact these cases had on people. The instructor was very excited by this stating, “That’s a really good idea! No one wrote that on their USAT. I’ll make a note of that to put in the file until I teach it again! I’m teaching it next winter” (In3: 82-83). The instructor began to brainstorm other ways to increase engagement using the educational technology, such as showing clips of interviews from CEOs on their reactions of the cases, and perhaps even creating a Facebook page to encourage alumni of ETH300 to post news articles they find about stories and cases that would relate to the course. The instructor explained that alumni of the course frequently send the instructor news clips they found that might be of interest, and if it was collected on a social media page it could be shared with the students in the class and they could explore it during group discussions. The instructor thought this could even provide students with ways to contact alumni who obtained jobs as a result of taking this course. This could truly connect this course with the real world.
**A realistic learning environment.** The instructor explained the ALC set the tone for a realistic learning environment as it allowed students to engage in discussions and experience learning processes that they will likely encounter in their work place. This meant the instructor needed to resist telling student the answer immediately and push the responses back towards the students: “Sometimes that’s what I want for authentic or interactive learning, not to spoon feed them. Sometimes you do have to prod them and hope they do it. Maybe I should have articulated it better” (In2: 243-244). The instructor described an example:

When I did the [clothing franchise] and a couple of tables said, I’m sure they just made a mistake and they should issue an apology. Yeah okay but Google [the clothing franchise’s] striped pajamas and I walked away. And I heard them shout OH MY GOD, they were so upset. This is not a mistake. This is a marketing strategy. Maybe I should have said after that, that this is why I didn’t just tell you about the striped pajamas, this is why I told you to Google it. So when you hear other things you don’t understand, I’m not going to tell you directly. I want you to take the initiative. If you don’t know what the case I referred to is, then Google it. If you don’t know what [a company] is Google it. I can say does anyone else know about [this company] and want to explain? That’s the kind of learning environment I want to create, not one where they get spoon fed” (In2: 244- 257).

**Learning to listen.** In the next iteration of the course, the instructor planned to encourage shy students to participate more in whole class discussions, “I should be more articulate in saying part way through the course that a lot of you are comfortable stepping up and …I want people who don’t usually put up their hands to do the large group work so can you help me mentor them” (In2:89-92). The researcher shared with the instructor that although two outspoken students (Felicity and Jennifer) did not mentor shy students to speak more, they actually learned to listen to
others more and give opportunities for others to share their ideas. The instructor responded: “Wow! I hadn’t thought about that! I have been impressed over the years by those who speak up more and say to me they learned to speak up more. But I hadn’t thought about learning to listen, that makes a lot of sense” (In2: 110-114). This data ended up being the biggest take away for the instructor.

“The biggest learning for me from what you said so far is the learning how to listen, which I did not think of, but it’s really important and I want to highlight next year. You will learn to participate but also learn to listen. There has been debate in academics- that increasing participation marks is really disadvanta ging introverts. Seriously introverts in university rule. It’s fine, good for them, but extroverts need their time. But no one has mentioned is extroverts will learn how to listen and not brush right over them” (In3: 198-203).

**Alignment between instructor and student perspectives.** In the first interview, the instructor was concerned there may be misalignment between what the instructor wanted students to learn and what the students learned, but the instructor was pleasantly surprised:

I was surprised by how students articulated shifts in their own learning. On the back of the memo assignment, I had students write their own position, and a number of them actually documented that their minds had been changed by the process of writing the assignment, then discussing it in groups, and in one case even discussing it in the plenary (whole class discussion). So their minds have been influenced by the scaffolding of the design. That’s what I wanted to happen, but I never seen it documented and articulated it by the students, also on their [exit cards]... It happens every year but it’s just this year maybe a little bit more. (In2: 185-193)

The instructor explained: “Early on, I tended to get more questions on the name plates [exit cards], like I would be really interested in seeing such and such, or this concept still doesn’t make
sense. By the end they are being more opinionated about the cases” (In2: 416-418). “There were ones that said I really thought that I knew what this meant or the answer was but it shifted or it makes me so frustrated I’ll never have a solid answer to most of these case questions. Some of them pointed out, which was helpful for me, the actual strategies” (In2: 408-410). The last few weeks were more than not, on their learning as a result of the case studies. It’s interesting to see the progression” (In2: 416-420). The instructor then read out an excerpt from one student’s exit card: “I need to take a step back and be reflective and aware of my biases- when I was pondering the case I was quick to decide it was a non-issue, then talking to my group I realized I need to use a different lens and understand that may be serious and meaningful for certain groups” (Cstudent: April 1). “So they were thinking about the topic, but they were thinking about their learning this year which I thought was really interesting” (In2: 194-195).

The final assignment also demonstrated to the instructor that students learned from the course: “I was very impressed this year. First there is a diversity in topics chosen… Overall I felt they did a really good job in identifying what the issues were and who the stakeholders were” (In3: 135-138). The average grade was 81, which is high. Most of them are where I want them to be” (In3: 142). The instructor identified places in the course that could be improved in the next iteration which was articulating the analysis portion of the assignment: “They mentioned the ethical principles… but they didn’t analyze why, what’s going on…So next time I will highlight that more in class… like this group used deontological thinking, but over here they used social contract” (In3: 145-151). The instructor referred to one student’s assignment that was the most impressive and received the highest mark, and it was Jennifer’s assignment! She had made a brochure describing and analyzing a case: “[Jennifer] didn’t follow this order [of the rubric] for her brochure. It covered all of it in a different order. I like the creativity” (In3: 180-182).
The instructor indicated that there was alignment between what he intended for the course and what students took away from the course. This was evident in the USAT (University Survey of student Assessment of Teaching course evaluation report) scores for the course, which 29 of the 34 students completed. All USAT responses were anonymous. Table 7 provides a summary of the USAT scores.

**Table 7 Summary of Instructor USAT scores**

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<th>Statements</th>
<th>Mean for this course</th>
<th>SD</th>
<th>Departmental mean</th>
<th>Lowest mean for this department</th>
<th>Highest mean for this department</th>
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<tbody>
<tr>
<td>Overall, this is an excellent course</td>
<td>4.8*</td>
<td>0.46</td>
<td>4.2</td>
<td>3.3</td>
<td>4.8</td>
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<tr>
<td>Overall, this instructor is an effective instructor</td>
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<td>0</td>
<td>4.3</td>
<td>3.4</td>
<td>5.0</td>
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<td>I learned a great deal from this course.</td>
<td>4.8*</td>
<td>0.46</td>
<td>4.2</td>
<td>3.1</td>
<td>4.8</td>
</tr>
<tr>
<td>The instructor showed sensitivity to needs and interests of students from diverse groups.</td>
<td>5.0</td>
<td>0</td>
<td>4.4</td>
<td>3.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Grading was a fair assessment of my performance in this course.</td>
<td>4.8*</td>
<td>0.57</td>
<td>4.4</td>
<td>3.4</td>
<td>4.8</td>
</tr>
<tr>
<td>The workload in this course was reasonable and appropriate.</td>
<td>4.9*</td>
<td>0.43</td>
<td>4.4</td>
<td>3.8</td>
<td>4.9</td>
</tr>
<tr>
<td>My interest in the subject has been stimulated by this course.</td>
<td>4.8*</td>
<td>0.57</td>
<td>4.1</td>
<td>3.4</td>
<td>4.8</td>
</tr>
<tr>
<td>The instructor presented material clearly.</td>
<td>5.0</td>
<td>0.18</td>
<td>4.2</td>
<td>3.3</td>
<td>5.0</td>
</tr>
<tr>
<td>The instructor was available for discussion outside class.</td>
<td>4.9*</td>
<td>0.3</td>
<td>4.4</td>
<td>3.5</td>
<td>4.9</td>
</tr>
<tr>
<td>The instructor in this course showed a genuine concern for students.</td>
<td>5.0</td>
<td>0</td>
<td>4.5</td>
<td>3.6</td>
<td>5.0</td>
</tr>
<tr>
<td>The course was well organized.</td>
<td>4.9*</td>
<td>0.25</td>
<td>4.2</td>
<td>2.6</td>
<td>4.9</td>
</tr>
</tbody>
</table>

*Where mean was not 5.0, 1-5 respondents checked Agree (4) or Neutral (3)*

With near perfect scores on every item, the instructor was taken aback: “This is the highest I have ever been. Usually I am 4.6 or 4.8” (In3: 22). “I was surprised by this pleasantly because I didn’t think the course had gone really well, but the three I pay attention to overall this is an
excellent course 4.8 and it’s the highest mean for the department, instructor effectiveness 5.0. So they liked what I was doing, and this is the one I always like to look at, ‘I learned a great deal from this course’, a 4.8 - that’s really good” (In3: 2-6). The back of the individual USAT sheets contained individual student comments about the course, and the instructor put them into three categories: (1) learning environment, (2) realistic course, and (3) the instructor’s teaching.

**Learning environment.** More than half of the comments were about the learning environment. Students wrote about the discussions, classroom, and interactions with others in the classroom. The following are representative comments:

- *I liked the classroom usage of technology.*
- *I really enjoyed the discussion component of this class, and the accepting nature of the environment.*
- *It was really awesome to get to share thoughts and opinions with my classmates without feeling the pressure to have to address the whole class as a means to have my opinion known.*
- *I loved the class discussions. I like talking in smaller groups first and then talking as a whole class. It’s a refreshing way to learn.*
- *Class was always a stimulating discussion in which every student was encouraged to contribute.*

**Realistic course.** Some of the student comments also mentioned how the course affected their life outside of the course, mentioning briefly “career” and “relatable”. The following are representative comments:

- *This has been the most relevant course I have taken in university to help with my career.*
I took this course due to glowing peer reviews but was unsure how it fit into my individual interests. These topics are very real, applicable, and debatable and I looked forward to exploring more and others opinions and ethical considerations.

Relatable to future work.

Impressed with the practicality of this course and it’s real world applicability!

I would love to see more on what we could do after this class—what jobs there are in the field.

**Instructor.** In nearly all of the final comment section of the USAT forms, students thanked the instructor for a wonderful course. The following are representative comments:

- Definitely my favourite prof!
- Throughout my 4 years, this prof has been by far the most impressive teacher!
- I have never taken an ethics course before so I actually appreciated the way the course was taught and how accommodating the prof was to students of other faculties.
- The prof is an absolute gem and I have already begun recommending the course to other students within my faculty.
- I enjoyed this course so much! It was such a joy to end every week this way. You’ve encouraged my critical thinking and expanded my thinking. What a great way to end my undergrad!
- Amazing prof who stimulated my interest in a subject that I wasn’t interested in.

**Advice for teaching and learning in ALCs.** After the very successful term, the instructor offered advice to others teaching and learning in ALCs. The first recommendation was that instructors fit the course to the classroom, “Don’t replicate your syllabus from when you were in a lecture room” (In2: 596), explaining for new courses, “design it from scratch to utilize the room”
(In2: 598), or for existing courses, “completely rethink every piece and flip the classroom. Everything you are going to lecture on, figure out a way to that upfront, and spend your time interacting with them, with each other, have them work together” (In2: 599-601). When developing and selecting activities, the instructor encouraged instructors, “to be creative to engage all different learning styles” (In2: 619), and think about doing things “collectively and use a smart board to see the same screen at the same time. But it’s the interactivity that is the most important part, not the technology. You need to design for the interactivity, don’t design for the technology” (In2: 630-632).

Despite the course being an overall success, the instructor wanted other instructors to know that sometimes student disengage in certain classes and this could be related to the time of the year rather than the material. The instructor explained keeping a journal for the course the previous year and referring to it each week, “There were a few classes where I wrote it really dragged today and I talked more and the students seemed really tired, and these were the same weeks as this year but different topics because I switched the order of it” (In2: 259-262). The instructor realized, “The topic is not the problem, it’s the timing. I have to think more about how not to do more talking in those classes next time. They will be tired so giving them more energetic assignments” (In2: 264-266).

The instructor explained that designing this course took a lot of effort upfront but that it was worth it, and students do recognize the instructors work:

At the end of the year banquet (same one Grace attended), I was sitting with students who have had me in one or the other of the classes in that room. I said I feel so guilty all the time wandering around the room like I am being lazy and you guys are talking for an hour. One of them said no it’s clear you have done a lot of work before hand, and that’s what the
literature says. Students actually got it. They saw that it was deliberate and I didn’t just throw this together but I had thought it through…So my advice would be make it interactive but don’t be lazy, really think it through and do all your heavy work beforehand, and then enjoy watching it work. (In2: 603-613)

The instructor also provided suggestions for future students taking courses in ALCs: “Get engaged. Realize there is a culture shift…we are not going to lecture... Be responsible for your own learning…you really will learn stuff that is worth learning, that is going to end up helping you in the job market” (In2: 654-657). “That’s the benefit of being in a classroom like this. It’s not the stuff you get from me, you can download my lectures and someone else somewhere else saying similar things. It’s talking to other people….Learning through that interaction” (In2: 654-660).

Summary. The final interview with the instructor confirmed some of the results from the first interview and the student interviews, creating a nice bookend for the series of cases. As a number of students in the study could attest, the classroom itself could not magically create a wonderful learning experience, but the instructor needed to build a course to fit the classroom. This required a great amount of time, motivation, and effort. The instructor’s efforts paid off, and as shown in the assignments, exit cards, USATs, and anecdotal feedback; what the instructor hoped students would learn in the course, the students had learned.

Chapter Summary

This chapter illustrated a complex dynamic between the instructor’s teaching and the students’ lived experiences in ETH300. In addition, this chapter reported on and analyzed data to answer research questions 1 and 2:

(1) From the instructor’s perspective, what reasons lead to a decision to teach in an ALC and how was a course planned and enacted in this classroom environment?
(2) From the students’ perspectives, what are their learning experiences in a course taught in an ALC? How does it compare to their learning experiences in traditional learning spaces such as lecture halls or seminar rooms? What have they taken away from this experience?

The instructor’s case part 1 examined how the instructor came to teach and plan teaching in an ALC, the influence classroom space had on the enactment of the course over the years, how the course was designed and modified specifically or the ALC, and what the instructor hoped students would gain from this course; an experience transferrable and applicable to their lives and careers. This was followed by the cases of 10 students in the course, each sharing their unique perspectives on their experiences, how it compared to other learning environments such as lecture halls and seminar rooms, and the lessons they took away from the experience to apply to their present and future lives. The chapter concluded with the instructor’s reflections on the completed course, feedback the instructor received from students, and recommendations for future instructors teaching and students learning in ALCs. The next chapter addresses the final research question and provides analysis and discussion on whether the learning in the ALC in this study was authentic.
Chapter 5 Are the Learning Experiences Authentic?: Addressing Research Question 3

Chapter 5 explores the third research question, (3) Do the learning experiences in an ALC represent Authentic Learning? If so, what influence does the learning environment have on Authentic Learning? Using the 12 factors of ToAL from Hill, and Hill and colleagues (Mediation, Situatedness, Teacher Attributes, Program, Embodiment, Distribution, Motivation (to learn), Multiple Literacies, Identity, Career Planning, Human Relationship, and Support Network) the analytical procedures described in Chapter 3 were used to answer the research question.

Mediation

Mediation “refers to sociocultural human thought and action that engage cultural tasks and the use of cultural and physical tools (e.g., language, signs, systems, computers, physical tools and equipment, computers, materials, and supplies) (Hill, in-press). Furthermore, tools could also be used to convey the same information to multiple cohorts of students (Woolley & Jarvis, 2007). In this study, the cultural tools consisted of the ALC’s layout and configuration as a whole, the small group tables, the interactive screens, student computers, and material provided by the instructor, such as the case studies and exit cards.

Walking into the ALC, students described the classroom as welcoming, bright, and a very different space from what they were used to in a lecture hall. They explained the circular configuration of the ALC classroom was a huge contrast to the traditional tiered lecture hall with the instructor in the middle of the ALC classroom instead of the front of the classroom. This broke down barriers between the instructor and the students which is consistent with reports from other studies on ALC (Baepler et al., 2014). The instructor was also intrigued by the layout of the classroom from the conceptual drawings and, therefore, planned a curriculum that would involve small group work. Students reported feeling safe at these small group tables, having clear sightlines
to group members and to the rest of their peers because of the circular arrangement of the tables around the classroom. Many students also explained the group tables replicated the furniture in a workplace as it allowed people to actually work in a group. This was in contrast to attempts to form a group in a lecture hall that was not designed for interactive learning.

The educational technology also played a role in teaching and learning in this ALC course. It allowed students to work collaboratively with their peers on a giant screen with each group member using a laptop for collaborative input, see other groups’ work on screens around the room, and it allowed the instructor to select a particular group’s screen to project to all the screens as the group presented their ideas to the entire class. All students recommended future ALC instructors to incorporate this educational technology into class sessions and to allow students to use them, whether for further research or layout of their thoughts. Additionally, they recommended that the computers be installed with the same software from professional practices and be allowed to use such computer programs, or their personal computers to find project information. Students indicated that this made the class much more interactive and engaging.

The case studies in the course provided most of the information students needed before having group and class discussions. The instructor had a whole collection of cases and selected a few different ones each year to keep the course fresh, all the while addressing the same key theories and issues that composed course content over the years. Students liked that the cases were on real issues, real companies, contained facts from the news and other real resources, and found it helpful to have the essential information all compiled together to read before class. This ensured all students were on the same page before the discussions, as opposed to listening to a lecture presenting the information slide after slide, which they thought was harder to follow. The instructor also provided exit cards and used card colour to switch up the groups easily, which allowed
students and the instructor to get to know each other’s names, and gave students the opportunity to reflect on their thinking and learning after each session.

**Situatedness**

Situatedness emphasizes that learning is most effective when in context because knowledge is largely situation specific, and little transfer occurs automatically (Hill, in-press). It “is learning in context, or learning that is situated in a context, where it would be used in the world outside of a classroom, or authentic situations. It is learning as ordinary practices of culture and real communities of practice” (Hill, in-press). This study illustrated how transfer of knowledge was facilitated beyond the learning context through the ALC space and the instructor’s teaching materials and approach.

The ALC was designed to be a space that could be used for all university courses. Since ETH300 was an elective course meant for students to use their course knowledge beyond the course and into their own content disciplines and everyday lives, the ALC was the perfect learning setting. According to the students and the instructor, the classroom facilitated group work and discussions, which was an important type of learning to prepare students for their future employment. Students appreciated that group work could take place in class instead of after class because the ALC space was set up for such an activity. Students thought this setting made the quality of their group work better compared to other courses where group work was completed online, often asynchronously and haphazardly. Group work in the ALC was situated within the class time and students received feedback from peers and the instructor almost immediately.

Furthermore, the instructor welcomed students to apply their discipline specific knowledge in the course content during the discussions, and for assignments and assignment discussions. This helped students extend their knowledge to other settings outside of the context of the case studies.
Even though the case studies were not real but were realistic, learning was still highly effective according to the instructor and the students. The instructor explained the cases were armchair cases, allowing the instructor to present the essential information from the issues and reducing distracting information which can occur in real cases (Huang, 2011; Woolley & Jarvis, 2007). This did not compromise the authenticity of the learning. Data revealed that students reported being highly engaged and were more focused on the fact they were based on real issues and situations, rather than fictional cases they often got in other courses, and that they could apply this course knowledge to knowledge in their content discipline. During class, they liked how the instructor presented new questions to consider that pushed their thinking beyond the course context, and which further prompted them to directly transfer the knowledge into their situations in their daily lives and future careers. A few students recommended that in the next iteration of the course, the instructor could use the educational technology more and could use it to enhance the context of the cases, such as showing clips of the news reports on the cases or interviews with CEOs of the companies.

**Teacher Attributes**

Teacher attributes includes the instructor’s personality, interest in students, and teaching approach (Hill, in-press). Students who had the instructor in the past absolutely adored the instructor, and those who had the instructor for the first time gave the same glowing reviews. They described the instructor as genuinely caring about students’ learning, having the desire to help students succeed, being inventive with teaching and learning approaches, and making learning applicable to real life.

The instructor was an early adopter of ALCs and understood the benefits of having courses in such space, as documented in the literature. Adapting the course planning to fit the ALC was
fundamental to the success of ETH300, which also included the instructor changing teaching approaches. The instructor became a facilitator instead of lecturer, coached and scaffolded students’ learning through gradually increasing the complexity of the case studies throughout the course (Herrington et al, 2014), and thus, engaging students in small group discussions and orchestrating whole class discussions. As students learned more theories and became accustomed to the routine of the course, the instructor began to return student questions back to the students, asking them prompting questions instead of answering their questions. The intent was that they would think more deeply about their decisions and conduct further investigation into the case studies. The students explained the instructor helped them to gradually become more independent leaners but was still very present and involved in the class activities as it was still a learning environment not a work environment. They appreciated this approach more than that of other instructors who had taught in ALCs who did not engage with the students and did not provide enough guidance needed by the students.

Students described the instructor’s teaching approach as being balanced, a combination of both instructor-centered and student-centered approaches, and both direct (Kirschner, et al., 2006) and guided (Renzulli et al., 2004) instruction. A few students expressed their surprise in the course. Because of the content, they had expected to learn exclusively from the instructor who was the expert of the content with experience in the professional settings (Andersson & Andersson, 2005), but they actually learned more directly from their peers than the instructor. This was because the instructor set up the content and curriculum based on the instructor’s knowledge and background in the discipline, which came in the form of case studies and mini lectures, but allowed all in-class learning to be interactive and student oriented. The assignments and subsequent assignment discussions were built upon the learning in class and were more open to the students’ individual
interests which led the learning to be more transferrable to the students’ own discipline contexts (Shaffer, 2006). This was illustrated by Danielle’s case in which she found her ideal career in health law as a result of doing research for an assignment and discussion.

Many of the students cautioned instructors who planned to teach in an ALC against using lecture as a main teaching strategy. They wanted future instructors who will teach in an ALC to make changes in their curriculum and teaching approach just as this instructor had done. They also noted the importance of the instructor’s expertise in using the educational technology, with some describing negative experiences with instructors who did not know how to use the educational technology. They recommended instructors who teach in an ALC to not only know how to use the educational technology, but to meaningfully incorporate it into the class activities beyond projecting PowerPoint presentations.

**Program**

Program is the intended, enacted, and assessed curriculum, and ways in which the curriculum is communicated (Hill, in-press). In the instructor’s case part 1, the instructor recalled the evolution of ETH300 curriculum and how a teaching and learning space influenced the ways in which the curriculum was designed and implemented each year. With a smaller group of students, the instructor focused on giving students the opportunity for articulation and reflection. The instructor discussed different teaching situations over a teaching career and said that when class size was larger and spaces became less flexible, it was necessary to resort to lectures with less opportunity for students to reciprocate their learning. In the ALC, the instructor could once again return to a curriculum that scaffolded students learning in the course and allow students to apply their own individual ideas and knowledge to more complex ideas from their peers (Lave & Wenger, 2014), and to actively articulate and reflect on their learning in small group and whole
class discussions (Herrington, et al., 2014). Over the course of the term, the instructor gradually presented more controversial cases as students built trust among each other and with the instructor. This was very important because the instructor wanted to develop trust with the students in order to keep the lines of communication opened and for students to be comfortable expressing their ideas and challenging one another in a respectful manner. However, the instructor was initially unsure of whether students would recognize the authenticity of the type of learning or understand the point of learning this way.

The students’ cases and the USAT responses revealed that students were aware of the realistic learning process in which they had engaged. They shared how they appreciated the learning process for preparing them in having discussions with future coworkers and how they had learned to engage in productive discussions on controversial subjects without being too aggressive or shutting down. Students described the ALC as the right space to have these conversations as they were practicing how to engage in these discussions under the guidance of the instructor who acted as a link between school and professional practice (Lave & Wenger, 1991).

**Embodiment**

Embodiment involves body and mind as central parts of learning, embracing cognitive, emotional, physical, and social dimensions (Hill, in-press). The instructor and students shared the impact of how the configuration of the space and furniture allowed them to better use their mind and body in their teaching and learning and compared this to the limitations of body movement in the lecture hall. In an ALC, the instructor easily was able to have small group discussions as students were already seated in groups and did not need to move into groups or find space outside of the classroom to form groups as in a lecture hall. Moreover, the instructor was no longer at the front of the classroom but in the middle, allowing the instructor to easily reach each group during
the small group discussions and engage with them. According to students, this changed the instructor’s body language; the instructor was more relaxed and casual when talking to groups. Students felt less pressure asking questions when the instructor was in such close proximity than in front of a large group of students in a lecture hall.

Students also reported that their body language changed, feeling more part of a group at the small group tables and in the larger circular configuration of the ALC. Students liked how they sat in comfortable chairs and could see and talk to their group peers without obstruction. They did not have to move their stuff, change the tables, or move chairs to form a group as they would need to do in other classrooms, and explained how these things in the lecture hall took away from their experience as they were physically uncomfortable. Students described the group setting in the ALC as fostering a natural conversation with their peers and the instructor. They also had fairly clear sightlines for the viewing the rest of the students in the class and to see who was talking during whole class discussions. The screens surrounding the classroom displayed their group ideas for the entire class to see, and students could turn their bodies slightly to show the class their work. According to the students, their body language was more similar to the workplace, both physically and emotionally, as they were more opened to interaction and to other people’s ideas, and to sharing ideas from their group with the wider department or company.

**Distribution**

Distribution emphasizes that learning is not isolated within the individual, “but extends outwards to include the ongoing actions provided by cultural tools and other persons… connects to sociocultural activities beyond school… and requires collaborative learning (Hill, in-press). Students work together on authentic tasks and construct knowledge as a result of collaboration
(Herrington, et al. 2014). This includes students engaging in multiple roles and taking on different perspectives from different stakeholders (Herrington et al., 2014).

In ETH300, all in-class activities were collaborative, engaging students in group work, group discussions, and debates to come to a solution to the problem presented in the case studies. The instructor wanted students to engage in this learning process because it was the kind of process they would engage in, in the future. Students were prepared for the in-class activities by reading and doing research on the case studies before class, and came to class with their own thoughts developed. This made the discussions much more constructive as students already had time to think and process the information on their own, instead of seeing a case for the first time in class and then having a discussion.

Students recognized the value in working and learning with peers during class and greatly enjoyed the opportunity to work with others in every class session; this had not always been the case in the other courses. For many, discussions were their favourite part of the course because they interacted and engaged in genuine back and forth conversations instead of going around the class and each student stating one idea, a minimum required for participation marks. They explained how working collaboratively meant different perspectives were presented, often ones they did not consider on their own, and solutions were co-created that took into account the various perspectives. It was important for the students not only to learn from each other, but to feel they had contributed to the knowledge-building. The educational technology in the ALC facilitated this. On the interactive screens, students gathered and synthesized ideas by keeping a displayed running list, elaborated on existing ideas, and came up with new ones using the white board or Word processing functions of the interactive screens. The value of learning with and from peers extended to the assignment discussions, which again students completed before class and came to class to
further analyze the information. Students explained this never happened in other courses where assignments are very private and they only received feedback from the instructor, but in ETH300 students additionally learned from their peers, seeing ideas from different perspectives. A few students even added that it did not matter what grade they got on the assignment, because they had learned a lot from doing and also from the follow-up assignment discussions.

The classroom and activities fostered a safe environment for students to share ideas and learn from one another’s backgrounds and perspectives. They liked how the learning environment encouraged collaboration, instead of competition, which to them was more reflective of a workplace environment. At the same time, students were able to individually demonstrate the knowledge they learned from one another through their exit cards and assignments, so there was a balance in assessing their collaborative and independent knowledge. One student recommended instructors play some music when small group discussions began so there would be less of an awkward silence, especially during the first few rounds of small group discussions when students were not used to such an activity or the group members.

Motivation (to learn)

Motivation to learn is students’ internal drive and desire for achievement in given domain, including supporting students’ self-esteem, and can be accomplished by the “acknowledgement of students’ interests in the classroom and learning environments that…allow students to investigate their interests and accomplish their learning goals” (Hill, in-press). According to students, the classroom and the instructor’s enactment of an engaging curriculum motivated them to learn.

Students recalled their first experience walking into the classroom and were full of excitement and curiosity of how teaching and learning would occur in this space. The bright orange wall, natural light from the large windows, warm carpet, large interactive screens, and round tables
and configuration made students feel a different type of learning experience would occur. Elsa explained how the space reminded her of a welcoming kindergarten classroom, while Hannah and Grace explained how the new design of the ALC made them think that their education mattered and made them more motivated to come to class on a Friday afternoon. The interactive screens made the class feel more high tech and were in stark contrast to the old lecture halls where paint was peeling from the walls. The ALC made activities more fun and interactive than writing on paper or a whiteboard. Since the screens are displayed around the walls, students could see what others were working on, which motivated them to think of more ideas. This is consistent with findings from Chen (2014).

Students explained that the case studies were based on real situations and were very interesting to read. This motivated them to complete the readings before class, as was the expectation in order to engage in the class session discussions. They felt accountable and made the time to do the required pre-class readings and, in addition, further research on the cases so they could bring well-informed ideas to the group and class discussions. For one student, the motivation to do the additional research even led her to discover careers she would not have otherwise found. During discussions, students found the instructor’s interaction with each group highly motivating. It encouraged them to continue exploring and analyzing the cases. The instructor prompted them to do research on their own, which led many to find more controversies linked to the case study. It was the combination of classroom environment and the instructor’s planned and enacted curriculum that made students motivated to learn in ETH300.

**Multiple Literacies**

Multiple literacies is the range of different capacities of learners and represents multiple ways of making sense in the world. It “acknowledges differences and encourages recognition and
attention to all intelligences in the classroom through teacher planning, teaching, and assessment, and through student learning. (Hill, in-press)”. Isabel explained that this class engaged students through “different methods of learning” (I3: 13), as the instructor and classroom environment provided students with different ways of learning, articulating their learning, and evaluating their learning.

Content was delivered through written case studies, movies, theoretical texts, documentaries, video clips, and short PowerPoint lectures. Students could communicate through writing on the screens, typing, doing research collaboratively or independently and then adding to the group’s ideas; some drew pictures and mind maps, while others verbally discussed ideas. The instructor assessed students’ learning through their verbal contributions in small and whole class discussions, individual written reflections, and assignments. Together, this engaged various types of intelligences, including interpersonal, intrapersonal, and emotional through discussions on controversial topics, bodily-kinesthetic and spatial through writing on the boards and moving around during the pop quiz session, and digital through using the educational technology and navigating websites to conduct research. The instructor explained that students may not have been comfortable engaging in activities that required them to do things beyond sitting and listening, but they became accustomed to it and they needed to participate in complex learning environments in order to succeed in their future careers. For the most part, it seemed students were positive to this learning environment, as evident in the interview data and the USAT responses. Felicity even commented on how the classroom made her aware of students’ various needs, and that in her future classroom, as a teacher, she wanted to replicate a similar learning environment. She hoped to give her students the opportunity to use their strengths, but also strengthen their weaker areas, for example, oral communication.
Identity

Identity is the recognition of personal growth and development of the sense of self (Hill, in-press). “When a student’s sense of being is a part of learning, identity is activated, and students are engaged in their learning, which is meeting personal growth towards their academic and career goals” Hill, in-press). The instructor created a curriculum aimed at engaging students in a learning processes that would help them develop transferable skills for the workplace.

The most frequently discussed development in identity across the students’ cases was that they became more open minded. The discussions with peers did not necessarily change students’ minds or perspectives, but did open their minds to other perspectives that they had not considered. Students explained that as a result of this learning experience, they would now go into situations with more of an open mind and ask others for their opinions in order to co-create a solution, similar to what was done in the course discussions. A few gave examples of becoming more open minded to patients, to co-workers, and to future students. Being open minded did not mean students would now be easily swayed by any opinion, but they were now able to engage in constructive conversations to help understand other people’s perspectives and ideas which made them think more critically.

Many students in the study described themselves as very shy and became more outspoken because of the small group discussions. They found their voice which seemed to be lost in a sea of students in a lecture hall. While others who were normally very outspoken in courses in lecture halls now learned to listen to others and to embrace various perspectives, not only their own. The instructor found this to be the most compelling finding from the study, that the learning environment helped students to not only learn to speak but also learn to listen to others; which is less frequently discussed in the literature.
Students also developed a sense of self in their own disciplines by applying their past knowledge from their discipline into the course content and vice versa. This furthered their personal growth towards their academic and career goals, with others finding career goals and clarifying their identity. A few examples include: Anna becoming more open to patients’ values and religions, Danielle finding a new career path that combined her interests, and Felicity redefining the type of teacher she wanted to become.

Career Planning

Career planning is any reference to the future after graduation, such as further education or careers (Hill, in-press). On the first day of class, all the students introduced themselves and mentioned what discipline they were in and how they hoped their learning experiences in ETH300 would enhance their qualifications for their future careers. Many students shared in their interviews for this study, with the instructor, and in the USAT responses, that they were surprised by how much they learned from each other and by the actual learning experience which they could apply to their lives after graduation. For some students more was learned from the process than from the actual course content. As discussed in the factor of identity, student personal growth and sense of self helped to either reinforce or clarify their career planning.

Although the ALC did not replicate exact workspaces, like how an introductory biology lab could compare to an actual professional science lab, students stated that the course and its implementation in the ALC was much more reflective of professional settings than lecture halls. Some students compared the small circular tables and interactive screens to a conference room in the workplace, and others whose goals were teaching careers drew parallels between the ALC and classrooms they would eventually teach in. The discussions in which students engaged were also realistic to the types of conversations and discussion process as those found in the workplace. This
made their learning in ETH300 very transferrable to their eventual jobs and everyday life. For instance, Danielle found her ideal career when preparing for the in-class discussions, while Grace and Isabel considered new careers such as public relations after engaging in so many case studies on company public relations problems, and Elsa, Felicity, and Brie whose goals were to become a teacher learned so much from watching the instructor of ETH300 interact with students; these latter students wanted to model the instructor’s teaching and facilitation strategies in their own classrooms. Students even shared how they would describe their learning experiences in ETH300 during job interviews as illustrations of how their education prepared them for the job. Normally, they would avoid talking about school and only use extracurricular activities or other part-time job experiences in their applications and job interviews.

**Human Relationships**

Human relationships is the expression of being with others (especially peers), gaining social support from peers, and developing relationships as a result of social interactions with others; and they can be both positive and negative (Hill, in-press). “These expressions manifest themselves as interactions based on feelings. In the classroom, relationships are typically teacher to student, student to teacher, student to student” (Hill, in-press). Students described the lecture hall experience as feeling alone, nervous, scared to talk to others, and not knowing anyone even when they are surrounded by a large number of people. This was in complete contrast to their positive experiences in the ALC, with most, if not all the students, reporting the discussions and learning with one another as the best parts of the learning experience.

The discussions, facilitated by the round tables, allowed students to be open to one another, share ideas, ask questions, have time to explain and defend their responses fully, and gain a richer understanding of one another’s perspectives. Students talked about how surprised they were by the
differences in people’s perspectives, and that having the time to converse made them understand where their peers were coming from. They explained that in a lecture hall this would not happen as students have to raise their hands and give short responses, which might be out of context, misinterpreted, and may, therefore, be offensive when it was not meant to be. Grace provided an example of a work experience where a co-worker broke down into tears because she was unable to articulate her disagreement with others and thought if that co-worker had practiced engaging in positive discussions like in this course, maybe she would have been able to have better expressed herself.

In this learning environment, students reported learning how to have conversations with others, negotiating with peers to come to a solution, helping opposing peers to come together by looking at things from the other person’s perspective, and overall developing stronger communication skills as a result of being with others. The round tables fostered a more intimate atmosphere than learning that occurs while sitting in rows, allowing students to be more open to sharing with their peers. The round tables also allowed students to have their group members in their sightlines as each spoke, and peers were more likely to jump in to support the person. The presentation of individual ideas with a group and then group ideas to the class as a whole fostered a sense of student and group ownership. This was prevalent in the learning atmosphere of the ALC. A few students in this study identified themselves as outspoken individuals who frequently took offense at people’s comments in their other classes, but revealed in their interviews that in ETH300 they were less combative and more open to understanding where people were coming from. They gave credit for this change to more time in small group discussions (as they didn’t need time to move into groups) and to seeing other people’s thoughts written on the screens. As Felicity stated, she would no longer go into a situation thinking she knew the right answer, but would now
approach the situation with an open mind and ask for other people’s opinions in addition to sharing her own. Others such as Anna and Elsa indicted that this experience allowed them to make friends in a course for the first time in years, and would take these human relationship lessons to apply to their day to day life and future careers. As Charlotte said, “Ultimately you can’t live alone…I don’t think that life would be as happy as being able to interact with others” (C3: 142-144). Clearly human relationships, a factor in the ToAL, was a positive experience in the ALC with this instructor.

**Support Network**

Support network is the structure of an individual’s social relationships including family, friends, academic supports, and clubs, “In authentic learning environments, students take risks in the learning process, learn in challenging ways, and move between school and real-world environments. This is not typical for learning in school, and a multitude of support networks are needed for students in this new learning context” (Hill, in-press). Across all the interviews, students consistently said they were enthusiastic and excited to tell friends and family about what they had learned, the cases they studied, and class session discussions. Some students had discussions with support networks before class sessions and brought those ideas into the class discussions. Others went home after class and told their roommates and friends about the cases, and had them stop what they were doing to do more research on the cases. The instructor also heard this from other students in the class and was ecstatic that students were taking these important issues seriously and continuing the conversation with others outside of class time.

All students recommended the course to their friends as well as to other students because it was a learning experience, both the course in an ALC and the course itself, they should have before graduating. Grace even suggested to the department head of her discipline area that more
courses needed to be in these classrooms to give all students this authentic learning opportunity. A few other students extended this further by recommending that the university make it mandatory for students to take at least one course in this type of classroom before graduating. The instructor frequently talked about the ALC at academic conferences with attendees becoming aware of these rooms and then advocating to their own institutions to invest in the development of such learning spaces. In the next iteration of the course, the instructor thought about using the educational technology to connect students with alumni of the course, hoping to further enhance the social network of students and possibly connect them with careers they had not considered.

**Chapter Summary**

The analysis of data from the instructor’s and students’ cases, using the 12 factors of Hill’s (in-press), and Hill and colleagues Theory of Authentic Learning (ToAL), reveals that the learning experiences of students in the course, ETH300, taught by this instructor in an ALC did align with the 12 factors in the ToAL. As such, it can be determined that in similar learning situations, learning in an ALC can be authentic. The next chapter draws a conclusion to this dissertation and presents implications of the findings for higher education institutions.
Chapter 6 Conclusion

Higher education has seen a focus on teaching and learning practices due to an interest in student learning experiences. Until recently, little attention has been placed on the actual learning space and how it impacts teaching and learning. With the present attention on student-centred learning and the accompanying pedagogy, the construction and use of Active Learning Classrooms (ALCs) has gained popularity in post-secondary institutions across the world. Therefore, it is important to understand the learning possibilities in an ALC environment, how to create an optimum learning environment in such classrooms, and how to plan and support authentic learning for students in ALCs. Research shows, as documented in the literature chapter, that authentic learning environments can only benefit student learning and enhance their educational experience as it relates to life in school and beyond school. The lived experiences of an instructor and the students in this study provide data to help with this understanding. As such, this study adds to the existing literature on ALCs and authentic learning. This dissertation captured, retold, and analyzed the planning and teaching experience of an instructor and the learning experiences of students in an ALC environment. It used the Theory of Authentic Learning (ToAL) of Hill and Hill and colleagues (in press) as the theoretical framework to explore whether the learning experiences in an ALC were authentic. Using a qualitative research approach, three research questions were addressed in Chapters 4, 5, and 6 respectively. A brief summary of the main findings are outlined below.

(1) From the instructor’s perspective, what reasons lead to a decision to teach in an ALC and how was a course planned and enacted in this classroom environment?

- The instructor decided to teach in an ALC to address potential misalignment between the instructor’s intended learning outcome and what students learn and take away.
Classroom space had a significant impact on the development and implementation of the course. Each classroom can limit or enhance teaching and learning methods in a different way.

ETH300 was redesigned specifically with the ALC in mind and to utilize the classroom configuration and educational technologies. This included: less lecturing, case studies about real or realistic situations in the world outside of education, and more interaction with peers which lead to a more realistic and authentic learning environment.

Recommendations for instructors:

- Create or redesign a course with the ALC in mind: ensure curriculum alignment with pedagogical strategies afforded in an ALC; incorporate at-home assignments within class activities; engage students in authentic processes, tasks, and activities; assess both collaborative and independent work; and develop a routine to allow students to become comfortable interacting but also changing things up (such as group members) to keep learning fresh.

Recommendations for students:

- Understand that the culture of post-secondary education is changing and be more willing to interact with peers during class because it will help develop transferable skills for the workplace.

(2) From the students’ perspectives, what are their learning experiences in a course taught in an ALC? How does it compare to their learning experiences in traditional learning spaces such as lecture halls or seminar rooms? What have they taken away from this experience?

- Students unanimously agreed this was the ideal learning environment. Lecture halls, seminar, and tutorials rooms were not as suitable for learning. Students were more engaged, more motivated to come and participate in this class than any other course they took, and attributed
a great deal of their learning to the classroom and the instructor’s planning of the course and use of the ALC.

- Students described the limitations of other learning environments as preventing more collaborative and student-led teaching and learning approaches, and how the ALC enhanced the enactment of these approaches.

- Transferrable skill students learned included: becoming more open minded, learning to listen, appreciating learning with and from others, developing critical thinking, strengthening collaborative and team work skills, and transferring their take aways to their own disciplines.

Recommendations for instructors:

- Redesign courses with the ALCs in mind (furniture, configuration, educational technology)

- Significantly reduce lecturing, implement and experiment with a variety of interactive activities that make use of the classroom furniture (small and large group discussions) and educational technologies (research and presentation), ensure balance between instructor and student-led activities, and genuinely invite and capitalize on students’ backgrounds, disciplines, and perspectives

Recommendations for students:

- Instructors need to explain that this is a different type of learning environment than students are probably used to and encourage students to embrace the interaction, participate in the discussions, and make use of the opportunity to practice transferable skills

(3) Do the learning experiences in an ALC represent Authentic Learning? If so, what influence does the learning environment have on Authentic Learning?

Question 3 was addressed in Chapter 5, which presented findings from the analysis of the instructor’s and students’ cases using the 12 factors of the ToAL derived from Hill and Hill and
colleagues’ research. Conclusions from this analysis indicated that the learning experiences of the students aligned with the 12 factors of the ToAL, and therefore imply that authentic learning can occur in ALCs. The findings offer numerous possibilities to foster an authentic learning environment in an ALC, and with the trend in higher education institutions to use ALCs this is an important finding. Recommendations to facilitate instructors’ offering an authentic learning environment by attending to the 12 factors of the ToAL are presented in Table 8.

Table 8. Recommendations for fostering an Authentic Learning Environment

<table>
<thead>
<tr>
<th>Factor</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediation</td>
<td>• Utilize the classroom furniture by having small group discussions.</td>
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<tr>
<td></td>
<td>• Take advantage of the classroom layout by having whole class discussions</td>
</tr>
<tr>
<td></td>
<td>• Incorporating the educational technology into authentic tasks and activities such as collaborating on tasks within groups, doing research in groups, presenting to other groups.</td>
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<tr>
<td></td>
<td>• Provide students with realistic case studies or preparatory materials that they can read before coming to class in order to fully engage in the class activities and name/ exit cards that help students and instructors get to know each other’s names and provide a place for students to briefly reflect on their learning before the end of class.</td>
</tr>
<tr>
<td>Situatedness</td>
<td>• Classroom facilitated learning processes that would prepare students for their future employment such as engaging in group work and discussions during class time as opposed to outside of class.</td>
</tr>
<tr>
<td></td>
<td>• Assignments and assignment discussions encouraged students to extent their knowledge outside of the context of the course material and into their own disciplines and lives.</td>
</tr>
<tr>
<td></td>
<td>• Although case studies were realistic and not real, this did not compromise the authenticity of the learning. Students recommended in future iterations for the instructor to use the educational technology to enhance the context of the cases.</td>
</tr>
<tr>
<td>Teacher Attributes</td>
<td>• It is important for the instructor to be familiar with the literature on the importance of space and be opened to changing their course and teaching approaches to fit with the ALC.</td>
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<tr>
<td></td>
<td>• Instructors should be actively engaged with students throughout the entire class, and use a combination of both instructor-centered and student-centered approaches, and both direct and guided instruction.</td>
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<tr>
<td></td>
<td>• Finally, instructors should not only be familiar with how to use the educational technology, but to meaningfully incorporate it into the class activities beyond projecting PowerPoint presentations.</td>
</tr>
</tbody>
</table>
| Program | • Recognize the impact classroom space can have on the implementation of a course, and experiment with various teaching and learning approaches.  
• ALC can offer instructors and students a more flexible learning environment than traditional spaces, allowing for curriculums that scaffold students learning, apply their own individual ideas and knowledge to more complex ideas from their peers, and to actively articulate and reflect on their learning in small group and whole class discussions.  
• It is important to construct a course where there is continuity from week to week and each week builds upon the previous week in content and complexity. In ETH300, the instructor gradually presented more controversial cases as students built trust among each other and the instructor over the term to keep the lines of communication open. |
| --- | --- |
| Embodiment | • Acknowledge the potential limitations and barriers classroom configuration and furniture can have on the mind and body movement of instructors and students which can impact teaching and learning.  
• For instructors, an ALC allows them to more easily interact with all students in the class, they appear more relaxed, casual, and approachable than in a lecture hall, and build better relationships with students.  
• For students, an ALC enhances small and whole class discussions because students felt part of the group and the class, and were both physically and emotionally more comfortable in the learning space to share their thoughts. |
| Distribution | • Incorporate activities that engage students in collaboration, group work, debates, and other learning processes that will help them in their future careers in which they need to work and communicate effectively with coworkers.  
• It was important for the students not only to learn from each other, but to feel they had contributed to the knowledge-building.  
• Provide students with material to prepare before the in-class sessions so they come in ready to share and articulate their thoughts with their peers.  
• Assess both individual and collaborative work. |
| Motivation (to learn) | • Instructors should take advantage of how inviting space can be (new furniture, natural light, current educational technology) making students feel more motivated to learn as they enter the room.  
• Realistic cases and discussions motivated students to read the cases before class in order to engage fully in discussions. The pre-readings allow students to bring well-informed ideas to class to articulate to their peers.  
• Instructors should also interact with students throughout the class especially during small group discussions as the interactions can guide and prompt students to continue to analyze and explore their thoughts on the material.  
• Students were encouraged to transfer their knowledge gained from the cases into their disciplines. |
| Multiple Literacies | • Experiment with a variety of learning methods that can engage students of different preferred ways of learning, articulation of learning, and evaluation of learning.  
• Gradually push students out of their comfort zone of sitting and listening, engaged them in various types of intelligences, including interpersonal, intrapersonal, and emotional through discussions on controversial topics, bodily-kinesthetic and spatial through writing on the boards or using group tables as stations for students to move around to, and digital through using the educational technology and navigating websites to conduct research. |
| Identity | • Through interacting with others, students can develop traits such as becoming more open-minded, more of a team player, and critical thinker. Shy students became more outspoken, while very outspoken students learned to listen to others and embrace other views. Think about what skills students should develop by the end of course to help their careers and ensure teaching and learning strategies are fostering those skills.  
• Incorporate activities and assignments that draw on students’ own disciplines to foster a bridge between the course and their discipline. |
| Career Planning | • Ask students about their career goals at the start of the semester, and consider modifying course content that touches upon students’ career goals. At the same time, the course can open up new career paths to students that they had not considered.  
• Capitalize on the similarities between the ALC and the workplace and engage students in activities that would be similar to what they will encounter in the workplace.  
• Articulate to students the connection between the learning processes they will engage in the course and how it will help them develop skills for employment  
• Consider showing students how they could articulate the transferable skills they learned in the course in their resumes and job interviews. |
| Human Relationship | • ALCs can foster a sense of community, with students seated in groups and configured in a larger circle formation. Instructors should take advantage of this arrangement in incorporating teaching and learning methods that foster social interactions  
• Students described interactions as more natural in this space, and became more opened to other perspectives, shared their thoughts, asked questions, worked together to form a more complex solution, and understood the value of working and learning with their peers. Therefore, social interactions that may not have worked in traditional learning spaces, work a lot better in these spaces. |
| Support Network | • Fostering a meaningful learning environment extends beyond the classroom walls, as students will naturally talk to their friends, peers, and family about their learning experiences—especially when learning is very... |
meaningfully to them. The discussions inside the classroom can continue outside of the classroom where students think and explore the content even deeper.

- Consider connecting current students with alumni of the course to further enhance the social network of students. Many alumni of the course ended up in new career directions because of the course hearing these life stories can help current students as they navigate the next steps of their lives.

The comprehensive nature of the ToAL captures how learning can be authentic in ALCs in higher education. Although based on this set of finding physical space does not need to be a distinct additional factor in the theory, it can be considered an essential sub-factor to be taken into account in all of the factors as demonstrated by the recommendations table. Including the physical learning environment in the discussion of ToAL can help research in authentic learning be even more encompassing and not separate the learning from the learning environment.

**Contributions to Teaching and Learning**

By examining the learning and learning environment from both the instructor’s and students’ perspectives, the findings from this dissertation show that learning spaces do not need to replicate the professional learning environment for learning to be authentic. From the teaching and learning side, this is important as it opens the possibilities of authentic learning beyond disciplines that have spaces that mimic the workplace such as science and science laboratories, and presents the ALC as a space that can facilitate authentic learning in any discipline. The fact that ETH300 was an elective course truly demonstrated this, as students from other disciplines were able to learn skills that they could take back to their own discipline and to their future careers. As demonstrated by the lived experiences of the instructor and students, teaching and learning in an ALC can be very different from teaching in traditional spaces, and both instructors and students
need to recognize this when coming into this space. Both parties need to change, and as advocated by the participants in this study, this change is for the better.

Contributions and Considerations for Future Research

As higher education institutions continue to implement and evaluate the effectiveness of ALCs in their own unique contexts, the results of this dissertation can be used to guide the structure of their research. Looking beyond the typical survey method assessment of class engagement and attendance records, future studies can focus on expanding data collection and analysis to capture students’ and instructors’ stories and lived experiences in these learning environments. From this rich data, researchers can gain a deeper and fuller understanding of what happens in ALCs, where improvements can be made, training for future instructors can be formed, and ensure sustainability of using these environments successfully.

Insert constraints and inequalities

It is also important to acknowledge potential constraints and inequalities that may exist as more institutions adopt ALCs. In many cases instructors may not have a choice in the type of classroom or number of students in their courses. This can cause inequality in who can teach in these classrooms, and may constrain and influence the instructor’s teaching approach and students’ learning negatively. There are also a limited number of these classrooms compared to lecture halls, so how can institutions determine which instructors and courses can be selected for these classrooms? One of the concerns raised by the instructor in this study was that after teaching in the classroom for a few years, the course may be moved back to the traditional lecture hall in order to take turns with other courses. This would mean the instructor would need to re-structure the course once again and some instructors may be hesitant to make that transition into the ALC only
to be forced back into the lecture hall. Although these constraints are outside of the scope of this dissertation, they are important to consider going forward.

In addition to research on ALCs, the findings from this study depicted the influential role of physical space on teaching and learning, with each factor in the ToAL being influenced by the ALC to some degree. As research on the scholarship of teaching and learning continues, researchers should consider how the physical space and physical context plays a role in the results of the study. It is not enough to state or describe the physical context in the methods section, but a meaningful and purposeful analysis of the subtle roles space could have on the effectiveness of a teaching and learning approach should be included.

Final Thoughts

This dissertation presented the lived experiences of students and an instructor in an ALC. The findings conclude that ALCs can in fact be more than engaging environments and be truly authentic learning environments regardless of students’ backgrounds, learning styles, or career goals. With these promising results, it is my hope that higher education continues along this path to foster a positive and authentic teaching and learning environment for future generations to come.
References


https://education.alberta.ca/media/352984/is.pdf


http://dx.doi.org/10.3102/0013189x018001032


https://csshescees.files.wordpress.com/2015/05/cssheprogrammay15evening-2.pdf


http://dx.doi.org/10.1080/09523980701491633


http://dx.doi.org/10.3102/0013189x028002004


http://dx.doi.org/10.1016/j.nedt.2006.02.010


Appendix A Ethics Approval

February 18, 2016

Miss Victoria Chen
Ph.D. Candidate
Faculty of Education
Queen’s University
Duncan McArthur Hall
511 Union Street West
Kingston, ON, K7L 3N6

GREB Ref #: GEDUC-793-16; Rome # 6017520
Title: "GEDUC-793-16 Students’ Learning Experiences in Active Learning Classrooms"

Dear Miss Chen:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GEDUC-793-16 Students’ Learning Experiences in Active Learning Classrooms" for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2015)) and Queen’s ethics policies. In accordance with the Tri-Council Guidelines (Article 6.19) and Standard Operating Procedures (405.001), your project has been cleared for one year. You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at http://www.queens.ca/traq/signon.html; click on "Events", under "Create New Event" click on "General Research Ethics Board Annual Renewal Form for Approved Studies").

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (access this form at http://www.queens.ca/traq/signon.html; click on "Events", under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the research or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes to the level of risk, participant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at http://www.queens.ca/traq/signon.html; click on "Events", under "Create New Event" click on "General Research Ethics Board Request for Amendment of Approved Studies". Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at the Office of Research Services for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

John D. Freeman
Ph.D.
Chair
General Research Ethics Board

c: Dr. Ann Marie Hall, Faculty Supervisor
   Dr. Liying Chang, Chan, Chair KEB
   Ms. Erin Wiedman, Dept. Admin
Certificate of Completion

This document certifies that

Victoria Chen

has completed the Tri-Council Policy Statement:
Ethical Conduct for Research Involving Humans
Course on Research Ethics (TCPS 2: CORE)

Date of Issue: 28 April, 2015
Appendix C Letter of Information and Consent for Instructor

LETTER OF INFORMATION & CONSENT FORM
FOR INSTRUCTOR

“STUDENTS’ LEARNING EXPERIENCES IN ACTIVE LEARNING CLASSROOMS”

This research is being conducted by Victoria Chen under the supervision of Dr. Ann Marie Hill in the Faculty of Education at Queen’s University in Kingston, Ontario. This study has been granted clearance by the General Research Ethics Board according to Canadian research ethics principles (http://www.ethics.gc.ca/default.aspx) and Queen’s University policies (http://www.queensu.ca/ura/research-ethics).

What is this study about? The purpose of this research is to examine students’ learning experiences in Active Learning Classrooms.

What is involved to participate in this study? 1) Unobtrusive classroom observations throughout the term in which the activity (e.g., group discussion), general instructions (e.g., purpose of activity, instructions for activity), and general students’ actions (e.g., discussing in groups, using screens, using laptops) will be documented. 2) Permission to view participants’ exit tickets. 3) Three 45-60 minute interviews. In total, participating in this study will require 3 hours of your time. Interviews will be audio-recorded.

At the end of all of the interviews, you will receive a transcript of their interview and will be asked to review it to determine if there is information you would prefer removed to protect your confidentiality.

Is participation voluntary? Yes. You should not feel obliged to answer any questions that you find objectionable or that make you feel uncomfortable. You may choose to withdraw from the study at any time with no effect on your standing in the university. The cutoff date to withdraw is May 1, 2018. If you wish to withdraw, contact Victoria Chen <vch@queensu.ca> or my supervisor Ann Marie Hill at <annmarie.hill@queensu.ca>. If you withdraw, you may request removal of all of your data from the study.

What will happen to your responses? Your responses will be kept confidential. Only Victoria Chen and Dr. Ann Marie Hill will have access to this information. Your confidentiality will be maintained to the extent possible. For data analysis and distribution, your name will be removed from interviews and will be given a pseudonym. Results from this study may be published in professional journals or presented at scientific conferences, but any such presentations will maintain individual confidentiality. In accordance with the Faculty of Education’s policy, storage of data for 5 years on a password-locked computer. If data are used for secondary analysis they will contain no identifying information.

What if you have concerns? Any questions about study participation may be directed to Victoria Chen at <vch@queensu.ca> or my supervisor Dr. Ann Marie Hill at <annmarie.hill@queensu.ca>. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.CREEQ@queensu.ca or 613-533-6081.

Thank you for your interest in participating in this research study. Your signature below indicates that you have read this Letter of Information and have had any questions answered to your satisfaction. Please keep a copy of this letter for your records.

Name: ____________________________ Date: ____________________________

Signature: ____________________________
Appendix D Letter of Information and Consent for Students

LETTER OF INFORMATION & CONSENT FORM
FOR STUDENTS

“STUDENTS’ LEARNING EXPERIENCES IN ACTIVE LEARNING CLASSROOMS”
This research is being conducted by Victoria Chen under the supervision of Dr. Ann Marie Hill, in the Faculty of Education at Queen’s University in Kingston, Ontario. This study has been granted clearance by the General Research Ethics Board according to Canadian research ethics principles (http://www.ethics.gc.ca/default.aspx) and Queen’s University policies (http://www.queensu.ca/urs/research-ethics).

What is this study about? The purpose of this research is to examine students’ learning experiences in Active Learning Classrooms.

What is involved to participate in this study?
1) Interviews: The study will require four 45-60 minute interviews. In total, participating in this study will require 4 hours of your time. The interviews will be audio-recorded. 
2) Permission for researcher to view your exit tickets (optional): Since these interviews are occurring after half the course has passed, there might be activities you may have forgotten about earlier in the term that may have had an influence on your learning. If you are participating in the interviews, consider taking a photo of your exit ticket on the last day of class and send it to me so I can get a better idea of experiences you had earlier in the term. This is completely optional. There are no known physical, psychological, economic, or social risks associated with this study.

The instructor will not know identity of participants and will not know which exit tickets are included in the study. At the end of all of the interviews, participants will receive a transcript summary of their interview and will be asked to review it to determine if there is information they would prefer removed to protect their confidentiality.

Is participation voluntary? Yes. You should not feel obliged to answer any questions that you find objectionable or that make you feel uncomfortable. You may choose to withdraw from the study without any effect on your course or standing in the university. The cutoff date to withdraw is May 1, 2016. If you wish to withdraw, contact Victoria Chen at <vct@queensu.ca> or my supervisor Dr. Ann Marie Hill at <annmarie.hill@queensu.ca>. If you withdraw, you may request removal of all of your data from the study.

What will happen to your responses? Your responses will be kept confidential. Only Victoria Chen and Dr. Ann Marie Hill will have access to this information. Your confidentiality will be maintained to the extent possible. For data analysis and distribution, your name and email address will be removed from interview and exit tickets and will be given a pseudonym. Results from this study may be published in professional journals or presented at scientific conferences, but any such presentations will maintain individual confidentiality. In accordance with the Faculty of Education’s policy, storage of data for 5 years on a password-locked computer. If data are used for secondary analysis they will contain no identifying information.

Will you be compensated for your participation? Yes. At the end of the study you will receive compensation according to the following schedule: $5 for the first interview, $5 for the second, $10 for the third and $20 for the fourth, for a total of $40. If you choose to withdraw partway through the study, compensation will be in proportion to your participation.

What if you have concerns? Any questions about study participation may be directed to Victoria Chen at <vct@queensu.ca> or my supervisor Dr. Ann Marie Hill at <annmarie.hill@queensu.ca>. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at 613-533-6091.
Appendix E Instructor Interview Guides

Instructor’s interview guide

Interview 1:
What made you decide to apply for your course to take place in an ALC?
  • Describe training to use this room
  • Changes to course in traditional lecture hall
How would you describe your teaching before you taught in the ALC? What did the ALC add?
At this point in the course, what would you describe as planning and teaching that is unique and possible in the ALC?
Tell me about your impressions of students’ learning experiences in this course so far.
  • similar/ different from students’ learning experiences in the past years
  • changes made to course structure because of past experiences.
Are there particular activities you think shape students’ learning experiences for their future careers? the most? And the least?
  • note which activities on the syllabus

Interview 2:
Tell me about your overall impressions of students’ learning experiences this semester.
Which activities do you think the space has helped students connect their learning to their future careers? Please explain.
What are the kinds of things students have written on their exit cards?
What would you suggest to other professors (in your field/ in others) who want to use this space for them to make the best use of this space to help students connect their learning to their future careers?
What advice would you give to future students who will take a similar course as this one in this classroom to best make use of their experiences to help them with their future careers?

Interview 3:
Is there anything you would like to add since the last interview?
What were your overall impressions of the final assignments?
What stood out to you in the USATs?
Appendix F Student Interview Guides

Students’ interview guide

Tell me about yourself:
- Program
- Year of study
- Career path
- Why you took this course

Tell me about your learning experiences in this course so far.
- Class activities for the learning of course content in this course

Thinking about your learning experiences so far, can you describe a typical learning experience?
- Group work
- Individual work
- In class, on-campus
- Connection to professional communities outside of the classroom; description and purpose
- Role of students
- Role of instructor
- Role of outside collaborators or other

How do you feel about this approach to learning?

Have you taken courses before in an ALC?
- What courses?
- Can you describe your learning in the course(s)? Similar/ different from this one.

How would you compare taking this course in the ALC with other courses you are currently taking not in an ALC?
- Compare features of the classrooms:
  - Seating
  - Technology
  - Room configuration

Tell me about how your learning experiences in this course/classroom has connected (if at all) to your life outside of the classroom?
- Planned career
- Volunteering/ clubs/ employment
- Other courses

Interview 2:

Since the last interview, is there anything you want to add about your learning experience so far in the course? Including the past two weeks.

Of all the activities so far: which ones to you have:
- Shaped your learning the most/ least- please explain.
- Which one were most realistic to a work environment?
How has the course and learning environment influenced you? Your personal growth and development of your identity.
In a job interview, what could you say about the type of learning you have experienced in this course that would help you in the job (career)?

**Interview 3:**

Since the last interview, is there anything you would like to add about your experiences so far? Including the final two classes.
If you had to describe to someone else the overall learning experience in this course and classroom, what would you say?

Which case/activity stood out to you the most in this course and why?

Let’s take a look at the photo you took of your name/exit card. What kinds of things did you write on your name/exit card?

In a job interview, what could you say about the type of learning you have experienced in this course that would help you in the job (career)?

Now that you are done the course, what would you suggest to other professors who want to use this space? How could they best make use of it to help students connect their learning to their future careers?

What advice would you give to future students who walk into this classroom and are deciding whether to take the class or drop it? How can they best make use of their experiences to help them with their future careers?