Developing Decision-Making Skills through Asynchronous Online Case-Based Learning

by

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Abstract

Case-Based Learning (CBL) has been used extensively in the fields of business, medicine, law, and social work, but has not been embraced as a training strategy in the corporate or government sectors. CBL requires groups of learners to apply procedural and declarative knowledge to solve problems that closely resemble those found in the real world. Previous research indicates that the pedagogical requirements of CBL are ideally met through the affordances of asynchronous online discussion. Through an intrinsic case study methodology, the current research study examines the combined use of CBL and asynchronous online discussion as a cost-effective training strategy for frontline government welfare workers situated across a large geographical area.

Keywords: case-based learning, asynchronous online discussion, decision making, government workers, social services, social welfare
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Namaste
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List of Acronyms

CBL  Case-Based Learning
EAW  Employment Assistance Worker
IO   Investigative Officer
MSO  Medical Services Only
OLR  On-Line Resource
PWD  Person with a Disability
SDSI The Ministry of Social Development and Social Innovation
### Glossary

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<td>Asynchronous online Discussion</td>
<td>Asynchronous online discussion refers to online discussions that are not occurring at the same time.</td>
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<td>Case</td>
<td>A case consists of a scenario, presented in text or video format, which outlines a problem or dilemma that must be solved.</td>
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<td>Case Brief</td>
<td>A written assignment that summarizes the major points of learning and outlines a recommended course of action.</td>
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<td>Case Brief Sample</td>
<td>A model answer that illustrates the recommended structure and organization of a case brief. Intended to be used with the Case Brief Template.</td>
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<tr>
<td>Case Brief Template</td>
<td>A set of guiding questions that help scaffold the preparation of a case brief assignment.</td>
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<td>Cohort</td>
<td>A cohort is a group of learners. In the context of this study the cohort consisted of eight learners and two moderators.</td>
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<tr>
<td>Conference Call Debrief</td>
<td>A conference call, held at the end of the 2-week discussion period, during which time the participants debrief the case.</td>
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<td>SharePoint</td>
<td>A Microsoft platform that includes, among other things, a document repository and an online discussion board.</td>
</tr>
<tr>
<td>Synchronous Discussion</td>
<td>Refers to discussions that occur at the same time. (see conference call debrief)</td>
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Chapter 1. Introduction

1.1. Background

The Ministry of Social Development and Social Innovation (SDSI) administers Income and Employment Assistance programs across British Columbia. Employment Assistance Workers (EAWs) determine client eligibility for monthly income assistance, and process additional requests for dietary, shelter, clothing, childcare, and health-related supplements. Determining eligibility requires workers to evaluate each client’s circumstances against a set of criteria as outlined in the appropriate regulation, and to make evidence-based decisions.

Simple decisions that are encountered on a regular basis become automatized fairly quickly, but complex decisions involving many different sections of policy and legislation can be very challenging, especially for newer workers. An audit of Ministry business in 2009 revealed that field staff needed to improve the quality of original eligibility decisions. Decisions that are poorly made, or poorly documented may have a financial impact on the Ministry and the taxpayer, and are more likely to be overturned during the Reconsideration and Appeals process.

The problem of learning explored in this thesis involves the design of decision-making training for EAWs across the province of British Columbia. The Ministry has approximately 1,000 EAWs in over 100 communities across the province, so classroom-based learning is not possible given the high and unsustainable travel costs. In addition, client caseloads dramatically increased following the economic recession that began in late 2008 without a parallel increase in staffing levels. Under these circumstances it was difficult for the organization to justify taking staff away from their regular duties even if this would result in the longer-term benefit of improved decision-making.
In addition, it is well recognized that decision-making cannot be developed through the passive transmission of facts. Legislation and policy may provide guidance on the range of possible options available, but complex contextual factors often figure into the decision-making process and the final decision. It can take years for an EAW to develop an in-depth understanding of the legislation, to identify the relevant contextual factors facing a client, and apply balanced judgment to arrive at consistently good decisions. Given all of these challenges, it was necessary to explore alternatives to classroom instruction.

Inspired by my own positive experiences of learning through case-based instruction, and challenged by the logistics of delivering decision making training across a large geographical area, I developed an online case-based learning (CBL) system that allowed SDSI field staff from across the province to develop their decision making skills by collaboratively exploring three complex cases via asynchronous online discussion. This thesis is an investigation of the CBL system I developed.

1.2. Framing the study

I drew on a few different bodies of literature as guidance in developing and investigating the case-based learning system for SDSI field staff. The first was the literature on Case-Based Learning (CBL), an instructional practice grounded in a social constructivist mode of instruction and learning that embeds content knowledge into complex and ill-defined problems known as ‘cases’. CBL has been used to develop evidence-based decision making for business, medical and legal practitioners (Walton & Matthews, 1989; Rollag, 2010; Webb & Poe, 2005), and has been shown to effectively connect theory with practice in the fields of psychology and teacher education (Gartland & Field, 2004).

According to Austin and Packard (2009), CBL in social work education helps to supplement fieldwork by simulating actual practice, challenging ingrained mindsets and negative stereotypes, and allowing learners to apply different theoretical frameworks to complex situations. Decision-making cases that provide limited information and no clear direction also help learners to “gain awareness of the emotional, intellectual and
procedural complexities of decision-making” (p.223). According to McDade (1995), when case studies are used as the vehicle for instruction the learning environment becomes a laboratory for testing theory, exploring alternatives, and understanding the impact of contextual nuances. CBL is an active process of instruction that focuses on interactions between learners, develops critical thinking through debate and evidence-giving, and allows for the generalized application of case learning to similar situations.

The second literature I drew on is that addressing computer-supported collaborative learning (CSCL) – where I found great consistency with notions presented in the CBL literature. CSCL provides opportunities for learners to connect and build knowledge through the use of computers and other electronic devices. Consistent with the practice of CBL, CSCL is also grounded in the social constructivist concept that learning and development are social activities in which new knowledge is built upon prior experiences. The origins of social constructivist theory can be traced back to the work of Lev Vygotsky (1978) and his Social Development Theory, which theorized that collaborative problem solving with a ‘more knowledgeable other’ can push learners towards higher levels of understanding.

From the perspective of a constructivist theory of learning, every new situation is viewed through the lens of prior experience resulting in a constant evolution of conceptual knowledge with each new use. According to Ertmer & Newby (1993), “a concept will continue to evolve with each new use as new situations, negotiations, and activities recast it in a different, more densely textured form” (p. 63). Knowledge transfer occurs when learners are engaged in authentic tasks that mirror the real world.

I also ventured a little into the literature addressing the practice of distance education. Especially helpful in framing the research questions for this study was Moore’s Three Types of Interaction (Moore, 1989) for engagement and learning in distance education courses: learner-content, learner-learner, and learner-instructor interactions. I was first introduced to Moore’s framework while reading an article on the facilitation of asynchronous online discussion (An, Shin & Lim, 2009). The parallels between Moore’s framework and the pedagogical features of CBL, as described by Webb et al. (2005) were immediately apparent (see Figure 1).
According to Webb et al. (2005) the learning objectives of CBL are embedded in cases that mirror real world problems. Similarly, CBL emphasises *Learner-content interaction* by requiring learners to actively identify and address these learning goals in the process of ‘solving the case’. CBL also emphasizes learning through collaboration with peers and the sharing of different perspectives on the same problem. In CBL, *Learner-learner interactions* occur through sustained discussion and social negotiation, which leads to a deeper understanding of the content embedded in the cases. Finally, CBL emphasizes the importance of guiding students through a learner-centred process, rather than the passive transmission of facts. In CBL, *Learner-instructor interaction* is achieved through the asking of open-ended questions designed to promote critical thinking and direct the learners’ analysis of the case.

Moore’s framework helped organize my literature search—the results of which are discussed in chapter 2 of this thesis—to include the following: a) the importance of
learning through authentic tasks, and the construction of cases by multidisciplinary teams in order to promote deep *Learner-content interactions*, b) best practices for the design of CBL, including learner preferences related to mode (classroom/online/blended) and temporality (synchronous/asynchronous), and a discussion on the potential impact of these differences on *Learner-learner interaction*, and c) strategies for effective *Learner-instructor interaction*, including recommendations related to the level of instructor participation and the form of instructor feedback.

Moore’s three levels of interaction helped me to organize the recommendations of field researchers and to conceptualize the design of my own CBL system, as outlined in chapter 3. In chapter 4, Moore’s framework gave structure to the interview protocol (Appendix C) and the research participants’ self-reflective writing exercises (Appendix B), and served as an a priori coding scheme during the analysis of the data. My reporting of the major themes and the subsequent discussion, chapters 5 and 6 respectively, were also organized according to Moore’s framework.

### 1.3. Problem statement

CBL has proven to be an effective way of developing decision-making skills through the presentation of authentic problems (Austin & Packard, 2009; Gartland & Field, 2004; Rollag, 2010; Walton & Matthews, 1989; Webb & Poe, 2005). There are, however, only a limited number of published research studies exploring CBL combined with asynchronous online discussion, and all of those studies focus on course work in post-secondary institutions (Levin, Robbins, & Ye, 2004; Pena-Shaff & Altman, 2009; Watson & Sutton, 2012; Weil, McGuigan & Kern, 2013). I was unable to locate any published research on the use of CBL combined with asynchronous online discussion in a business or government setting that could help me to understand how SDSI workers would experience this form of instruction, or what they might learn from this style of training.
1.4. Research purpose and questions

The purpose of this study was to examine the experiences that EAWs had with the CBL system that I developed. There were several respects in which the case-based mode of training was novel for EAWs. If the system was to be continued and scaled up, an evaluation of learning outcomes and learners’ experiences was necessary.

EAWs are a diverse group that may respond differently to the various aspects of this instructional approach. In order to comprehensively address all aspects of this new training approach, three broad research questions for this study were framed using Moore’s (1989) three types of interaction for engagement and learning in distance education courses:

1. What are participants’ experiences in interacting with the content?

2. What are participants’ experiences in interacting with other learners?

3. What are participants’ experiences in interacting with facilitators?

Finally, in order to inform the development of an assessment of learning that will be practical and minimally invasive, this study will address the question:

4. What evidence do the participants’ case briefs provide that they have applied concepts from the training materials?
Chapter 2. Literature Review

My search for research literature used the following keywords: CSCL, social constructivism, case-based learning, case method of instruction, asynchronous online discussion, decision-making, social services, government, corporate learning, online facilitation. Initially, I sought to locate research that combined CBL with asynchronous online discussion, but due to the paucity of research in this area, I revised my search query to include general articles on CBL, and those related to the facilitation of asynchronous online discussion. The importance of learning through authentic tasks was a concept that surfaced frequently during my initial review of the literature, so I will begin with a discussion of this concept.

2.1. Learning through authentic tasks

The importance of learning through authentic tasks has been the focus of extensive research involving a variety of instructional designs. The Jasper Series (Cognition and Technology Group at Vanderbilt, 1992) explored anchored instruction and the power of generative and collaborative learning. Goal-Based Scenarios immerse students in interactive learning environments with the goal of solving a specific problem (Schank, Fano, Bell, & Jona, 1993). Merrill (2000) identified authenticity of tasks as a First Principle of Instruction, and Rovai (2007) advocated for the design of “authentic content- and task-oriented discussions” (p.79), as a way for learners to connect with prior experience.

It is important for learners to engage in learning that mirrors the real world for a variety of reasons. Learning through authentic tasks helps to overcome the passive transmission of ‘inert ideas’ (Whitehead, 1929) by allowing learners to problem-solve ill-defined activities with real-world relevance. Authentic learning environments provide scaffolding through design, coaching from instructors and peers, and access to expert
modelling and performance. Authentic activities allow groups of learners to engage in a single task over a sustained period of time and to collaborate towards the development of an artifact of learning that can be presented and defended to peers (Herrington, 2006).

The case study is one example of an authentic task that connects learners to the real world and serves as a focal point for discussion and collaborative problem solving. Cases often present conflicts or dilemmas that are ill-defined and ambiguous, but contain sufficient information to ignite the problem-solving process and compel the learner to make a decision after considering a range of possible solutions (Gartland & Field, 2004).

2.2. Case-based learning

CBL is different from other instructional approaches in a variety of ways. According to Webb et al. (2005) the three features that distinguish CBL from other forms of instruction are the ‘objective’, the ‘role of the instructor’ and ‘the role of induction’.

In CBL, the objective is to promote generative discussion between learners through a focused situational analysis of the case, to help learners uncover important concepts or principles embedded in the cases, and to apply relevant theories in order to outline a plan of action. CBL provides learners with the opportunity to share their perspectives in a low-risk environment and to refine their understanding through a process of social negotiation with other learners (Gartland et al., 2004). In this regard, students are active processors of information, rather than passive recipients of information passed from instructor to student (Rovai, 2004).

In a CBL classroom, the instructor becomes the discussion leader, listening and attending to students, and selecting questions that direct learners toward the concepts embedded in the case. Rather than teaching, the facilitator encourages the learners to reflect on their own biases, to consider the alternatives presented by other learners, and to carefully consider the benefits and limitations of each new idea.
Finally, inductive instruction provides students with an opportunity to make connections, recognize patterns, and understand how principles apply in context. The inductive framework can only be established through the use of a collection of cases that can be compared and contrasted. As each new case is analyzed, the learner acquires new ways of thinking that can be generalized to similar situations in the real world.

I found one paper that dealt with the construction of cases, specifically the process through which instructors identify and embed the concepts or principles that learners are expected to uncover during their analysis. According to Barnes, Christensen and Hansen (1994) the benefits of instructor-written cases include, "increased sensitivity to all teaching documents, enhanced effectiveness in preparation skills, and the production of materials that help blur the artificial distinction between the seminar room and the world ‘out there’" (p.285).

Weiss and Levison (2000) describe the use of concept maps to develop teaching cases used by medical students at MCP Hahneman University. In this practitioner report, the authors describe the development of a single case that was designed to expand student understanding of patient-centered approaches to addressing women’s health.

First, a case development group consisting of a faculty member and subject-matter-experts (SMEs) is formed. The faculty member, whose discipline is the major focus of the case, establishes the initial learning objectives and then the rough case is circulated among the SMEs to add additional learning objectives. The case development group is also responsible for writing the facilitator notes and prompts that will be used to guide the small-group sessions. The facilitator notes serve as a student study guide once the case is completed.

The next step involves creation of a concept map to demonstrate various knowledge cross-links associated with the teaching case. The concept map serves as a master blueprint that can be used by case writers who then select the curricular goals and learning objectives most relevant to each discipline, or highlight specific clinical manifestations that need to be taught across the disciplines. Emerging from this process is an interdisciplinary teaching case, and a visual tool that shows the complex relationships between important ideas.
I was intrigued with this process and adapted it for the construction of the cases used in this study. Details of this process are provided in Chapter 3.

2.3. CBL combined with asynchronous online discussion

One of the greatest challenges I faced during my review of the literature was the paucity of rigorous research studies that investigated the combination of CBL and asynchronous online discussion. I selected research articles that followed the recommendations made by Creswell (2013), each with a well-defined methodological approach and clear alignment between the data collection, analysis and reporting procedures. I looked for measures designed to increase the validity and reliability of quantitative studies, and procedures that enhanced the trustworthiness of qualitative studies (Lincoln & Guba, 1985). I found a few studies that met these criteria and I describe these below.

The first study by Pena-Shaff & Altman (2009) was a qualitative case study on the delivery of CBL through a blending of classroom and asynchronous online discussion. The study involved college students enrolled in two sections of Educational Psychology. Students were divided into 10 groups of 6-8 individuals and every student was required to participate in four online case discussions. Each student was expected to post a minimum of four messages per discussion (16 messages per semester) to the bulletin board system in response to open-ended questions posted by the instructor. At least two posts needed to respond to another student, and one needed to summarize the current discussion. Each case discussion lasted between 8-10 days. During the last few days, each group was assigned one of the following tasks (a) summarize the online discussions, or (b) create a consensus Action Plan that was supported by the various theories that were discussed online.

Data collection included the frequency of participation from the bulletin board index, students' feedback about the cases at the end of each class discussion, and students' perceptions of the online discussions. A post-course questionnaire included five Likert-scale questions related to (a) students' perceived level of participation, (b) the perceived effectiveness of the online discussions, (c) the perceived usefulness of
discussing the case again in class, and (d) the students’ level of enjoyment of the online discussions. The questionnaire also included two open-ended questions related to the students’ perceptions of the advantages and disadvantages of using asynchronous online discussion.

On average, each student posted 15.7 messages during the semester. Analysis of the online messages for cases in which a consensus Action Plan was required revealed more clarification, negotiation and use of examples than the cases that required a group summary of the online discussions. 68% of the students felt that discussing the cases again in class deepened their understanding of how to apply the theories that were being used to support the case analyses. Perceived levels of participation were positively correlated with their perceptions of the value of learning through the online discussions and their enjoyment of the online discussions.

The perceived advantages of learning cases through asynchronous online discussion were grouped into three categories: Learning (i.e. sharing of ideas and perspectives, time to think and reflect before posting), Communication (i.e. fostering group discussion, equal opportunities to contribute) and Convenience (i.e. not having to meet in person, semi-independent study). The perceived disadvantages of learning cases through asynchronous online discussion included: Learning (i.e. perceived lack of participation from some students, posting very little or at the last minute), Communication (i.e. time lag between posts, difficulty explaining ideas), Technology (i.e. detached, impersonal), Assignment (time consuming and demanding), and Grading (i.e. subject to others’ participation, resentment at being graded for online discussions).

Weil, McGuigan & Kern (2013) conducted an exploratory case study that examined the use of case-based learning combined with asynchronous online discussion delivered to students enrolled in a course on Corporate Accounting. The primary objective of the study was to investigate the perceived usefulness of online CBL for developing the competency requirements for a professional accountant designation.

Data was collected through a questionnaire, and responses were rated on a 7-point Likert scale. All of the student responses were above the mid-point on the Likert scale, indicating that the students perceived online case-based instruction as an
effective tool for developing their professional competencies. Students perceived the greatest benefits in the following areas: (a) ability to identify relevant data in the case, (b) ability to think critically, (c) ability to summarize the available information. Students perceived the teaching of cases online to be least beneficial in, (d) dealing with situations involving uncertainty or ambiguity, (e) improved ability to organize data, (f) consolidate prior knowledge in accounting, (g) enable you to make decisions based on incomplete information.

2.4. Comparing online CBL with other approaches

The second set of studies focus on comparisons between CBL delivered through classroom, online and blended modes. Webb et al. (2005) examined differences in CBL delivered through a technology-mediated environment as compared to a traditional classroom. The researchers conducted a quasi-experimental study that compared four treatments: pure classroom, pure online, and two blended treatments with differing levels of online discussion.

The researchers administered a comprehensive questionnaire at the end of the course, designed to test the recall of factual information and concepts related to each case. Students also rated their satisfaction with each case, and the degree to which each case had influenced their thinking, on a 7-point Likert scale.

Knowledge- and analysis-level learning outcomes were superior for treatments that included asynchronous online discussion. According to the researchers, this supports the idea that “online discussion may, in some ways, be truer to the underlying philosophy of the case method pedagogy than the traditional [classroom] discussions" (p.245). The researchers also found that as the online component of CBL increased, so did the perception that the instructor should have been more active in leading the discussion – the strongest desire for instructor presence being among students in the pure online treatment. This suggests that a blended design may be superior to a pure online or pure in-class approach.
Watson and Sutton (2012) conducted two different empirical studies to compare CBL supported through synchronous versus asynchronous discussion. Both analyses compared overall student satisfaction between synchronous and asynchronous technologies used to support online CBL. In the first study, the instructor taught the same online course multiple times, but in some course sections the mode of instruction was entirely synchronous while in the other course sections the delivery was entirely asynchronous. The second study involved the same students within a single online course in which some cases were delivered through synchronous online discussion, and some cases were delivered through asynchronous online discussion.

In the first study the instructor taught the same online course four times. Twice the course was delivered online through synchronous discussion using Live Classroom, and twice the course was delivered through asynchronous online discussion. When the Live Classroom tool was used, students discussed four different cases. Additional cases were also analyzed through a discussion board, individual written responses to questions, and a group assignment. During the two course sections that were delivered entirely through asynchronous discussion the instructor used the all the same methods (discussion board, individual written responses to questions, and a group assignment) but one or two additional cases were discussed on the asynchronous discussion board.

In the first study, data were collected through a voluntary and anonymous online survey approximately three weeks after grades had been submitted. Students were asked to respond to questions on a 5-point scale. The questions used in the survey were part of a standard survey required by the distance learning department and the instructor’s faculty department. Seventy-two students completed the survey, which represented a return rate of 55.8%.

For several items on the survey, the level of student satisfaction differed significantly between the two modes of instruction. In all cases where the satisfaction levels had significant differences, the student ratings were higher for the asynchronous online discussions and lower for the synchronous Live Classroom. Students found the Live Classroom tool difficult to use, and did not like having to participate at set times
given that it was an online course. Students felt more comfortable without the pressure
to participate that can occur in a traditional classroom.

In the second study, the researchers assessed perceived student learning across
different case discussion methods. Cases in this study were used in one of three ways:
(a) discussed through asynchronous online discussion, (b) used as part of a team
assignment, and (c) used for an individual assignment. The instructor administered a
web-based survey and asked students to evaluate how each of these approaches
contributed to their learning.

Paired t-Tests were performed to determine whether there were significant
differences in students’ perceptions of learning between the three sets of cases.
Students indicated that they learned significantly more through the use of asynchronous
online discussion and completion of a group assignment than from an individual
assignment. Although students acknowledged the valuable learning that was achieved
through these tasks, they felt that these methods were challenging and time consuming
and preferred not to use them again in the future.

Levin et al. (2004) conducted a comparative analysis of changes in learner
preferences between CBL offered through synchronous versus asynchronous online
discussion, over a 15-week period. The learners were pre-service teachers enrolled in a
web-supported course on classroom management. An anonymous survey about
perceived preferences between synchronous versus asynchronous online case
discussions and peer-facilitated versus instructor-facilitated discussions was
administered during the first and last week of the course.

Each student participated in two synchronous and two asynchronous case
discussions, and two peer-facilitated and two instructor-facilitated case discussions.
Quantitative and qualitative analysis of the data indicated that a strong initial preference
for asynchronous discussion declined over a period of 15 weeks, although half the
respondents still preferred the asynchronous approach.

Participants that preferred synchronous discussion at the end of the course
provided the following reasons: a) immediate feedback from peers and instructor b) the
pacing of the discussion felt more like a real discussion b) a one hour chat versus having to check the discussion several times during the week c) the challenge of having to think intensely and learn from peers in a short time frame. Participants that maintained their preferences for asynchronous discussion provided the following reasons: a) the convenience of participating when they had time, and b) having time to think and respond in greater detail to others’ responses.

Although initial preferences for peer-facilitated versus instructor-facilitated courses did not change much from the initial survey, students that preferred the peer-facilitation appreciated the valuable insights that their peers were able to bring to case discussions, and felt more comfortable with the peers. Students that preferred instructor-facilitated discussions felt that their instructors were more knowledgeable about the cases and were better able to keep the discussions on track.

### 2.5. Facilitation of asynchronous online discussion

The third set of research studies examines the facilitation of asynchronous online discussion. I was unable to find sufficient research on the facilitation of asynchronous CBL, so I searched for articles that discussed facilitation of asynchronous discussion in a more general way.

Hew and Cheung (2008) conducted an exploratory case study, using the constant-comparative approach, to examine the facilitation techniques used to attract student participation in online asynchronous online discussions. The study involved twenty-four pre-service teachers enrolled in a blended course on Instructional Technology as part of a post-graduate diploma in Education. The researchers collected data from student reflection logs and through online observation of the students’ discussion.

The research participants were randomly divided into two groups, with each group led by two randomly chosen facilitators. Both groups covered the same discussion topics. After the online discussions the students were asked to complete some reflective writing on their experiences of the online discussion. Students were asked to identify
four facilitation skills that were used in the online forum, and to explain why they were used. The researchers also examined the depth of the discussion threads and deemed that a facilitator had successfully attracted student participation if the discussion threads had a depth of six or more levels.

The researchers examined the facilitation techniques used by the student facilitators in the 12 threads with six or more levels, and triangulated their observations with the student reflection logs. The researchers used an emergent coding scheme to identify seven commonly used peer facilitation techniques, including: (a) giving own opinions or experiences, (b) questioning, (c) showing appreciation, (d) establishing ground rules, (e) suggesting new direction, (f) personally inviting people to contribute, and (g) summarizing.

Ng, Cheung and Hew (2009) conducted a case study, using the constant-comparative approach, to determine the most effective peer facilitation techniques for encouraging interaction between learners in two blended graduate-level courses that used asynchronous online discussions. Peer facilitators were taught a common set of online facilitation techniques, including: questioning, showing appreciation, setting ground rules, challenging others’ points, clarifying and elaborating, general invitations to contribute, and setting new directions.

The researchers analysed the online discussion transcripts using Gunawardena’s (1997) interaction analysis model, which distinguishes five levels of knowledge construction activities: (a) sharing and comparing, (b) identifying areas of disagreement, (c) negotiating meaning and co-constructing knowledge, (d) evaluation and modification of new schema that result from co-construction, and (e) reaching and stating agreement and application or co-constructed knowledge. Two independent coders coded all phases of knowledge construction with inter-coder agreement reaching 93% and 94% for Cases 1 and 2, respectively. The average number of instances of knowledge construction per forum was 11. Forums with above average knowledge construction were considered to be the more active forums.

Content analysis was performed to determine the types of facilitation techniques used in the forums and whether they were used more frequently in the active forums as
compared to the less active forums. To confirm that the facilitation techniques influenced learner interactions, these observations were triangulated through individual interviews with each participant.

After the peer facilitation techniques were coded, the researchers compared the number of times each peer facilitation technique was used in each case. The five peer facilitation techniques that appear to encourage interaction in asynchronous online discussion the most, included: (a) showing appreciation, (b) considering others’ viewpoints, (c) general invitation to contribute, (d) questioning, and (e) challenging others’ points. In particular, the researchers found that the facilitators in the two more active forums asked open-ended questions, on the average, seven and three times more frequently than the less active groups. The researchers observed that asking open-ended questions tended to widen the scope of the discussion and opened the door to perspective talking.

An alternative to facilitation is to orchestrate interactions between learners through the use of a cooperation script (Dillenbourg, 2002). A cooperation script is like a musical score that defines how different parts of an ensemble will play together. Role assignment is one form of scripting that provides structure to asynchronous discussion by asking individual learners to perform specific roles.

De Weaver, Van Keer, Schellens and Valcke (2008) explored the use of roles as a scripting tool in asynchronous online discussion with students in a first year university course in Instructional Sciences. The researchers selected five roles: source searcher, theoretician, summarizer, moderator and starter. Quantitative content analyses of students’ posting were performed to determine the extent to which participants enacted those assigned roles.

Logistic regressions revealed that the participants performed their assigned roles while continuing to participate in the online discussions outside those roles. This research suggests that role assignment may be an effective way of orchestrating interactions between learners in asynchronous online discussion.
In a follow-up study, De Wever, Van Keer, Schellens and Valcke (2010) compared knowledge construction between groups using role assignment, with groups supported by a cross-age peer tutor (i.e. a more knowledgeable peer) in asynchronous online discussion. Peer tutors learned social, organizational, cognitive and meta-cognitive strategies for moderating the discussion groups over two days of training prior to the start of the online discussions.

The researchers employed a cross-over design to examine the differences in three conditions (all tutor-support, tutor-support fading to role-support, role-support fading to tutor-support). Gunawardena’s (1997) interaction analysis model was used to analyze the transcripts from each of the online discussions. The researchers found that both role support and tutor-support enhanced knowledge construction, with tutor support enhancing knowledge construction somewhat more, although the effect size was small. The researchers found no differences in knowledge construction for the conditions in which role-support faded to tutor-support, or vice versa. This suggests that role-support and tutor support may be used together, provided the designer takes caution to avoid what Dillenbourg (2002) refers to as ‘over-scripting’.

Dennen (2005) conducted a case study, using cross-case analysis, of nine web-based classes that used asynchronous online discussion. The researchers examined how activity design and facilitation factors affected student participation. The participants included students and instructors of nine online courses taught by eight different instructors at seven universities. Each case ranged in size from 15 to 106 students, including students in undergraduate to Masters-level courses across a variety of disciplines.

Data was collected from each case using the following instruments: a pre- and post-course interview with the instructors, pre- and post-course student surveys, and direct observation of all course activities, communications and documents. Data was analyzed in a two-step process, starting with a focus on how course design and facilitation factors influenced student participation within each case. The next step was to examine all nine cases together for similarities and differences in order to understand
the relative impact that various design and facilitation choices had on student participation.

The researcher found that participation in asynchronous online discussion is optimized through the use of goal-based activities that are relevant to students, have clear expectations, and explicitly stated learning objectives. Across all the cases, sharing of perspectives was considered one of the most important features of this mode of instruction. However, when instructors took the role of 'expert', students tended to write to the instructor rather than to each other. This suggests that facilitators should find the optimal balance between being “too dominant or too absent” and to be present “without setting the expectation of being omnipresent” (p. 145). When providing feedback to learners, it is advisable to provide general feedback to the group as a whole, rather than to individual learners.

Although assignment of grades tended to produce more activity, the level of activity was influenced by whether the feedback was delivered as qualitative or quantitative. When students were assessed on a purely quantitative basis, the quality of the online contributions did not meet the instructors’ expectations.

2.6. Self-directed learning

I reviewed one final article to help frame my understanding of the relationship between self-directed learners, peer networks, and facilitators. Bloomfield (2009) describes self-directed learning as the fluid movement between learning in isolation and learning within the context of a peer network. Self-directed learners may also choose to place themselves under the guidance of experts who can provide advice, modeling, and support in determining the credibility of learning tools and resources. Peers and experts allow the self-directed learner to test newly acquired ideas, and gauge their overall success in relation to learning goals.

Bloomfield identifies a number of factors that influence the degree to which an individual will engage in self-directed learning, including prior knowledge and access to resources (including time). According to Bloomfield, “for learners to exercise control in
any meaningful sense they must not be so buried under the demands of their daily work that they have neither time, nor energy nor inclination left over to engage in shaping and making decisions about their own development” (p. 2623). I found this observation particularly relevant because the present study asks research participants to balance the training with the demands of their regular duties.

Self-directed learning is an important skill in the today, in which individuals face increased pressure to manage their learning and career development with less formal guidance from instructors. While Bloomfield recognizes the fact that asynchronous modes of learning give learners greater control over the pacing, direction, location and timing of learning, he continues to see an important role for educators as facilitators of self-directed learning.

Bloomfield’s review of the research literature also points the fact that adult learners tend to overestimate their level of involvement and time spent in self-directed learning. This may have implications for the present study. Bloomfield writes, “Learners may claim to have developed skills or acquired relevant knowledge to a high degree, but be unable accurately to estimate their true level of accomplishment” (p. 2618). It is therefore problematic to rely on the research participants’ self-assessments of learning in a formal program evaluation. This lends to support to the need for an objective measurement of learning.

2.7. Recommendations for the design of online CBL

I found only one article that outlined a series of best practices for the design of CBL delivered via asynchronous online discussion. Rollag (2010) is a practitioner report that synthesizes the experiences of teaching Harvard Business School-style cases online as part of a blended MBA program. This article did not fully meet the standards that I associate with rigorous research, as the researcher was vague about his data collection methods and did not strictly adhere to a single methodological approach. However, his best practices are based on four years of student surveys, focus groups and interviews with faculty and students about online learning through asynchronous
online discussion, and conversations with individual faculty members regarding their personal strategies for teaching cases online.

Although the author acknowledges previous research regarding student preference between online and classroom delivery of CBL, he also states, “I have not found a published article that describes a comprehensive set of design choices and trade-offs associated with designing, facilitating, and assessing an effective, efficient online case discussion” (p.501). I certainly identified with his struggle to find appropriate research literature concerning the design of online CBL, and find that many of his recommendations ring true from my own experience of designing and delivering CBL combined with asynchronous online discussion. For these reasons I decided to incorporate several of his design recommendations into my own learning design, as described in the following paragraphs and in Chapter 3.

According to Rollag (2010), it is important to establish guidelines about posting frequency and deadlines, and to stress the importance of building on each other’s ideas. In terms of instructional supports, he recommends a combination of course readings, discussion topics, and assignments to help students achieve the learning objectives embedded in the cases. His experience suggests that introducing and debriefing the case discussions are critical to the success of online CBL. In a survey involving students—the sample size included only 18 students—95% preferred to have the instructor organize the online discussion by creating a separate thread for each major topic, and to divide responsibility across the group by assigning one learner to start the discussion in each thread.

Rollag also recommends preparing a detailed lesson plan that includes the timing and sequencing of discussion questions, and “posting additional questions at strategic intervals“ (p.507). He suggests assigning students with a small number of questions and a deadline to respond. His experience suggests that smaller groups tend to produce more thoughtful responses to those questions, while limiting the time frame for discussion helps to avoid learner and facilitator burnout. He encourages instructors to provide just enough feedback, guidance and motivation to allow students to facilitate most of the discussions themselves.
2.8. **Summary of the literature review**

Some researchers have suggested that the pedagogical requirements of CBL can be effectively met through the learning affordances of asynchronous online discussion (Watson et al., 2012; Webb et al., 2005). Improvements in critical thinking, the ability to locate relevant information embedded in a case, and improved written communication are some of the potential benefits of CBL combined with asynchronous online discussion.

Asynchronous CBL allows for the sharing of multiple perspectives, application of course theory and content, and the opportunity for equal participation among participants (Pena-Shaff et al., 2009). The nature of asynchronous discussion mitigates the challenges of interjecting during a fast-paced classroom discussion, making it easier for students to find their ‘voice’. The flexible nature of asynchronous discussion also offers learners the convenience of participating when they have time. Participants can read and evaluate the contributions of others and reflect before making their own contributions to the discussion.

Since online CBL extends over several days—well beyond a single classroom period—it allows for multiple contributions from different learners, and provides opportunities for a deeper analysis of the concepts and principles embedded in the case (Rollag, 2010). Online CBL discussions also provide an enduring record that allows learners to revisit and review important elements of a discussion (Rollag, 2010).

As with any instructional strategy, asynchronous online CBL involves a number of limitations and challenges. Unequal participation is one of the more common issues identified by learners in asynchronous online discussion. The lapse in time between posts is also a real concern for some learners (i.e. the lack of immediate feedback), resulting in a negative impact on the interactions between participants (Watson et al., 2012).

Several researchers highlight design and facilitation as critical factors in the success of asynchronous online CBL (Dennan, 2005; Pena-Shaff et al., 2009; Rollag, 2010; Webb et al., 2005). In the absence of real-time feedback from a facilitator, online
case discussions must provide sufficient scaffolding to promote focused interaction and cooperation between learners. Disorganized threads may result in repeated or disjointed posts, which can frustrate the group’s efforts at knowledge construction. Breaking discussions into smaller parts reduces the possibility that learners will feel overwhelmed (Pena-Shaff et al., 2009; Rollag, 2010).

Bloomfield (2009) describes the fluid relationship between self-directed learners, peer networks and facilitators. His research identifies several factors that influence a learner’s readiness to engage in self-directed learning, including the demands of their daily work. He also cautions that adults tend to overestimate the amount of time they engage in self-directed learning and the amount of learning that is achieved through such activities.

As an alternative to facilitation asynchronous online discussions can be organized through the use of a cooperation script (Dillenbourg, 2002), such as the role assignment technique used by De Weaver et al. (2008). Research also suggests that role support can be combined with peer tutor support to further enhance knowledge construction in asynchronous online discussion (De Weaver et al., 2010).

Finally, concept mapping is a valuable exercise that can be used to develop interdisciplinary teaching cases. Concept maps serve as a master blueprint that can help case writers to see the knowledge cross-links associated with a teaching case (Weiss & Levison, 2000), and have shown to be effective for helping learners to summarize the central ideas of a particular topic (Nesbit & Adesope, 2006).

Given the paucity of research on the use of online CBL outside post-secondary settings, I hope to add to the existing literature by evaluating an online CBL system designed to improve the decision-making skills of social welfare workers. I believe that the evaluation of my CBL system will offer significant insights regarding the affordances and limitations of this form of instruction when used to develop employees in a government setting.
Chapter 3. The Learning Design

3.1. Background

The following section describes the design, implementation, evaluation and re-design of a CBL system combined with asynchronous discussion for SDSI field staff. The design choices for the pilot were based on my review of the literature, and recommendations made by a group of senior EAWs and Investigative Officers from across the province. Advanced Decision Making was piloted to a group of 72 learners in the fall of 2012. Based on learner surveys and focus groups with the moderators, a series of revisions were made to the original design and a second implementation was conducted from October to December 2013. Although the data captured for this thesis focuses entirely on the second iteration of this design, I have included a brief overview of the original course design in order to provide the reader with some background on how the course was developed.

3.1.1. Assembling a multidisciplinary design team

Research indicates that instructors choosing to implement asynchronous online CBL need to invest more time planning and organizing their courses in order to ensure increased collaboration between learners (Rollag, 2010; Rovai 2007). Schwab (1973) advocates for a participatory process in the development of curriculum through an ongoing process of social negotiation, experimentation, evaluation and refinement. He identifies ‘five bodies of experience’ that must be represented when undertaking curriculum planning, including: subject matter experts, learners, the socio-cultural context, teachers, and designated curriculum specialists.

For the collaborative design of Advanced Decision Making, I assembled a diverse group of subject matter experts (SME)—those who represent the various subject
‘disciplines’ across the Ministry—including: Employment Assistance Workers, Investigative Officers, Family Maintenance Workers, Assistant Supervisors, and Outreach Workers. Each of these SMEs would later be assigned to their own learning cohort and moderate the online discussions. From this point forward I use the term SME and moderator interchangeably.

One week before the curriculum design process began, the newly recruited moderators participated in their own online discussion using a sample case. My goal was to provide the moderators with their own experience of learning through an online CBL system that would inform their development of the instructional materials for the course pilot. Later on, during the curriculum planning sessions, we analyzed the transcripts from this online discussion to better understand how different facilitation techniques could impact learner interactions.

3.1.2. Case development

As mentioned before, case construction is a complex process that requires instructors to clearly identify and embed the concepts or principles that learners are expected to uncover during their analysis of the case. On day 1 of the curriculum planning session, the twelve moderators were divided into three 4-member project teams and began brainstorming rough cases that would target the various learning priorities identified by the Ministry. After some feedback from the larger group, each of the three project teams selected their strongest case for further development.

A concept mapping process was used to help the SMEs develop a blueprint of the curricular goals and learning objectives of each case (Weiss and Levison, 2000). Each project team assembled post-it notes on large piece of paper, with each post-it note representing an important learning objective associated with their case. The project teams added and rearranged post-it notes to explicate their understanding of the cases, and to show the relationship between these big ideas. Each project team presented their draft concept maps to the larger group for discussion, feedback, reflection and revision (Amundsen, Weston & McAlpine, 2008). We followed this process of feedback, reflection
and revision several times, resulting in incremental improvements to the concept maps and revisions to the associated cases.

All three cases were text-based and approximately one paragraph in length. Specific details that would prematurely narrow the field of discussion were deliberately withheld from the learners, with the hope that they would consider the full range of possible outcomes provided for by policy and legislation. The following three cases were developed for the pilot of Advanced Decision Making:

**Case 1**
A family unit of four (mom, dad, and two kids) arrived from Quebec and applied for income assistance—they were found eligible four months ago. They have been collecting regular assistance ever since. Mom and Dad come into the office to discuss Mom’s recent PWD approval. Now you, the worker, have reviewed the file and discovered that at intake Dad had declared that he has an out-of-province warrant. The worker sent off the warrant check referral at the time of intake and it came back confirming that Dad does have an existing out of province (PQ) indictable warrant. An eligibility alert for the outstanding warrant was added to the file when it was confirmed; however the alert was never actioned.

**Case 2**
A woman comes into the office to apply for assistance. She has recently been a recipient of band assistance. She is applying with her 16-year-old daughter, who is the mother of 6-month-old twin children. The 17-year-old father of the twin children also wants to move in with the applicant, her daughter and children. The grandfather’s whereabouts are unknown. The grandmother cannot afford to provide for the family unit. She is also inquiring about PWD.

**Case 3**
Two applicants, who previously shared the same file, are re-applying for assistance as single persons. Both applicants still reside in the same residence. The female applicant is applying as a single parent with a six-year old child. The other applicant is a male MSO client who is re-applying for PWD assistance. He lost his income due to a relapse of bipolar disorder. He is unable to return to his previous employment in the construction industry but wants to return to work.

### 3.1.3. Learning the cases

Following the development of the concept maps and cases, I asked each project team to develop a set of open-ended guiding questions that would promote discussion on the important ideas within each case. During the pilot, I asked the moderators to post
these guiding questions at strategic intervals (Rollag, 2010), and to encourage the learners to cover the important concepts embedded in the cases.

I then asked the project teams to prepare model responses to each of the guiding questions. The model answers were discussed in the large group in order to arrive at a consensus understanding of each case. Following the recommendations of Weiss and Levison (2000), I invited several external advisors to participate in these discussions, including: a Regional Adjudicator, a Reconsiderations and Appeals specialist, and a Policy Implementation Manager. The collaborative process of writing followed by discussion, debate, reflection and refinement helped to ensure that all of the moderators in the large group had acquired sufficient base knowledge to lead their cohorts through each of the teaching cases.

3.1.4. Structuring the online discussion

Online case discussions must be designed and structured in ways that promote focused interaction and cooperation between learners without constant guidance from a facilitator (Rollag, 2010). Learners may find threaded discussion difficult to follow and time consuming to read, emphasizing the need for a structured and well-organized learning design. These challenges can be mitigated by creating a separate discussion thread for each of the major themes associated with the case scenario (Rollag, 2010). To keep the discussions organized and manageable, a separate discussion thread was created for each top-level node on the concept map. Learners were provided with a copy of the case concept map to improve their recall of the central ideas presented in each case (Nesbit & Adesope, 2006), and to understand the relationship of these parts to the whole.

According to Pena-Shaff et al. (2009), providing a clear structure, assigning specific tasks, and setting deadlines helps to keep the discussion focused and productive. The pilot for Advanced Decision Making employed role assignment (De Wever et al., 2008) as a moderate method of scripting the online discussions. Each participant was assigned one thread and asked to perform the Starter role no later than Day 2 of the discussion. Each learner was asked to perform the Responder role at least
four times by building on the contributions made by another learner. One member of each group was asked to perform the Researcher role and locate relevant policy and legislation that would support the on-going discussion. Finally, each learner was asked to perform the Summarizer role and synthesize all of the contributions made to their assigned thread on the penultimate day of the 2-week discussion period.

3.1.5. Establishing learner guidelines

Research on asynchronous online discussion recommends establishing clear learner guidelines (Pena-Shaff et al., 2009). I asked the moderators to reflect on their own experience of learning through the sample case discussion, and to create a learner guide that would orient participants to the design and structure of the training. Based on the moderators' experience with the sample discussion, they recommended that the learner guides include information on how to use the SharePoint discussion boards, a description of the various roles that would be assigned to the learners (Starter, Responder, Researcher, Summarizer), and suggestions on how to manage their time during the training.

3.1.6. Learning facilitation techniques

Ng, Cheung and Hew (2009) taught facilitators a common set of online facilitation techniques, including: questioning, showing appreciation, setting ground rules, challenging others’ points, clarifying and elaborating, general invitations to contribute, and setting new directions. These were the skills that the moderators were expected to use in order to attract participation in the online discussions. Based on the recommendations of Dennen (2005), I stressed the importance of finding balance between being too dominant and too absent.

To better understand the importance of learner-learner interactions, I asked the moderators to analyze the transcripts from their own online discussions. The moderators were asked to distinguish between posts that encouraged further discussion (i.e. posing questions back to the group), from posts that tended to restrict the flow of conversation (i.e. lengthy 'know-it-all' posts), and posts that demonstrated collaborative learning (i.e.
acknowledging and building on each other’s ideas). Based on our analysis of the transcripts from the sample case discussion, the moderators recommended that learners limit their posts to around 200 words, to acknowledge each other, and to build on each other’s ideas. These recommendations were added to the Learner Guide, together with a sample post that illustrated these recommendations.

3.1.7. Conference Call Debrief

Research suggests that some level of synchronous exchange can support learner-learner and learner-instructor interaction (Watson et al., 2012; Webb et al., 2005). Participants who preferred synchronous discussion provided the following reasons: a) immediate feedback from peers and instructor b) the pacing of the discussion felt more like a real discussion b) a one hour chat versus having to check the discussion several times during the week c) the challenge of having the think intensely and learn from peers in a short time frame (Levin et al., 2004). In addition, a case wrap-up is a recommended best practice for CBL delivered through asynchronous online discussion (Rollag, 2010). For these reasons, a 1-hour case debrief was held at the end of each case discussion via conference call.

3.2. Pilot implementation

Seventy-two learners were recruited to participate in the pilot for Advanced Decision Making, which took place from October through December 2012. The twelve moderators that helped to design to training were each assigned to a six-member learning cohort. Each case was explored through online discussion over a 2-week period, with a break between cases to accommodate the issuance of monthly assistance cheques to clients. The following list outlines the instructional supports that were included in the pilot, based on the recommendations of field researchers:

- Discussion threads organized by major themes (Rollag, 2010)
- Learner guidelines (Dennen, 2005; Pena-Shaff et al., 2009)
- Concept maps (Nesbit & Adesope, 2006)
- Course readings (Rollag, 2010)
• Role assignment (De Wever et al., 2008)
• Peer moderator support (De Wever et al., 2010)
• Case debrief (Levin et al., 2004; Rollag, 2010)

3.3. Pilot evaluation

According to Schwab (1983), “curriculum is not something about which decisions can be certified in advance of trial as the best decisions. Some of these matters require further elucidation” (p.240). During the pilot, I used an anonymous web-based survey to conduct formative assessment of the pilot after each case discussion. The surveys measured learners’ perceptions of the training by asking them to respond to a series of Likert-scale questions related to (a) the perceived difficulty of each case, (b) time management, (c) moderator support, (d) supervisor support (e) the perceived level of collaboration between learners, and (f) general satisfaction with the training. The survey also included two open-ended questions: 1) What did you like most about this training? 2) What is the one thing that you would change about this training? In addition, I conducted several focus groups with the moderators to gather their impressions of the learning design.

The feedback from the learner survey was generally positive. Since the survey data from the pilot is not part of this thesis, I have included only a general overview to help the reader understand why certain design enhancements were made. Learners felt supported by their supervisors and by their moderators, and felt a strong sense of learning collaboratively with the other members of their cohort. Learners were concerned that the course demanded more time than they had expected, and felt that they received too many emails from the Coordinator and the moderators. The moderators spent more time monitoring the online discussions than they had expected, expressed concerns about the perceived lack of learner participation, and wanted to play a more active role in leading the online discussions.
3.4. Course redesign

To address concerns raised during the formative evaluation, an improved learner package was developed so that all the required information was sent to the learners in one email. The revised learner package included a calendar so learners were clear on the deadlines for posting. To address time management issues a Learner Agreement was developed. The Learner Agreement asked each participant to identify three 1-hour blocks of time each week to participate in the training. The terms of the Learner Agreement were negotiated between the participant and their immediate supervisor.

For this study, a case brief assignment was added to the learning design. The case brief assignments required participants to synthesize their learning from the case discussions, while outlining their rationale for the decisions made in relation to each case (Watson et al., 2012). The moderators developed a sample case brief (Appendix E), a template with guiding questions to help the learners produce their own brief, and a draft rubric that could be used to evaluate the case brief. A measurement of learning was necessary because research has shown that adult learners tend to overestimate the knowledge that is gained from their learning activities (Bloomfield, 2009). Participants were asked to submit their case briefs before the start of the conference call debrief.

Our experiences with the pilot caused the moderator community to rethink the way they approached their roles as facilitators. To reduce the moderators’ workload, I assigned two moderators to each group. Recognizing that asking open-ending questions is most important technique for effective facilitation of asynchronous online discussion (Ng, Cheung & Hew, 2009), we gave the learners all of the guiding questions at the very start of each case discussion. Giving the guiding questions in advance meant that the moderators would not have to constantly monitor the online discussion, which reduced the potential for burnout. This also gave the moderators more time to provide learners with detailed qualitative feedback on their case briefs (Dennen, 2005).

Finally, I formed a small project team to help transform one of our text-based cases into a video. I was interested in exploring the use of a video case with this learner population because their work depends on the full range of verbal and non-verbal cues present by clients (Bizzocchi & Schell, 2009).
In summary, the following instructional supports were added to the second iteration of the learning design:

- Learner Agreements (Dennen, 2005; Rollag, 2010)
- Improved learner guide with calendar and posting deadlines (Dennen, 2005)
- A video scenario (Bizzocchi & Schell, 2009)
- Open-ended Guiding Questions (Ng, Cheung & Hew, 2009)
- Case Brief Assignment (Watson & Sutton, 2012)
Chapter 4. Methodology

4.1. Qualitative approach used and rationale for choice

Before I outline my research methodology, I would like to take a few paragraphs to position myself in relation to Yin (1994) and Stake (1995), two researchers who present distinctly different approaches for conducting case study research. Yin and Stake differ the greatest in terms of how they define a ‘case’, in their approach to case study design, and in their epistemological foundations (Appleton, 2002).

The first challenge for the case study researcher is to define the boundaries of a particular case. For example, does this case involve an individual, a group, or an organization? Yin takes the perspective that defining a ‘case’ is hard to do because the boundaries between context and phenomenon are not always clear (Appleton, 2002), while Stake defines a ‘case’ as a complex and integrated system within clearly defined boundaries (Creswell, 2013).

Yin and Stake offer distinct approaches to the design of case study research. Yin suggests using an exploratory case study design to determine the feasibility of a research project, or to develop questions or hypotheses that can be explored in a subsequent study. As an alternative, Yin describes an explanatory case study design as one that attempts to demonstrate causal relationships, which clearly follows a positivist approach to case study. Stake offers three distinctly different case study designs. An intrinsic case study seeks to understand a case that is, “unusual in and of itself and needs to be described in detail” (Creswell, 2013, p.98). The primary focus of an instrumental case study is to improve our understanding of one key issue related to the case. Finally, a collective case study is an instrumental case study expanded to include multiple cases (Creswell, 2013).
The most significant distinction between Yin and Stake can be traced back to differences in their epistemology. Yin’s approach is closely aligned with the Positivist paradigm, which seeks to explain human behavior through observable phenomenon that can be confirmed through the senses, or explained by observed laws and principles. Positivists focus on the development of hypotheses, followed by collection and analysis of empirical data to support or refute these hypotheses. Positivists gather facts in order to form generalizations that can be applied to a population through an objective, value-free stance (Creswell, 2012).

Stake is influenced by a constructivist epistemology in which knowledge is viewed as a social construction, opposed to objectivism, which assumes the existence of a single objective truth waiting to be discovered (Creswell 2013). Constructivism seeks to interpret and to understand the subjective meanings of human behavior from the point of view of the actors. Understanding human behavior requires a holistic view that must consider the interplay of contextual forces that shape an individual’s experience. For Stake, the goal of case study research is to gain a deep understanding of the case within a specific context, not to generalize to a population (Appleton, 2002).

Not only do these epistemological considerations influence the types of questions that a researcher will ask, they inevitably influence the choices around data collection and analysis. For example, constructivist case study researchers acknowledge the importance of multiple realities that are co-constructed between the researcher and the participants. To align with this interpretive framework, a constructivist case study researcher would collect data through open-ended or semi-structured interviews, observation and texts (Creswell 2013), followed by an emergent analysis in which new themes are explored more deeply in subsequent iterations of collection and analysis.

Yin advocates the use of both qualitative and quantitative data collection and identifies six primary sources of evidence for case study research, including: direct observation, participant observation, documentation, archival records, interviews, and physical artifacts (Yin 2003). Yin’s quantitative roots are also revealed through his focus on the quantitative criteria for judging the quality of research designs, such as internal and external validity, reliability (Yin 2009).
Stake (1995) prefers to focus on the qualitative and philosophical dimensions of the case study approach, and offers six common case researcher roles: Teacher, Storyteller, Advocate, Evaluator, Biographer, Theorist, and Interpreter. According to Stake, the researcher must decide how much to participate personally in the activity of the case, how much to pose as expert, whether to take the position of neutral observer, advocate, or critical analyst, and to what degree the researcher should provide the reader with interpretations about the case.

My approach to case study aligns most closely with Stake (1995) because we both follow the interpretive framework of social constructivism. CBL aligns entirely with constructivist theory in many ways, for instance, facilitators guiding learners through their problem-solving efforts. I would also argue that the discussion cohort provides excellent opportunities for learners to connect with many “more knowledgeable other[s]” (Vygotsky, 1978). As a qualitative researcher I have been taught to seek alignment between my epistemology, axiology and method.

4.2. Research participants

The study involved ten (10) research participants – eight participants and two senior staff that served as their online discussion moderators. Participants included a cross-section of employees from across the province, with experience ranging from 2 to 20 years of service. Based on an earlier pilot, employees with less than 2 years of experience were deemed to have insufficient base knowledge and were restricted from applying.

Ethics approval was obtained from the SFU Office of Research Ethics before beginning the recruitment process (Appendices A & B). An Expression of Interest was distributed to staff, via email, advertising 40 seats for ‘Advanced Decision Making’ training, with a set number of seats allocated to each region. Each applicant who was approved for the training was provided with a detailed description of research study, a copy of the informed consent document, and asked for their voluntary participation in the research study. Applicants had the option of participating in the training, but not the research study. Twenty-five signed consent forms were returned.
All 40 learners were evenly distributed into five learning cohorts, based on region, specialty, and years of service. The learning cohort with the largest number of signed consent forms was selected as the research cohort. Two learners who had not given their permission were removed from the research cohort and replaced by two consenting participants with similar characteristics.

Participants were paid their regular wage for every hour they participated in the research study. This included approximately 20 hours of asynchronous online discussion, 3 hours of synchronous debriefs, and a 1-hour personal interview (approximately 24 hours in total). Participants were given time away from their regular duties in order to participate in the training, and to complete reflective writing exercises, and participate in the individual interviews.

4.3. Data collection method and procedures

The research study was carried out between October 2013 and February 2014. Data was collected through 1) direct observation of the online discussions and case briefs 2) writing by the participants 3) analysis of the individual case brief assignments, and 4) individual interviews.

4.3.1. Direct Observation

Direct observation of the online discussion provides insight into the three levels of learner interaction. The three levels of interaction have been operationalized, with specific examples of each type of interaction taken from the pilot study (Appendix K). These observations, combined with the participants' self-reflective writing were used help to refine the interview protocol (Appendix C) so that specific interactions could be explored during the individual interviews. Quantitative data, such as the number of page views and postings per day, was recorded through web analytics software embedded in the SharePoint software, and was used to triangulate and lend support to my observations and those of the participants.
4.3.2. Self-Reflective Writing

At the end of each case, participants were asked to write about their experiences of using the CBL system. The reflective writing served as a memory aid for the participants during the individual interviews. The Self-reflective writing (Appendix B) was guided by the first three research questions:

1. Describe your experiences of interacting with the content?
2. Describe your experiences of interacting with other learners?
3. Describe your experiences of interacting with the moderators?

4.3.3. Case Briefs

For each case, the participants prepared an individual case brief that outlined their rationale for why the family unit was eligible or ineligible for assistance or benefits. Participants were given a template with a set of guiding questions to help scaffold their case brief, and a sample case brief to show the organization and level of detail that was expected. The case briefs were evaluated based on a rubric developed by the principal investigator and a group of subject matter experts (Appendices H,I,J). The case briefs provided a quantitative measurement of the learning outcomes for each participant.

4.3.4. Individual Interviews

Moore's (1989) Three Levels of Interaction was used to create a semi-structured interview protocol (Appendix C). The individual interviews were conducted over the telephone and recorded for transcription. Personal interviewing was chosen over a focus group, because it was believed that individual interviews would generate the most candid responses from participants. In a focus group, individual participants may be reluctant to speak honestly about the challenges they faced with other participants. Interviewing also reduces ‘piling on’ to other participants’ responses that can sometimes occur during a focus group.
4.4. Data analysis procedures

Data analysis included coding of the interview transcripts and grading of three case brief assignments from each learner. The self-reflective writing assignments were used to verify the interview protocol (Appendix C), and were not coded. My notes were used to triangulate observations made by the research participants, and were not coded. My data analysis procedures followed the recommendations of Creswell (2013) and others (Asmussen & Creswell, 1995; Stake, 1995).

4.4.1. Coding the interview transcripts

When I received the transcripts from the transcription service, I prepared and organized the data by removing any information that could identify the research participants, and corrected any misspellings of Ministry jargon. I also developed a code key to mask the names of the research participants and applied the key to the transcripts and case briefs.

Using Moore’s Three Levels of Interaction as an a priori framework, a coding scheme was inductively developed to capture the variety of responses that were provided during the interviews (Creswell, 2013), but the sub-themes within this framework were identified through an emergent analysis. I read through the data several times, looking for consistent patterns of ‘correspondence’ across the data (Stake, 1995). While Stake acknowledges that we sometimes find “significant meaning in a single instance”, he stresses the importance of looking at the data, “over and over again, reflecting, triangulating, and being skeptical about first impressions and simple meanings.” (Stake, 1995, p.78)

During my first read of the transcripts, I immersed myself in the data to gather an overall impression, and made rough notes regarding several recurring ideas that were immediately apparent. From these recurring ideas I developed a list of tentative sub-codes (Asmussen & Creswell, 1995). Based on my experience with the course pilot, I expected to see certain codes in the data (i.e. Time Management), but I adhered to Stake’s advice and remained skeptical until I had located various examples of
correspondence across the data. Following my initial read of the interview transcripts they were imported into MaxQDA qualitative analysis software.

Starting with the first interview, I applied the tentative codes that were identified during my first reading of the transcripts, and created additional codes for each new idea. I frequently used in vivo codes (i.e. the exact words used by participants), such as “I had a hard time with the case brief assignments”. By the time I had coded the fourth interview, several recurring themes had emerged from the data. To reflect these themes, and better organize the growing number of codes, I aggregated similar ideas together into new theme headings (Creswell, 2013). As I coded the remaining transcripts, I continued to add new codes until saturation was reached and no new ideas were emerging from the data. After I had coded all 10 interviews, outlying codes that did not fit with my research questions were winnowed from the code list. The remaining codes were reorganized into seven main themes to create the codebook (Appendix L).

To help verify the codebook I recruited a PhD student with extensive experience in the coding of qualitative data. We each coded the first interview transcript separately, using the first iteration of the codebook, then met to discuss differences in our application of the codes. Our agreement on the first interview was low (48%) because we had not agreed upon the granularity of the coding – i.e. sentence or paragraph level. Reapplying my own codes at the paragraph level brought the inter-coder reliability to 83% (κ = 0.699).

To improve the reliability of the codebook, minor adjustments were made before proceeding with the next transcript. For example, we clarified what was included and excluded in each theme, which helped to reinforce the themes as mutually exclusive categories. The title of theme 1– “Outside my Comfort Zone’ was given the more neutral title ‘Challenging Scenarios’, and additional examples for themes 1 and 6 –‘That’s my Preference’ were selected to further elucidate our understanding of those themes. Our inter-coder reliability score on the second interview transcript was 82% (κ = 0.778).

For the next interview, I developed a minor variant of the main codebook that could be applied to the moderator interview transcripts (Appendix M). This variant reflected how the questions posed to the moderators had been slightly adjusted in order
to gather information on the learning design from their perspective. The inter-coder reliability on the third interview was 79% (κ = 0.741).

After three rounds of practice coding, and several meetings with my fellow coder to resolve deficiencies in the codebooks, I proceeded to re-code the entire set of transcripts with the revised codebooks (Appendices O & P). After completing this final round of coding, the second coder randomly selected one interview for comparison, resulting in an inter-coder agreement of 90% (κ = 0.879). The themes from the interview transcripts are summarized in Chapter 5 - Discussion.

4.4.2. Grading the case briefs

Learners were provided with a structured case brief template containing a set of open-ended questions (Appendix D), and an easy to follow example that had been written using this format (Appendix E). Learners were asked to reduce the case to its essential elements and not exceed two pages in length. The moderators collected the briefs and provided detailed written feedback directly to the learners, but the formal grading of the case briefs took place after participants had completed the training. Given the culture of the Ministry, and the fact that employee appraisal has traditionally been delivered in the form rich descriptive feedback, I decided not to release the case brief scores to the participants.

To develop grading rubrics for the learners’ case briefs, I read through each set of eight briefs to identify the common elements. Waters and McCracken (1997) have suggested that the assessment tool in a problem-based learning design should reflect the key concepts identified during the design stage. For this reason, the resulting grading rubrics (Appendices H, I, J) asked learners to touch upon the big ideas as represented in the concept maps and guiding questions. I consulted several moderators on the design of the grading rubric and made revisions to the rubrics based on their recommendations.

Over three days, I trained two discussion forum moderators—I chose one Investigative Officer and one Employment Assistance Worker who were not part of the research study—to grade the case briefs. The training was conducted via conference
call, and both graders worked independently from different offices during the process. Both graders were given a copy of the Case Brief Grading Protocol (Appendix F), Case 1 Sample Brief for Practice Grading (Appendix G) and Case 1 Grading Rubric (Appendix H). I read the grading protocol out loud to the graders, explained how to apply the grading rubric, and provided the graders with an opportunity to ask questions. The graders were then dismissed and asked to grade the sample briefs separately. The graders participated in three rounds of practice grading, and met via conference call after each round to discuss any differences in their scores.

Following the third round of practice grading, I provided Grader 1 with the eight Case 1 briefs that were submitted by the research cohort. When grading was completed, Grader 2 randomly selected and graded two case briefs from the research cohort and inter-coder agreement was calculated using Cohen’s Kappa. On days 2 and 3, the graders repeated this process using sample data and the grading rubrics for Cases 2 (Appendix I) and 3 (Appendix J) respectively. After Grader 1 completed grading the full set of briefs from Case 2 and Case 3, Grader 2 randomly selected two briefs from each set of cases and inter-coder agreement was calculated using Cohen’s Kappa. The case brief scores are reported in the Chapter 5 – Findings.

4.5. Establishing trustworthiness

4.5.1. About the researcher

For approximately eight years I worked as a counsellor and instructor for the Ministry’s community-based partners, and it was during that time that I worked extensively with clients on income assistance. In 2011, approximately two years prior to the start of this research study, the Ministry of Social Development and Social Innovation hired me to coordinate their eLearning development. This thesis project was born out of a desire to explore the convergence of my two great career passions, counselling/helping and educational technology.

The Ministry has been incredibly supportive of my schooling and research, and has funded the entire cost of tuition and books through the Pacific Leaders Scholarship,
in exchange for a Return of Service Agreement that expires in August 2016. My role as Coordinator of Curriculum and Instructional Design assumes a certain level of informal authority over the learners and the moderators involved in this study. I was aware of the perceived power imbalance and its potential to impact the participants’ ability to be completely honest about the shortcomings of this training. I made every effort to build a relationship of trust with the participants and encouraged them to be completely honest with me without fear of reprisal.

Proximity to your research participants and site offers many advantages, but it also brings additional responsibilities that an outside researcher would likely not face. My greatest challenge was to analyze the data without pre-formed assumptions, and this is especially important since I conducted a pilot study a year earlier. Learner feedback from the pilot study, and a review of the literature, was used to inform a significant redesign of the course organization and content. Major themes from the pilot study evaluation were used to inform the interview protocol draft (Appendix C), but to guard against the threat of pre-formed assumptions, I consulted with my advisors, and other academics to monitor my own constructs; what Guba and Lincoln (1989) have referred to as 'progressive subjectivity'.

4.5.2. Credibility, dependability and confirmability

According to Shenton (2004) credibility is one of the most important factors in establishing the trustworthiness of qualitative research projects. In evaluating the credibility of a study, the reader must ask if the findings presented in the study ring true from the perspective of a critical reader, and whether the personal values of the researcher have negatively impacted interpretations from the data or agreement between the researcher and the participants.

The credibility of this study was enhanced through a prolonged engagement at the research site. Collection of data from different sources, and through the use of different methods—direct observation, self-reflective writing, individual interviews, and evaluation of the case briefs, took place over a four-month period.
One potential threat to the credibility of this study may be reluctance on the part of research participants to be honest about the shortcomings of the training. In order to increase the honesty of the participants, the informed consent document states that participants have the right to refuse to participate in this study, or to withdraw from the study at any time without any negative consequences.

Research participants were selected from a pool of learners that met the inclusion criteria. From this pool of potential participants, purposive sampling was employed to assemble a diverse cohort of learners, comprised of EAWs and IOs from the five service regions across the province. The identities of participants were masked using pseudonyms to ensure the confidentiality and to increase the honesty of participant responses.

To help strengthen my own interpretations from the data, I gave participants an opportunity to provide feedback on earlier drafts of this thesis. I heard back from six of the ten participants, who told me that I had accurately captured their impressions of the training. I also engaged in frequent debriefing sessions with my faculty advisor and sought peer critique from members of my graduate cohort, and my Ministry colleagues.

To increase dependability and confirmability of this study, I have provided the reader with a detailed account of my data collection and analysis techniques. Throughout each phase of the research process, the research records were made available for review by my faculty advisor and thesis committee members. Data related to this case will be stored securely at the home of the researcher for a period of two years following completion of the thesis defense.

The neutrality of the research findings was supported through multiple observers (Principal Investigator and moderators), triangulation from multiple data sources (observation, self-reflective writing, analysis of case briefs, and personal interviews), and my own reflective writing regarding the perceived effectiveness of my chosen data collection and analysis procedures. Transferability is inherently difficult in a natural setting, but a sufficiently thick description gives the reader the necessary information to determine whether these findings may apply to other settings (Lincoln & Guba, 1985).
4.6. Ethical considerations

4.6.1. Assessment of Risk

This study meets the definition of “minimal risk”, meaning that the probability and magnitude of possible harms implied by participation in the research is no greater than that encountered by participants in those aspects of their everyday life that relate to the research (Tri-Council Policy Statement, 2010). Research participants may or may not benefit from involvement in this research study, but what is learned through this research will help the Ministry to improve employee-training programs. Participants had the option to withdraw from this study at any time without giving reasons and with no effects on their employment, or participation in future training opportunities.

4.6.2. Approval Process

The approval process for this study included consent from the Director—Learning Services, Executive Director—Employee and Workforce Development, and Assistant Deputy Minister—Regional Services Division. The Ministry of Social Development and Social Innovation, Province of British Columbia provided approved frontline staff with time to participate in this training and research study. The Office of Research Ethics, Simon Fraser University, granted final approval to conduct this research study.

4.6.3. Informed Consent

Applicants who meet the inclusion criteria for the training were sent a description of the research study, a copy of the informed consent document, and asked for their voluntary participation in the research study. Potential participants are instructed to print the consent form, sign it, and return it to the Principal Investigator. The informed consent document clearly states that learners may choose to participate in the training, but not the research study. Those who choose not to be included in the study will not be included in the research findings.
4.6.4. Reciprocity

The findings of this research study will be used to improve the quality of training developed by the Ministry, and will inform future iterations of this training. At the time of writing, we have already trained 20 moderators and 112 employees using this instructional approach.
Chapter 5. Findings

This chapter reports my findings based on the four research questions that were framed by Moore’s (1989) three types of interaction for engagement and learning in distance education courses:

1. What are participants’ experiences in interacting with the content?
2. What are participants’ experiences in interacting with other learners?
3. What are participants’ experiences in interacting with facilitators?
4. What evidence do the participants’ case briefs provide that they have applied concepts from the training materials?

5.1. Learner-Content Interactions

The following section reports on four prominent themes that surfaced in my analysis of the interview transcripts, related to learner-content interaction. Theme 1 – “Challenging Scenarios” examines participants’ experience discussing the three case scenarios, the perceived level of difficulty of the cases, and perceived differences between the text-based and video-based cases. Theme 2 – “Organizing My Thoughts, Planning My Contributions” explores the learners’ experience of using the concept maps and guiding questions to make sense of the cases and plan their contributions to the online discussions. Theme 3 – “Ambiguity, Friend of Foe?” explores the participants’ experience of having to make decisions based on cases with incomplete information, and their experiences preparing the case brief assignments. Finally, Theme 4 – “Managing My Time” examines the experiences participants had balancing this training with their other job-related duties.

5.1.1. Theme 1 – Challenging Scenarios

The participants thought the case scenarios were challenging enough to make them think carefully about how to apply legislation and policy. The struggle to
understand each of the cases generated a lot of collaborative discussion among the participants. The group was able to identify the additional information that needed to be gathered from the clients in order to meet the legislative criteria, explored several different courses of action for each case, and weighed the possible implications of each course of action. This generated very productive discussions between the learners, both in the online discussions and during the conference call debriefing sessions.

Some learners, especially those with several years of service, felt that the cases contained elements that were similar to real situations that they had encountered in the past, but different enough that they required a great deal of thought.

They were very challenging and that’s good because when you’re taking a course like this you don’t want something easy, you want something that is going to challenge you. I thought the three Case Scenarios that were chosen were good ones in that a lot of thought had to go into making a decision and gathering information and coming up with an overall outcome. (Gabriel)

But not all of the participants felt that the three cases were well chosen, or reflective of the recent changes in how service delivery is structured across the Ministry. Five of the eight participants noticed that all three cases involved the intake of new clients, and suggested that a mix of cases representing the various job roles would have improved the training.

I guess some scenarios can be tailored to certain streams. As a face-to-face worker this was really great because we actually do everything. I could see this benefiting Intake as well, but Case Management I think it would have to be tailored a little bit. I don’t know how [intake of] a three-generation family is going to benefit a Case Management Worker… because they wouldn’t do that anyway. (Stephen)

Although some of the learners appreciated the challenge of discussing cases that were outside their particular area of expertise, two learners floundered due to a lack of sufficient base knowledge of the intake process. This is how Simone described her initial experiences with the training:

Part of me is thinking that I am becoming too specialized, that I don’t know…like I’m losing my skills…part of me felt overwhelmed and I
thought I would have to be completely retrained, that's what I was thinking in the back of my mind. (Simone)

Case #3 was presented in the form of a 4-minute video involving the intake of a couple and their child, who continue to cohabitate for financial and health reasons even though they are no longer in a romantic relationship. The male partner left his previous job due to a relapse with bipolar disorder. The discussion centred on determining whether or not the clients met the Ministry's definition of a 'marriage-like relationship', and the complex financial, social and emotional needs of the family.

Six of the eight participants, and both moderators, preferred the video format of Case 3, compared to the text format of Cases 1 and 2. Participants who preferred the video spoke about the quality of the acting and felt that it realistic portrayed a typical intake interview. Three participants felt that the video was similar to interviews they have conducted in the past, and one participant felt that the video could be used to train new staff on how to conduct client interviews:

I really enjoyed [the video] I thought it was really good. I think that it would be really good for a new employee to watch [the video] and to watch somebody who is a seasoned [worker] lead...it was realistic, that’s the way it is. (Simone)

As participants watched the video case unfold, they carefully observed subtle nuances in the client’s behaviour including nervous fidgeting and a lack of eye contact. The importance of attending to these behavioural cues during a client interview became a significant focus of their discussions, especially during the conference call debrief. Participants made a number of important observations, and raised critical questions, including: “Why is the daughter not attending the intake interview; is she being neglected?”, “What impact has Joel’s recent relapse of bi-polar disorder had on Heather?” and “I’m concerned about Heather’s lack of eye contact; is there violence in her relationship with Joel?” Shannon shared her impressions of the video case:

[The video was] a little more real...rather than just staring at text you’re kind of developing as you’re watching that video. As a Ministry worker you’re developing your decision. The wheels, the cogs are already turning in your brain just like you would [if] somebody [was] across the counter. You’re running through which Act applies, what
rates apply, what exemptions, how many assets are they allowed to have, could this be happening, could that be happening? (Shannon)

5.1.2. Theme 2 – Organizing my thoughts, planning my contributions

The participants described how they used the concept maps and guiding questions to organize their thoughts and plan their contributions to the online discussions. Most learners appreciated the visual representation of the big ideas, and how those ideas were broken down into smaller, more manageable pieces that could be addressed in the discussion threads. However, one learner felt that the concept maps were too busy and preferred not to use them at all.

The guiding questions helped to bring each case into focus for the learners, and served as a starting point for exploring the cases. The questions were varied in their scope and complexity and helped learners to consider different ways of thinking about the cases. Learners tended to use the concept maps and the guiding questions together:

I would look at the Concept Map and then I would be, “okay that gives me a really good idea of where I can go” and then I would go to the Guiding Questions to help me respond clearly in the on-line message board. (Genevieve)

The participants used the guiding questions to plan their Starter posts, to keep the discussion going when they felt stuck, or to prepare their Summary posts at the end of the discussion period. One of the moderators commented on how pleased she was that the group collaborated to ensure that all of the guiding questions were covered. Some of the guiding questions were fairly simple, but other questions required a deeper reading of the legislation and a more sophisticated analysis of the case. One EAW, who has worked for the Ministry for many years, selected questions that would push his own learning to new heights:

I was looking for some [guiding questions] that I could really sink my teeth into and really get a good discussion, get something really good going. (Gabriel)
Learners used the Ministry’s On-line Resource (OLR)—an intranet site with links to the Acts, Regulations, and office procedures—quite extensively while they were planning their contributions to the online discussion and writing their case brief assignments. Possibly due to the fact that other participants would read their posts and briefs, the learners tended to carefully review the OLR to ensure that their interpretation of the legislation was defensible. As in real life, learners found it hard to know where to start because the OLR is so detailed and complex.

I was going outside of the group and asking somebody that actually did intake, because when I went on to the on-line resource it was a little overwhelming. If you don’t know how to do intake it’s just overwhelming. I could see how people could get lost in policy and legislation. (Simone)

One learner acknowledged that field staff can sometimes become complacent, feeling certain that their understanding the provisions of the legislation is correct, and no longer taking the time to check the OLR. One of the moderators also expressed concern that this basic research skill was falling out of practice because employees are becoming more dependent on the built in ‘Assisted Eligibility’ performance support within the case management software. Several learners described how they spent time conducting research on the OLR during the training:

When I’m unsure of something I always go the OLR. I always look up something or whatever, but then every once and a while somebody will ask me a question and I’ll go “Oh – I’m not really sure” and so in doing our briefs you had to do that to know where that regulation was or where that Act was and how we interpreted it. I thought that was a really good process to go through. (Ocean)

5.1.3 Theme 3 – Ambiguity, Friend or Foe?

The case descriptions deliberately withheld information from the participants to prevent a premature narrowing of the discussions. The vagueness really made participants think, and contributed to robust conversations online and during the debrief conference calls. Ocean really liked how the ambiguity opened the discussion:

The questions were fairly vague and even the updates were fairly vague but I think it helped in a way that you did get the different opinions. I actually really liked that portion of it. Okay, well if this
happens then I’d do this or if that happens I’d do this. It actually gave you different avenues to look at. (Ocean)

Ambiguity may have helped to keep participants open to a wide range of alternatives, but they were unable to gather more information from the clients as the discussion unfolded. But as Genevieve pointed out, in the real world you can ask more questions:

You would walk into a room and you would have a stranger sitting there and you’ve got to find out if they’re eligible. And they need to tell you their story, you need to take their information, you need to see how it fits the legislation. And of course you know, you’re able to ask more questions. In this scenario we couldn’t ask more questions. (Genevieve)

Since participants had to rely entirely on the information that was provided in the case, they were forced to make decisions based on incomplete information. This required participants to make a lot of assumptions about how to proceed with the case brief assignment. This was particularly frustrating for some of the participants and it had a negative impact on their experience of the training. Although part of the case brief assignment required participants to generate a list of questions they would ask the clients in order to better understand their situation, this did not satisfy some learners:

They’re children that have a child and there was just too many unanswered questions...Is there a social worker that is involved? Are they going to school, what is he doing? Are they out of school? There was just not enough information for me. And what about the Gramma there? Why is she applying with them? What was their history before? (Simone)

About half of the participants felt that the case brief assignment was laid out in a logical manner that was easy to follow. The moderators developed a sample case brief to show participants the structure and organization of the case brief, and a template with a set of guiding questions. Gabriel explains his experience of preparing his first case brief:

I had never written up a Case Brief before now, so when I went through [and] looked at the examples, looked at the explanation [and]
it was fairly straightforward and pretty easy to write up. I mean it was just sort of logical, [one] step that one leads to another. (Gabriel)

However, not all of the participants were able to locate these support materials on the SharePoint, which made the preparation of their first case brief assignment a little more challenging:

The sample discussion and the sample Case Brief are important things for them to kind of have their attention drawn to in the beginning, but it seemed like some of them were struggling a little bit to find those starting points. (Shannon)

The case brief template contained a set of guiding questions, but for some participants the instructions were not as clear as they could have been. As each question in the case brief template tended to build on the previous question, there was a tendency for sections of the brief to overlap, and participants were sometimes confused about what content should go in each section.

I think the first one was really difficult to do because I wasn’t sure what information to put in each section. The first part with the legislation was easy, the second part [made me wonder] “how specific do I outline the scenario?” and then [in] the third and the fourth part. I didn’t really understand the difference between the two sections.... What information goes in the third section and what information goes in the fourth section? (Genevieve)

The case brief assignment was not well liked by the participants because it was a task that took quite a bit of time to do well. Participants spent time researching policy and legislation on the OLR, in order to complete the assignment, and not every learner was confident in their research skills. Nonetheless, several participants saw value in case brief assignment and felt that they learned from having to break the decision-making process down into steps:

I’m more a quick answer person, which is part of being in outreach, you kind of just go quickly, where with a Brief you have to really think it out methodically. So it taught me how to do that. (Jonathan)
5.1.3. Theme 4 - Managing my time

Participants were asked to commit three 1-hour blocks of time each week to participate in the training, and to sign a learner agreement that was endorsed by their supervisor. All of the learners were able to sit down with their supervisors and sketch out the times with very little pushback. Many of the learners planned to use their morning and afternoon flex time to participate in the training. Some learners printed their schedule and kept it on their desks, which served as a constant reminder of their commitment to the training. But even with the learner agreements in place, many of the participants had to come up with time management strategies and be more disciplined with their time.

It's tough. You have to really be disciplined because otherwise you end up doing it on time that you shouldn’t be doing it, like on your lunch or on your breaks. (Jonathan)

Some of the participants had no difficulty meeting the minimum 3-hour time commitment, and were even able to take extra time to participate in training. But some participants, especially those working in the telephone contact centre, found that their training schedules were swept aside when client service volume was high. One learner explained how her designed training time was taken away:

For me, being at the Contact Centre, I was given one hour a day for three days and if I didn't get my time done within that one hour then I may have time to do it in my [day off], or I may have time to do it in the morning if I came in early for work, but that’s it. I had three hours a week and that was it. There were even times when my three hours a week was taken away from me, so I actually didn’t have time to do it. (Genevieve)

Adding to the challenges of balancing the training with regular duties was the fact that the Ministry is redesigning the service delivery model and employees are moving into new positions to realign with those changes. One of the moderators described how the restructuring of the Ministry, especially during the last few weeks of the training, made it harder for participants to focus on the training.

The restructuring of the service delivery model really slowed people down. You go from knowing exactly how to do your job to feeling like a
Kindergartener over the course of 24 hours because of process changes. (Shannon)

Preparation of the individual case brief assignments appeared to be the most time intensive part of the training, and not every participant spent as much time on this task as they felt it required. The learners that were able to devote sufficient time to the task tended to produce higher quality case briefs. During the personal interviews, participants with the higher scoring case briefs described how they conducted research on the OLR to confirm the soundness of their decisions, discussed the cases with their colleagues and supervisors, and solicited feedback on their developing briefs. These learners claimed to have spent two or more hours preparing their case brief. Geneviève described her process of preparing her case briefs, as follows:

I probably spent half an hour to an hour sort of planning it out and mapping it out in my head and looking for information. Looking for legislation and looking on the OLR for the information that I would need. Preparing for it and then probably about another half an hour to an hour to write it and then maybe another half an hour to revise it and then I had a few people – for the second and the third ones I had a few people read it over just to see if it made sense or whatever.

I put a lot of work into them because I wanted to understand the whole thing from beginning to end. The whole thing. I had [a coach] read my second one and she didn’t give me, she didn’t sort of say well don’t forget to add this and don’t forget to add that, she just asked me a few questions. What about this and what about that? (Genevieve)

Gabriel claimed to have spent about 2 hours on each case brief. He described how he gathered information from the OLR and parts of the online discussion in order to complete his case briefs. For Gabriel, the challenge was to write a brief that capture all the relevant information as concisely as possible:

I didn’t find them difficult at all other than just trying to keep it brief enough because I know that they’re supposed to be less than two pages so it really gave my ability to combine and be really efficient with my words. I did use some of the other discussion threads to pull in information from as well – so I sort of gathered information from everywhere when I was writing them up. (Gabriel)
Ocean claimed to have spent about 2.5 hours preparing each of her case brief assignments, which also included fact checking all of the relevant details on the OLR. The process reminded her of the importance of always checking policy and legislation:

Once you get so far into your job you’re like okay, yeah, I know that regulation. I know okay, we’re supposed to do this, this and this. But in doing the final paperwork there, you actually had to go and find what was the regulation, what was the Act and that really reminds you that maybe that is something you should be looking at every once and a while...in doing our briefs you had to do that to know where that regulation was or where that Act was and how we interpreted it. I thought that was a really good process to go through. (Ocean)

Stephen claimed to have spent roughly an hour on each of the case briefs, and felt that the assignment was pretty easy to understand. He felt that the case briefs for Cases 1 and 2 were easier to produce after receiving feedback from the moderators. Stephen describes how the moderator laid out exactly what she would like to have seen in the document:

It was very good. It wasn’t like – good job, here you go – there was detail in each section on what I did really well and what I could have done and what to improve on. (Stephen)

Marilyn was disappointed in her case briefs and felt that she could have done much better if she had devoted more time to the exercise.

Definitely with my learning styles I’m definitely not as quick as others can be. I rewrite and I reword and I reread and I just...over and over and over again. That’s just my learning style, I just take longer. (Marilyn)

5.2. Learner-Learner Interactions

Before I report on the qualitative themes related to the learner-learner interactions, I would like to report some quantitative data related to the number of participant posts. These observations were made from transcripts of the online discussions from October 3 to December 13, 2014. During Case 1, the participant cohort made a total of 58 posts to the online discussion, or an average of 7 posts per
participant. In Case 2, the cohort made 81 posts, or an average of 10 posts per participant. For Case 3, the cohort made a total of 76 posts to the discussion boards, or an average of 9.5 posts per participant. The slightly fewer number of posts in Case 3 compared to Case 2 can be largely attributed to less participation from Simone and Geneviève, who made only 7 and 4 posts respectively compared to the group average of 9.5 posts (see Table 1).
Table 1. Number of online posts per case discussion

<table>
<thead>
<tr>
<th>Learner</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
<th>Total posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathan</td>
<td>8</td>
<td>9</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>Geneviève</td>
<td>7</td>
<td>10</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Skyla</td>
<td>5</td>
<td>14</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Gabriel</td>
<td>9</td>
<td>11</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Stephen</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Simone</td>
<td>6</td>
<td>10</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Marilyn</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Ocean</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Total posts</td>
<td>58</td>
<td>81</td>
<td>76</td>
<td>215</td>
</tr>
<tr>
<td>Average</td>
<td>7</td>
<td>10</td>
<td>9.5</td>
<td></td>
</tr>
</tbody>
</table>

The next two sections report two prominent themes that surfaced in my analysis of the interview transcripts, related to Learner-Learner interaction. Theme 5 – “Sharing Diverse Perspectives” examines participants’ exposure to new ideas presented through the online discussions, course readings, a video on cultural sensitivity, and the conference call debriefing sessions. Theme 6 – “That’s My Preference” explores the participants’ experiences of the asynchronous online discussions, the synchronous case conference debriefing sessions, and other forms of synchronous communication.

5.2.1. Theme 5 – Sharing Diverse Perspectives

One frequent theme described by the participants was the value of sharing diverse perspectives on the cases. Reading how other participants had worked through similar situations in the past, and collaboratively problem solving with their colleagues were considered to be the greatest strengths of the training.

The discussion on-line I thought were really good. I really liked the way that it was set up where if somebody just kind of started the ball rolling and then everybody had to put in their share of it. I actually really enjoyed the reviews too because you got to hear other people’s opinions on different things. (Ocean)
Newer workers especially appreciated hearing the perspectives of more seasoned workers and learning from their experience. Learners felt reassured and gained confidence in their own interpretations of legislation and policy when they could see that other members of the group took a similar view of the case. Even experienced staff recognized the gaps in their own thinking, and appreciated the perspectives of others:

> It’s nice having confirmation of some of the decisions that you do make. Validation is what I guess I mean. That you’re on the right tract and when I’m not sure then it is nice having somebody else’s viewpoints and decisions and how did they make that decision. (Skyla)

When different perspectives were shared on the same problem, it expanded the group’s understanding of the cases and opened the learners to new ways of thinking that could be applied to similar situations in the future. Each participant brought a different lens to the case. Some learners examined policy at a deeper level, while others explored inherent ethical dilemmas associated with the cases. Genevieve explains how the other participants influenced her thinking:

> It was sort of interesting to see that some people went more towards empathy and some people went more towards legislation and some people sort of went with group consensus...Then I would read the information and go okay, so how do I feel about this? I would say probably about 50% of the time that the ideas that I had were influenced by things that other people were saying. (Genevieve)

Learners were introduced to four short articles written by Lynne Garner, a former Ministry employee who defended a thesis on Administrative Fairness and the various influences and abuses of decision-making within the context of Ministry work, including power imbalances between staff and clients. These articles presented the learners with a whole new set of perspectives on their work, and were very well received. One learner in particular believed that these articles should be required reading for all field staff:

> Lynne’s writings really made you think about who is sitting – not really sitting across from you, but metaphorically sitting across from you when you’re talking to them, and what they might be going through. I really, really enjoyed reading those and it really brought home the importance too of what we’re doing and how we should understand the importance and how it is going to affect other people. (Ocean)
One of the moderators observed that, over time, the learners came to openly acknowledge gaps in their understanding, knowing that their peers would respond in a respectful and caring manner. Shannon describes her observations of how the learners offered their support to one another:

I think just feeling safe enough to put a question out there... nine times out of ten it seemed when somebody did kind of confess that they were confused about something within a thread, the group would rally around them and say “that threw me too” or make them feel a little bit better about why that’s a complicated piece of legislation. (Shannon)

With each case, I observed that the discussion posts were shorter, and there appeared to be a modest increase in the number of learner-learner interactions. In Case 1, I was able to observe 17 instances in which learners acknowledged the contributions of other learners and appeared to build on those ideas. In Case 2, I was able to observe 28 instances where learners acknowledged and appeared to build on the ideas of the other participants. In Case 3, I observed 38 instances where participants acknowledged others and appeared to build on their contributions. Elizabeth made similar observations of the Learner-Learner interactions:

You could tell that they were interacting just because they would go by what the previous post was. For example someone would post something and they would say that’s a really good point and I didn’t think of that. Or – yeah and in addition to what so-and-so said, this is what I think, or have you guys thought about this? Or they would post a question for someone, like do you think this would apply? So they were definitely interacting and working off each other, for sure. (Elizabeth)

Although sharing diverse perspectives was the most commonly reported theme in the participant interviews, not all of the learners enjoyed the process of knowledge building. One participant, who felt she did not have sufficient base knowledge, disliked the design and format of the training and had a very difficult time contributing to the online discussions in a meaningful way.

I didn’t like the threads that we had to do. I liked that it was broken down and we all got a thread to work on, but I didn’t like that we were supposed to build on other people’s threads because I was very unknowledgeable, I wasn’t really sure what I was supposed to be putting. (Simone)
The sharing of diverse perspectives also included a video on cultural sensitivity that participants watched at the start of Case 2—a case involving a three-generational aboriginal family, led by a single grandmother. The speaker, a member of the Aboriginal Speakers Bureau of the BC Public Service, shared his personal views about aboriginal culture and culture in general. As a personal of native decent, Jonathan really enjoyed the video:

I think I liked that one because being of native descent it was interesting, it hit close to home, right? And it was just nice to see what you were trying to say about being sensitive but put in a nicer way. Making it look like it is just like a second language, which it is. (Jonathan)

Gabriel also thought the video was well done and that the information was useful, and relevant to the case. Genevieve, who grew up close to aboriginal communities and felt that she already had a fair amount of cultural sensitivity, had this to say:

I thought it was great. I thought it was really interesting and I appreciated that it was even set in another language and at first I was listening to it and watching it and I was like oh this isn’t English...just the way he spoke, and he spoke in his [mother tongue], and talked about challenges, it just made me realize that I may have limited knowledge, but I don’t know what it is like to be First Nations. (Genevieve)

Other than these three participants who really enjoyed the video, it was not really discussed by the rest of the participants. One participant was unable to recall the video at all. The following comments from Marilyn are somewhat reflective of how other participants felt about the video:

I’m not a Native American, [but] everything that he shared on there was just interesting. It wasn’t really specific but just over-all it was interesting to listen to, but then I went right back into work and my mind is now on the next call I need to take, right? So I don’t think I really took that moment at the end of it to really think about it. (Marilyn)
5.2.2. Theme 6 – That’s my Preference

Those participants who expressed a clear preference for synchronous (real time) exchange said that they preferred to talk directly with others and brainstorm solutions to the case, rather than writing out their responses. Skyla preferred the synchronous modes of communication:

The on-line discussions were great but I found that the one-to-one, the conference, the actual phone call with other people on the line, that helped things gel a bit better. I’m more of a visual face-to-face hands-on kind of a person so it is easier sometimes to get the point out and get my meaning out once when I’m actually talking to someone, as opposed to trying to put it down into verbiage in an e-mail or whatever. (Skyla)

Unequal participation, both online and during the conference calls, was a concern for some learners, as the more extraverted members of the group tended to monopolize the conference call discussions. Similar concerns were raised about the online discussions. One participant was frustrated that her peers didn’t give her the time to complete her starter post. This learner also expressed concern that her colleagues were not following the guidelines, and either posted really long posts, or addressed more than one idea in a single post, which made it very difficult for her to add to the conversation in a meaningful way.

I felt like in some of the threads the whole thing was discussed completely in the beginning and it didn’t give some people time or space to add anything. There were a lot of comments for all three cases, “well I think the person above has made all the relevant points” because there was a couple of people in the group who said everything about everything and it didn’t really give people space to respond. All you could respond was – “yes I agree that’s a really good point, I don’t know what else to say.” (Genevieve)

Two of the participants and one of the moderators expressed frustration about their attempts to get other group members to respond to their online questions. These participants noted that it was difficult to get other learners to respond to their questions or to clarify their interpretation of the legislation in the online discussion. According to Gabriel posting a question in the online discussion came with no guarantee of ever being answered:
...when I’m meeting in person with somebody I’m able to get a lot more information or pick their brain on what they’re thinking about. Whereas on a Discussion Board you’re getting their thoughts but you’re not sort of – you can ask them clarify but whether or not they go back to that Discussion Board and see it or respond to it, you don’t know if that’s going to happen. (Gabriel)

Those participants that preferred the conference calls felt that the conversation was more fluid, and provided opportunities to dig more deeply into the cases by asking questions and getting immediate response from the group.

But not everyone enjoyed the conference calls. Two of the participants told me that they found the conference calls intimidating and stressful. Some of this anxiety came from a fear of giving the “wrong answer” in front of the rest of their peers. Even the moderators later expressed concern for how the format of the conference call had affected the more quiet members of the group.

I found the conference calls very, very stressful...it felt like Russian Roulette. In my mind I’m thinking “don’t pick me, don’t pick me” because I don’t know enough. So then you feel put on the spot... I would have rather not said anything, and had the opportunity to type in versus somebody saying to me, “Okay Simone, what do you think about this?” (Simone)

Marilyn felt that she had a lot more to contribute to the online discussions, but she struggled with the preparation of her case brief assignment. So, when it came time to share parts of her case brief with the other participants during the conference call debrief, she wasn’t confident about the quality of her answers.

I just felt awful that I didn’t put enough, there wasn’t enough substance in my Case Brief...with the threads I felt like there was a lot more on my mind to share, it’s just the Case Briefs there was – it started off with the first one and I was like okay it’s unfamiliar, it’s new, it’s different, and then I came to the second Case Brief and I was like oh my goodness what’s wrong with me. I’m not getting this. (Marilyn)

Learners who wanted more synchronous communication took the initiative to connect with other learners over the telephone, and through video chat. This provided opportunities for immediate exchange, without the pressure of the conference calls. Two
participants had other workers in their office who were part of a different training cohort, and took advantage of this opportunity to have face-to-face discussions about the cases.

That was neat to have someone [in the training] in my office, and he’s on a different thread, so not only are you getting the thread but you’re discussing and reading and sharing but then actually having somebody physically in your office that was good. We had good conversations. (Marilyn)

Stephen was disappointed that the conference call debrief fell on his flex day, and was scheduled to debrief with another group. He wanted to attend the conference call with his group because the other members of his group had different ideas about the cases, and the conference call would have provided an opportunity to ask deeper questions about their different perspectives.

The moderators were both relatively new to chairing a conference call, so they also experienced stress. Managing the agenda and staying on track, calling on people, dealing with awkward moments of silence on a call, and knowing when to interject were new skills that they needed to develop. Elizabeth describes her experience of learning to lead the debriefing sessions:

Well I had never done anything like that before, so my nerves were a running challenge for me. As well just making sure that everyone participated, because you had to call kind of...call people out directly, and that was a little unnerving for me as well.

I felt more comfortable towards the end of it, but definitely I was nervous and just kind of getting used to the pausing to allow for answers, because in dealing with the silences and stuff and it’s kind of, you want it to kind of move along nicely and it was just...that was new for me. (Elizabeth)

In my observations, the moderators did a good job of ensuring that everyone participated in the conference call and shared their ideas with the group. I also observed that the quality of the debriefing sessions improved with each consecutive conference call.
5.3. Learner-moderator interactions

The following section reports one prominent theme that surfaced in my analysis of the interview transcripts, related to learner-moderator interaction. Theme 7 – “More Knowledgeable Others” explores the participants’ experiences of collaborating with their moderators, but also describes their interactions with supervisors, coaches and other colleagues outside the learning cohort.

5.3.1. Theme 7 – More Knowledgeable Others

The participants spoke highly of the moderators’ positive attitudes and their respectful and tactful communication. The moderators would check to make sure that learners were clear on their roles, and were able to access the system without any problems. In the first few days some of the learners would send emails to the moderators expressing uncertainty about how to proceed. The moderators would help learners locate instructional supports, such as the readings or the guiding questions, and provided feedback on their initial posts so that they knew they were on the right track.

Lots of the interaction with the moderators was either during the wrap-up conference call at the end and usually by e-mail. A lot of times they would give me their feedback after posting on the discussion boards or after submitting my case briefs. (Gabriel)

Knowing the learners, where they came from, and their job roles was important. One of the moderators created a schedule with each participant’s name, including the times they intended to participate in the training, contact information, title, years of service, and so on. She kept that schedule on her desk during the training so that when any of the learners contacted her she had immediate access to that information.

What’s important to a worker in Prince George might be a lot different from what comes up every day for a worker in Victoria or Port Hardy. Just acknowledging some of that made the learners feel a little bit more comfortable...that we actually had some sense of who they were. (Shannon)

The moderators connected with the participants through emails, instant messages or phone calls. Sometimes the moderators connected with learners to find out
why they were not participating, to offer them a little extra guidance and to encourage their involvement in the online discussion.

A couple of times I noticed that there was a couple of learners that weren’t participating as much, and then I would send them an e-mail and try to get them to, you know... have you commented on this one? You want to take a look at this one? Or I would ask them a question and ask them to respond to it, and then they would join right in. (Elizabeth)

The moderators provided direct feedback to learners by acknowledging their contributions to the online discussions and encouraging their efforts. Stephen described how his moderator would occasionally send an email to let him know that she was paying attention:

When I responded on a particular thread she would send an e-mail just saying you did a great job, or she would just comment, that kind of stuff, and let me know that I’m on the right track and this is the right kind of thought process. (Stephen)

Occasionally learners ignored the guidelines by posting lengthy posts, or needed to be reminded of the deadlines for their Starter post, but these sorts of problems generally resolved themselves after the first few days.

...I think just in the beginning we tend to start out with larger thread posts because [they don’t know] that they just have to speak to one part of the thread. Then you see it get more specific as we move through the three cases. They understand [that] I only have to make one point here, I don’t have to cover everything. (Shannon)

The two moderators split the group to ensure that sufficient support was given to each learner, and to balance the time-consuming task of providing detailed feedback on the case brief assignments. The more senior moderator provided a model to the newer moderator on how to provide feedback on the case briefs. Elizabeth explains how she followed Shannon’s example when she provided feedback to the participants:

I had observed my co-moderator’s feedback, and I liked the way she presented it, just because she kind of broke it down in sections...she would kind of separate the parts and make a quick comment about the
parts, and I liked that format... I kind of followed her lead that way. (Elizabeth)

The moderators provided detailed feedback on each section of the case brief, with notes on what other information the participants could have included in their briefs, or suggestions on how they could think differently about the case. Most participants indicated that they were quite pleased with the detailed feedback they received on their case briefs, and were able to incorporate that feedback in their subsequent case briefs.

The feedback was fantastic. I got two from Shannon and one from Elizabeth, and the feedback was very helpful. It was very detailed and very specific. It was great. It was very encouraging and yeah, it was great. (Genevieve)

However, the level of feedback received on the case brief assignments may have been overwhelming for some learners, and it’s possible that they may have contributed to further resistance. Marilyn describes the level of feedback she received:

There’s always definitely the positive spin, which is great, but there is also that you could have thought of this or added this or added that. And I, after submitting the first [case brief]... I got the feedback...[and] there was a lot of red.

I was having difficulty. There was resistance and my mind wasn’t opening and my answers weren’t coming to me, or thoughts or words weren’t coming to me so I struggled with that but [my moderator] knew that and so...there was a lot of feedback which is okay, right, that’s fine, that’s good. (Marilyn)

Employees often comment on how difficult it is to locate information on the OLR – the intranet of policy and legislation. Because of the online discussions and the case briefs, participants wanted to check their facts to make sure what they posted was accurate. This meant spending more time in the OLR, which for at least one participant seemed to improve his research skills. Stephen explained how this training forced him to reach out to a more experienced colleague who took the time to show him how to use the OLR more effectively.

...he spent some time with me and went through how to understand the Acts and Regs and where to find them...we scrolled down the entire Acts and the entire Regs, and he showed me and explained to
me...what he uses and what he picks and how this relates...It was hugely helpful and I would not have done that had I not taken this course. I would not have done that. (Stephen)

As an unintended side-benefit of this training, seven of the eight participants described learning with a more knowledgeable other outside their designated learning cohort. Two participants consulted with their supervisor about the case, three participants asked a colleague to review their draft case briefs, two participants had regular meetings with participants from other groups, and one learner received personal instruction on how to use the OLR as the result of this training. These learners pointed to this type of community support as a contributing factor in their success with the training.

5.4. Case Brief Scores

This section reports the scores of the three case brief assignments, including the inter-coder agreement that was achieved between the two graders (see Table 2 – Case Brief Scores and Inter-coder Agreement). I will provide a deeper discussion of the case brief assignment in the following chapter.

Simone demonstrated significant improvement in her case briefs from Case 1 to Case 3. The case briefs scores for Skyla, Jonathan and Marilyn trended downward from Case 1 to Case 3. Although Skyla recorded most of the important details in her case brief she did not include a deeper analysis of the case or provide the a rationale for her decisions. Her briefs were approximately ½ a page, rather than the 2-pages produced by her peers with similar levels of experience. Skyla explained that she has never felt very comfortable presenting her ideas in written form, and preferred to talk about the case.

Jonathan struggled the most with the case brief assignment. For his first case brief assignment he submitted a summary of all the discussion threads, instead of using the case brief template, which was obviously very time consuming, but it was hard to tell if he understood the main ideas because much of what he submitted was copied directly from the discussion boards. Nonetheless, he included most of the important points and scored 78% on his first case brief. Jonathan told me that he struggled with the cases
because he works in a highly specialized role and has no prior experience with client intake.

Marilyn was disappointed with her performance on the case brief assignments and explained that she has always needed more time than her peers to complete written assignments. Given the demands of her regular duties, she had a hard time allocating enough time to the task and felt that she could have done much better if she had more time to complete her case briefs. For Skyla and Marilyn, a written assessment may not have been the best way to evaluate how well they could apply their learning from the case discussions. Given their preference for the conference calls, a personal interview may have been a more effective way of measuring their ability to apply concepts from the learning.
Table 2. Case Brief Scores and Inter-coder Agreement

<table>
<thead>
<tr>
<th>Learner</th>
<th>Case Brief 1</th>
<th>Inter-coder Agreement*</th>
<th>Case Brief 2</th>
<th>Inter-coder Agreement</th>
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<td>100</td>
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<td>44</td>
<td></td>
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* κ = Cohen’s Kappa (κ = 1 perfect agreement; κ = 0.526 moderate agreement)
Chapter 6. Discussion

This chapter provides a deeper discussion on the themes reported in the previous chapter, including a discussion on the scores from the case brief assignments.

6.1. Learner-Content Interactions

The following section provides a deeper discussion of the three prominent themes related to learner-content interaction. These include: Theme 1 – “Challenging Scenarios”, Theme 2 – “Organizing My Thoughts, Planning Contributions”, Theme 3 – “Ambiguity, Friend or Foe?”, and Theme 4 – “Managing My Time”

6.1.1. Theme 1 – Challenging Scenarios

The scenarios were challenging for all of the participants, but those with fewer years of service and those working in highly specialized job roles did not have sufficient base knowledge and tended to flounder. Based on my experience with the pilot I decided that learners under two years of service had not acquired sufficient base knowledge to participate in the training, but having two years of experience was not always an indication of learner readiness. This finding is consistent with the literature on constructivist approaches to learning. According to Ertmer & Newby (1993), constructivist approaches to learning and are more effective when used with advanced learners. As learners acquire more knowledge, they develop the conceptual power needed to deal with complex and ill-structured problems.

However, with such a diverse population of potential learners, it is difficult to know exactly when a learner has acquired sufficient based knowledge. Meeting the minimum two years of service was not always an indication of learner readiness. One participant who had worked in a highly specialized role for many years told me that she
has enrolled in this training because she was concerned that her generalist skills had atrophied. Despite her years of experience and a genuine desire to learn, this style of training was not well suited to her needs due to her years of work in a highly specialized role. In the future, I may employ some sort of assessment tool to determine potential learners’ readiness for this style of training.

The three original cases developed by the moderators in the fall of 2012 focused on the intake of new Ministry clients, but since that time the Ministry has undergone a major restructuring that has fundamentally reshaped the client service delivery model. Unfortunately, we were not provided with advanced notice of these changes, but nonetheless, this experience speaks to the importance of confirmative evaluation to ensure that training programs continue to align with changing business practices and the needs of the learners.

The original three cases continue to have relevant for workers in the intake stream, and for supervisors and managers who require a holistic understanding of the decision making process in order to effectively manage workers across different streams. However, the cases should be re-written so that they provide more information to learners. Several of the participants that I interviewed were excited about the possibility of developing new cases that aligned with the work performed in the Phone Centre and Case Management job streams.

Since the Ministry is still in the early days of this restructuring, this feedback offered some valuable insight that will inform the development of a next generation curriculum. Knowing that specialized work streams have the potential to weaken generalist skills demonstrates the need for a planned and systematic approach to employee development that includes on-going cross training of employees to ensure that the organization remains flexible and adaptable in the future.

Case 3, the video scenario, seemed to provide an immersive learning experience and the examination of the case through a more holistic lens. Participants discussed the importance of attending to non-verbal communication between the clients and the worker during an intake interview. The participants appeared to be immersed in the
video, and tended to analyze the case more from the perspective of the clients' needs rather than the perspective of Ministry policy and legislation.

Participants were also aware of how they would respond to some of the non-verbal communication displayed by the clients. I found it interesting that the participants raised concerns about domestic violence and child neglect, because these were not issues that we deliberately embedded in the video. It would appear that the participants projected their own experiences of working with real clients as they watched the video. This is consistent with research suggesting that media-rich, thick narrative cases offer learners an immersive learning experience through a suspension of disbelief (Bizzocchi & Schell, 2009).

6.1.2. Theme 2 – Organizing my thoughts, planning my contributions

Providing all of the guiding questions to the learners at the start of each case discussion proved to be an excellent design choice as every single participant acknowledged how these questions helped to organize their thinking about the cases. Providing questions with varying degrees of complexity meant that even the most experienced workers were provided with opportunities to challenge themselves. Providing a list of questions for each thread meant that each learner could explore a different dimension of the case, which appears to have reduced the problem of piling on to what others had already written. Based on my own observations and those of the moderators, the learners collaborated to ensure that all of the guiding questions had been answered in the online discussion.

Sporadic contributions from learners in asynchronous online CBL may compel facilitators to monitor the discussions more frequently (Rollag, 2010), but the moderators didn’t have time to constantly monitor the case discussions given the demands of their regular job duties. Providing the guiding questions in advance placed the responsibility for facilitating the online discussion in the hands of the learners, and resolved the time-consuming challenge of having to “post additional questions at strategic intervals” (Rollag, 2010, p.507). This strategy also helped prevent the moderators from becoming overly involved in directing the online discussions, which has shown to restrict
interactions between learners in asynchronous online discussion. For example, Mazzolini and Maddison (2003) found that when facilitators started the discussions the result was shorter threads compared to discussions that were started by the students. Dennen (2005) found that when instructors took on the ‘expert’ role in an online discussion, the learners tended to write in response to the instructor, rather than to one another.

During the pilot many of the moderators expressed concern that they were not more actively involved in leading the online discussions. Research has shown that increased interactions between learners, may contribute to instructors feeling devalued (Webb et al., 2005). Without the burden of constantly monitoring the online discussions, the moderators were able to invest their 3-hours of weekly training time providing detailed feedback to each learner on their case brief assignments, and leading the conference call debriefs, which proved to be of greater benefit to the learners and a more fulfilling use of the moderators’ time.

The preparation of the case brief assignment was not something that the participants enjoyed doing because it was challenging and time-consuming. Learners who were able to immerse themselves in the task, which included conducting research on the OLR, gathering information from the online discussion, and methodically breaking down the decision making process, claim to have learned from the assignment. This is consistent with Watson and Sutton (2012), who found that although students felt that they learned a lot from online discussions and an assignment, they preferred not to use these methods again in the future because they required too much effort.

A sample case brief and template was created to help learners develop their case briefs, but there was evidence that some learners had a difficult locating these documents. In hindsight, it may have been worthwhile to schedule a meeting with the learners to orient them to the case brief assignment. In the future we should impress upon learners the need to set aside 1-2 hours to research and write each case brief. This would require more time spent on the case brief assignment, and less time spent in the online discussions.
Some learners clearly struggled with the preparation of their case briefs. I felt that an individual case briefs was the most effective method for assessing individual learning, as it is often difficult to know how much any individual has contributed to a group assignment. Watson and Sutton (2012) found that students learned more from a team assignment than from an individual assignment, and Vygotsky’s (1978) theory on the zone of proximal development suggests that more novice learners may benefit from learning alongside more knowledgeable others. This idea for a group assignment is also supported by Pena-Shaff & Altman (2009) who found that case discussions that required the development of a consensus Action Plan included more clarification, negotiation and use of case examples than what was achieved through cases that required a group summary of the online discussions.

Although the On-Line Resource is not strictly part of this learning design, learners spent time conducting research on the OLR, and this appears to have improved some learners’ ability to use the resource more effectively. Participants used of the OLR during the planning of their online posts and in their preparation of the case brief assignments. For these learners, the cases served to anchor their authentic use of the OLR, and strengthened their use of the tool to generate the sub-goals needed to solve real world cases in the future (Cognition and Technology Group at Vanderbilt, 1992).

### 6.1.3. Theme 3 – Ambiguity, Friend or Foe?

Many participants struggled with the fact that they had to depend entirely on the information provided in the case. For some of these learners, this ambiguity had a negative impact on their experience of the training. This is consistent with research that indicates that although students perceive a benefit in learning through CBL delivery through asynchronous discussion, they perceived this method to be least beneficial with regard to (a) dealing with situations involving uncertainty or ambiguity, (b) enabling them to make decisions based on incomplete information (Weil et al., 2011).

Several participants saw value in having to document their step-by-step decision-making process in the form of a case brief, but recognised the need to make numerous assumptions in order to complete the task. These learners saw value in the task as it
deepened their understanding of the case, required them to check their facts on the OLR, and forced them to write clearly and concisely. This is consistent with Weil et al. (2011) in which students perceived the greatest benefits of CBL combined with asynchronous to include: (a) ability to identify relevant data in the case, (b) ability to think critically, (c) ability to summarize the available information.

We provided the learners with a model answer in the form of a sample case brief, and case brief template that included three open-ended questions with a set of sub-questions. Nadolski, Kirschner and van Merriënboer (2005) stress the importance of breaking tasks into smaller, more manageable parts for the learners, and finding balance between assignments presented as whole tasks versus tasks with too many steps. Stephen and Gabriel felt that the case brief template and the sample brief were laid out in a very logical manner, and were easy to follow. Genevieve noted that that some of the sub-questions tended to overlap and she was confused about what content should go into each section, and yet she received the highest scores of any participants.

Unfortunately, some of the learners floundered with the case brief assignments because, according to one of the moderators, they had difficulty locating the sample case brief and template on the SharePoint. Skyla, for example, did not use the case brief template for any of her assignments, and for some reason this was not resolved after the submission of her first case brief. In the future we need to do a better job of ensuring that learners can find the sample case brief and case brief template, either through a redesign of the SharePoint, or through improved communication between the moderators and the learners. Those learners who were able to access these instructional supports found the tasks easy to follow and logical, and tended to score much higher on their case brief assignments.

Jonathan performed better on the first assignment without the use of the case brief template—he submitted a summary of all the discussion threads instead—but struggled with the case brief template in Cases 2 and 3. According to his moderator, Jonathan was provided an opportunity to re-submit his brief for Case 1, but did not. When asked about the sample case brief during the personal interview, Jonathan was unable to recall ever seeing the sample case brief. Again, participants who used the
sample case brief told me that it was particularly useful during the preparation of their first case brief. This finding is supported by research by Trafton & Reiser (1993) that stresses the importance of providing learners with worked examples to aid the solving of subsequent problems.

Jonathan said that he was really confused by the guiding questions in the case brief template and consulted some colleagues, who were not enrolled in the training, for advice on how to complete the task. This proved unsuccessful, however, as none of Jonathan’s colleagues had seen the instructional supports required to complete the assignment. One of the moderators told me that she had offered to help Jonathan complete his second case brief, but he declined the offer.

Even those participants who acknowledge the benefits of preparing a case brief felt that the task was time consuming and their least favourite part of the training. This is consistent with Watson and Sutton (2012) who found that learners perceived benefits in learning through asynchronous online discussion and an assignment, but preferred not to use those methods again in the future.

To address the issue of ambiguity we may need to re-write the cases so that they include more information from the very start, or release additional information to the learners in stages. Problem-Based Learning cases are often designed to release new information based on triggers, for example, providing medical students with the results of a requested diagnostic test (Kaufman, 1985; Walton et al., 1989). Using a trigger release method may be effective strategy for this population of learners, as it tends to reflect the real-world practice of gathering information through interviewing.

6.1.4. Theme 4 - Managing my time

Participants had to balance this training with regular job duties. Many of the participants developed time-management strategies and recognized the need to be more disciplined with their time. When participants leave their office to attend face-to-face training, they are able to separate themselves from their regular work responsibilities, and focus on the task of learning. This training asked participants to weave the training into their regular work schedules.
According to research cited in professional journals, employees cite 'lack of time' as one of the biggest challenges associated with online workplace training. Although companies encourage training and professional development, employees are often expected to complete training on their own time, or to participate in ways that minimize the impact on their productivity (Czeropski, 2012). To a certain extent, the Learner Agreement helped learners and their supervisors plan and organize their time before the training began, but it was clear that several of the learners needed more than three hours each week.

We underestimated the amount of time it would take learners to complete the case brief assignments. While several participants self-advocated for more training time, this was not an option for some of the learners due to increased service demand. Some supervisors chose not to respect the boundaries of the Learner Agreement and asked participants to resume their regular duties during training time. In some cases this resulted in the loss of several hours of training time that was never replaced. When employees are away from the office, it is rare that they would be called back to the office to resume their duties, but when training takes place in the office during regular work hours this appears to be a real concern.

Although some participants attributed their time management difficulties to their particular work stream (i.e. telephone contact centre employees) two of the highest performing participants, in terms of their case brief scores, worked in the contact centre. The differences in performance, as measured by the case brief assignments appeared to relate more to participants’ level of experience on the job, their familiarity with the intake process, and their ability to manage their time more effectively. It’s not surprising that more experienced staff are able to perform their regular work duties faster than newer employees, and this may have allowed them to devote more time to the training. At the same time, it is worth noting that adult learners tend to over-estimate the actual amount of time spent engaged in self-directed learning (Bloomfield, 2009).

One of the pedagogical features of case-based learning is induction, which requires the presentation of at least three cases (Amundsen, personal communication, February, 2012). The demands placed on staff during monthly cheque issue, meant that
the cases needed to be spaced one month apart. Although the break gives learners time to integrate their learning, it also means that a full training cycle takes three months to complete. Given the greater demands of asynchronous online CBL, learner burnout is one possible implication of using these instructional methods in workplace-based training (Rollag, 2010; Czeropski, 2012). As Bloomfield (2009) states, learners also need to have time and energy left over from the demands of their daily work to willingly engage in self-directed learning.

6.2. Learner-Learner Interactions

The following section provides a deeper discussion of the three prominent themes related to learner-learner interaction. These include: Theme 5 – “Sharing Diverse Perspectives”, and Theme 6 – “That’s My Preference”

6.2.1. Theme 5 – Sharing Diverse Perspectives

One theme that was consistently expressed by the participants was the value of sharing diverse perspectives. Newer workers appreciated hearing the perspectives of more seasoned workers and learning from their experience. Learners felt reassured and gained confidence in their own interpretations of legislation and policy when they could see that other members of the group took a similar view of the case. New perspectives expanded the group’s understanding of the case, and even experienced staff recognized the gaps in their own thinking. These findings are consistent with Bloomfield (2009) who describes self-directed learning as a fluid movement between learning in isolation and learning as part of a peer network where newly acquired knowledge can be tested.

The sharing of diverse perspectives was not just limited to learning within the cohort, as seven of the eight participants connected with colleagues who were part of their training cohort. Several learners spoke about informally meeting with other learners, trainers and supervisors to discuss the cases through informal ‘communities of inquiry’ (Cognition and Technology Group at Vanderbilt, 1992). Not only did these connections extend beyond the boundaries of the learning cohorts, they extended beyond the boundaries of individual offices, to include colleagues from across the
province. This finding is supported by practitioner reports suggesting that asynchronous online discussion can serve as a vehicle for team building by bringing geographically dispersed employees together (Czeropski, 2012).

Two of the participants and both of the moderators described improvements in learner-learner interaction between Cases 1 and 3. I also observed shorter posts and increased learner-learner interaction such as acknowledging each other and building on the ideas presented by the other participants. One of the moderators observed that participants were taking greater risks in sharing their opinions, rather than playing it safe by simply cutting and pasting content from the OLR. It appears that learners moved from the recall of facts into higher order processes such as critical thinking (Bloom, 1956). During the final conference call debrief it appeared as though participants were engaging in a more holistic discussion of the case. For example, issues related to domestic violence, and child abuse and neglect were not intentionally embedded in the case, or supported by the guiding questions.

Most participants had very little to say about the video on cultural sensitivity that introduced Case 2. It appears that the learners did not make a strong connection between these abstract cultural ideas and the Ministry’s Three-generation family policy. Although the video was meaningful to participants with some prior knowledge of aboriginal culture, most participants did not appear to have a stronger understanding of cultural constructs of ‘family’, as the result of watching the video. I did not make these connections explicit to the learners. I believe I could strengthen these connections by providing participants with a pre-reading, and connecting the video to the discussion threads through the use of some guiding questions.

6.2.2. Theme 6 – That’s my Preference

The interview participants were divided in terms of their preference for either synchronous or asynchronous discussion. Those that preferred the asynchronous online discussion cited the following reasons: (a) sharing different perspectives, (b) time to think and reflect before contributing, (c) ability to contribute when they had time, (d) not having to worry about being put on the spot. Those that preferred the synchronous
conference call debrief gave the following reasons, (a) it flowed like a real conversation, (b) ability to ask questions and seek clarification in the moment, (c) it was easier to explain their ideas verbally than it was to write their responses. This is consistent with research concerning student preferences between CBL delivered through synchronous versus asynchronous modes of instruction (Levin et al., 2004).

Pena-Shaff & Altmam (2009) suggest that students perceive improvements in their understanding of cases when they have a chance to discuss them again in class. Likewise, Rollag (2010) emphasises the importance of debriefing to help learners deepened their understanding of the concepts embedded in the case. For these reasons, it seemed appropriate to incorporate the conference call debriefs into the learning design. For those learners who sought opportunities for more of a real time discussion on the cases this was highly desirable. Some of these learners preferred to have the entire training facilitated in this format, rather than posting to the online discussions.

The more extroverted members tended to dominate the conference debriefs, so the moderators interjected to invite the other members of the group to join in. Unfortunately, this approach was anxiety provoking for some of the participants. This is consistent with the finding of Watson and Sutton (2012) who found that students who preferred asynchronous discussion often cited their ability to participate without the pressure that can occur in a traditional classroom. Rather than respecting individual preferences, we asked everyone to participate at the same level, and this had a negative impact on some learners’ experience of the training.

In the future, we could adopt a softer approach to our facilitation of the case debriefs. This could be achieved through the use of more general invitations, such as “Would anyone else like to contribute?” (Ng, Cheung & Hew, 2009). Rather than asking participants to answer specific questions, we may consider asking participants, “What was the most meaningful part of this case for you?” These facilitation techniques may feel less intimidating to the quieter members of the cohort.

Unequal participation was also an issue in both the asynchronous online discussions. Some participants felt that their colleagues were too eager, and jumped into
the discussion before they had a chance to play the Starter role, or posted too much and left nothing new to add to the discussion. Unequal participation is a common complaint about asynchronous discussion, but the research usually identifies non-participation as the major issue, rather than too much participation (Pena-Shaff et al., 2009).

6.3. Learner-moderator interactions

The following section provides a deeper discussion on one prominent theme related to learner-moderator interaction, Theme 7 – “More Knowledgeable Others”.

6.3.1. Theme 7 – More Knowledgeable Others

Throughout the training, participants regularly connected with more knowledgeable others, including colleagues, coaches, and supervisors. This was one of the positive unintended side benefits of this training. I did not expect to see learners going outside their cohort to seek the advice of colleagues who were not part of the training, but this happened on a regular basis and is consistent with Bloomfield’s (2009) observations that self-directed learners choose to place themselves under the guidance of experts as a way to gauge their progress with learning goals.

I also heard from several learners that their supervisors expressed interest in the training, and took time from their busy schedules to case conference with their direct reports. These types of informal and unplanned learning interactions increased the reputation of the training, making it easier for us to recruit participants for subsequent offerings of the course, including one for supervisors.

I recommended that the moderators avoid becoming the centre of attention and asked them to find an optimal balance of presence between being too dominant or too absent (Dennen, 2005). Based on the advice of Rollag (2010) I recommended that the moderators provide just enough daily feedback and guidance so that learners can facilitate the discussion themselves. This appeared to be the right approach for this particular group of learners. At the same time the moderators provided rich qualitative
feedback (Dennen, 2005) that improved their understanding of the case, and helped them to improve their subsequent case briefs.

Organizing and leading the conference calls presented an excellent development opportunity for the moderators, many of whom are aspiring supervisors and trainers. Learning how to coordinate and lead teams of people virtually is a skill of increasing significance as the workforce continues to evolve. Many of the moderators were initially self-conscious and uncomfortable with the task, but I observed tremendous growth in their ability to lead virtually. This was yet another unintended positive benefit of the training.

### 6.4. Case Brief Assignments

The next section addresses the fourth and final research question: What evidence do the participants’ case briefs provide that they have applied concepts from the training materials?

Generally speaking, EAWs with at least two years of experience in the intake stream, as well as those employees who had previously worked in generalist roles, performed better on the case brief assignment than those who were hired into specialized roles or had been operating in specialized roles for many years (see Table 3 – Case Brief Scores). The case briefs produced by Geneviève, Gabriel, Ocean and Stephen were consistently clear and concise.

Once again, this seems to highlight the importance of developing sufficient base knowledge before participating in constructivist approaches to learning. These learners demonstrated a strong synthesis of the main ideas, and their case briefs made clear connections between the problems embedded in the cases and the provisions of legislation and policy. Each of these learners claimed to have spent between 1 to 2.5 hours on each of the case brief assignments.
### Table 3. Case Brief Scores

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<th>Case Brief 2</th>
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During this study, I asked the participants to submit their case brief assignments before the conference call debrief. This essentially denied the learner an opportunity to ask the group questions and clarify their understanding of the case before submitting it for feedback. The learners may have experienced less anxiety around the debriefing sessions if the conference call was presented as a final chance to seek clarification on any outstanding issues or misunderstandings about the case.

Although an individual case brief may have been the best solution for assessing each learner’s ability to apply learning from the online discussions, a group assignment may have resulted in better learning outcomes. In Watson and Sutton (2012) students perceived greater learning through a group assignment than an individual assignment. Pena-Shaff et al. (2009) found that more clarification, negotiation and use of examples during online discussions that required learners to develop a consensus Action Plan that discussion that required a group summary of the online discussions. This relates back to Vygotsky’s (1978) Social Development Theory, which promotes the benefits of learning through collaborative problem solving with a ‘more knowledgeable other’. A group assignment also aligns more with the theoretical underpinnings of social constructivist learning.
6.5. Limitations

As in all research, there are inherent limitations in the design of the study reported here. First, the case brief assessment tool was new to this particular iteration, and my findings highlighted the importance of including sufficient information in the cases for learners to render a decision. The level of ambiguity in the cases, especially in Case 2, made it very difficult for learners to make a final decision and to complete a case brief. This may partly explain why half of the cohort saw a decline in their case brief scores for Case 2.

Second, although certain themes recurred across all three cases, the training was not designed to build knowledge incrementally across the cases. Thus, the case brief scores do not simply reflect improvements in the overall quality of the case briefs from case to case: they also capture differences between the cases. In light of this, it may have been valuable to gather pre- and post-training data on the quality of decisions being rendered by learners to see if the participants' documentation skills improved as a result of this training.

Third, the online discussions were a potential source of data that was not incorporated into the research design. It is possible that some insight might have been derived by coding the online discussions for evidence of knowledge building, using a model such as the one proposed by Gunawardena (1997). However, this was not conceived as consistent with intent of this particular research study.

Finally, the limited number of participants involved in this case study makes it difficult to generalize these findings to a larger population. Although generalization is not the goal of case study methodology, the ability to generalize about the effectiveness of this training when applied to a larger population of learners may be important in determining the Return On Investment for the Ministry.
6.6. Future research

Work on this research has developed a strong interest in researching the use of rich-narrative (video) cases as a way to develop employees’ interviewing skills, and the use of a staged-release format commonly used to train medical students.

Given the recent restructuring of the Ministry’s workforce into ‘streams’, it may also be worthwhile to examine the adaptation of the cases for analysis by interdisciplinary teams. This would provide an opportunity to explore how information embedded a single case could be used by learners with different expertise.

Finally, it may be worthwhile to carry out a follow-up study examining the extent to which the learners involved in the present study demonstrate improvements in their decision-making skills six months after completing the training, and whether there is a detectable change in the number of original decisions being brought forward for reconsideration and appeals.

6.7. Conclusion

The goal of this case study was to understand the experiences that ten frontline employees of the Ministry of Social Development and Social Innovation had with decision making training that was delivered through case-based learning combined with asynchronous online discussion. Although this instructional approach has been used extensively in post-secondary settings in the field of teacher education and nursing, I was unable to find published research on its use in government of corporate settings. In this way, this study makes a unique contribution to the literature.

The work performed by Ministry field staff requires a tremendous amount of knowledge. Constructivist learning requires that sufficient base knowledge be established, and within the limits of the data examined here, it seems clear that the greatest benefits of the Advanced Decision Making training were realized when participants had base knowledge that aligned well with the content of the cases. To that end, shortcomings documented here may be addressed through a re-writing of cases,
and/or the development of a more effective way of screening potential learners. This may include a pre-training assessment, such as a written analysis of a case.

The Advanced Decision Making training appears to have developed the ability of participants to analyse complex cases, identify the aspects of a case that are relevant to eligibility for benefits, and to ask critical questions. Several participants claimed to have improved their skills in conducting research, making connections between policy and legislation, and explaining the importance of these ideas clearly and concisely in writing.

In addition, the training appears to have developed related skills, including participants’ ability to case conference effectively with colleagues via videoconference and telephone. Participants connected with colleagues, coaches and supervisors to create informal communities of inquiry that helped to deepen their understanding of the concepts embedded in the cases.

Given the generally positive experience reported here, there appears to be potential for this style of training to be used to train workers in other Ministries—such as the Ministry of Children and Families and the Residential Tenancy Office—where clients are interviewed and assessed, and where decisions are made through the application of a complex set of Acts, Regulations and guidelines.

The predominately asynchronous mode of delivery involved in this training satisfied the Ministry’s need for a cost-effective learning design that allowed busy front line staff to learn and develop without having to take time away from their regular duties. The Ministry estimates the cost savings associated with this training to be approximately $75,000 compared to delivering decision-making training to the same number of learners in a classroom setting. Moreover, the flexibility of asynchronous online discussion and its compatibility with CBL is possibly superior to classroom-based training, because learners were able to spend more time immersed in the training than they could if these cases were discussed during one or two days of onsite training.
References


Appendices

Appendix A  Consent form

OFFICE OF RESEARCH ETHICS

Consent Form
Case-Based Learning Combined with Asynchronous Online Discussion

STUDY TEAM

Principal Investigator:
Sean Bruce Cunniam, MA student in Educational Technology and Learning Design
Email: [redacted]

Faculty Supervisor:
Dr. Kevin O'Neill, Associate Professor, Educational Technology and Learning Design
Email: [redacted]

Information collected from you during this research study will be used as part of a thesis (public document). The data collected through this research study is subject to the Freedom of Information and Protection of Privacy Act (FOIPPA).

Data will be collected through direct observation of the online discussions, short self-reflective writing exercises, individual interviews and analysis of group case briefs. The collected information will be used to improve the delivery of employee training.

The researcher will make direct observations during the online discussions. Themes from the discussions and from the self-reflective writing will be explored during the individual interviews. Audio recordings of the interviews will be transcribed. In the transcripts, your identity will be masked using pseudonyms and then the original audio recordings will be destroyed.

Transcribed interviews, and anonymized self-reflective writing will be stored in a locked cabinet at the Ministry of Social Development and Social Innovation, Learning Services for a period of TWO (2) years following completion of the MA thesis defence.

NOTE: Telephone, email, and on-line observations are not a secure means of communication; therefore confidentiality cannot be guaranteed. You are asked to submit this consent form and self-reflective writing exercises through house mail.

SPONSOR

The Ministry of Social Development and Social Innovation, Province of British Columbia will provide you with time to participate in this training and research study. No additional funding has been provided.
ELIGIBILITY AND STUDY PURPOSE

Employment Assistance Workers and Investigative Officers of the Ministry of Social Development and Social Innovation, with at least TWO (2) years of experience, are invited to participate in this research study. Your feedback will be use to evaluate this employee training, and to design future training.

VOLUNTARY PARTICIPATION

You have the right to refuse to participate in this study. If you decide to participate, you may still choose to withdraw from the study at any time without any negative consequences. Refusal to participate will not have any adverse effects on employment or evaluation of your employment or (future) enrollment in on-line courses, etc.

What if I want to participate in the training, but not the research study?
No problem. If you choose to participate in the training only, your comments or experiences about the training will not be included as part of the research study.

STUDY PROCEDURES

What happens if I say, “Yes, I want to be in the study”?
• You will submit a copy of this signed consent form to the Principal Investigator (Sean Cunniam).
• You will attend a 1-hour learner orientation via LiveMeeting with your discussion team.
• You will complete a short eLearning course online
• You will be assigned a discussion forum Moderator who will provide you with ongoing assistance and technical support.

What happens during the study?
• You will engage in online team discussions involving three different client scenarios.
• The training will take place during regular work hours.
• Your regular schedule, including flex days, will not be disrupted.
• Each case discussion will unfold over a 2-week period.
• You will spend 3-4 hours each week analyzing and discussing the case scenarios.
• As a discussion team, you will plan and document the most appropriate client intervention(s) in the form of a case brief.
• At the end of each case, you will complete a short reflective-writing exercise about your experiences of the training.
• At the end of the training you will complete a 1-hour personal interview, with the Principal Investigator (Sean Cunniam), to share your experiences of the training.
• Your interview will be recorded and transcribed, but your identity will be kept confidential.
• Your experiences will be reflected in the final report, but your identity will be kept confidential.
POTENTIAL RISKS OF THE STUDY

Is there any way that being in this study could be bad for you?
The study team does not think there is anything in this study that could harm you or be bad for you. Although it is unlikely that any of our questions may upset you, you have the right not to answer any question. Please let one of the study staff know if you have any concerns.

Your supervisor, managers and other decision makers within the ministry will not be able to identify you based on your comments as they appear in the final report.

POTENTIAL BENEFITS OF THE STUDY

What are the benefits of participating?
You may or may not benefit from participation in the study. What the Ministry of Social Development and Social Innovation learns through this research study will help Learning Services to improve employee-training programs.

COMPENSATION

You will be paid your regular wage while participating in the training.

You will be provided with 3 hours away from your regular duties each week in order to participate in the training, to complete self-reflective writing exercises, and to participate in individual interviews.

CONFIDENTIALITY

How will your identity be protected? How will your privacy be maintained?
Your confidentiality will be respected. Information that discloses your identity will not be released without your consent unless required by law. All documents will be identified only by code number and will be kept in a locked filing cabinet. Your identity will not be revealed in the final report.

WITHDRAWAL

What if I decide to withdraw my consent to participate?
You may withdraw from this study at any time without giving reasons, and with no adverse effects on employment, or evaluation of your employment, or (future) enrolment in on-line courses.
ORGANIZATIONAL PERMISSION

Permission to conduct this research study has been obtained from:


STUDY RESULTS

The results of this study will be reported in a graduate thesis and may also be published in journal articles and/or books.

Learning Services, on behalf of the Ministry of Social Development and Social Innovation, will hold a copy of the graduate thesis.

CONTACT FOR INFORMATION ABOUT THE STUDY

Who can you contact if you have questions about the study?


CONTACT FOR COMPLAINTS

Who can you contact if you have complaints or concerns about the study?
If you have any concerns about your rights as a research participant and/or your experiences while participating in this study, you may contact Dr. Dina Shafey, Associate Director, Office of Research Ethics at dshafey@sfu.ca or 778-782-9631.
FUTURE USE OF PARTICIPANT DATA

Research data collected from this study will be used to enhance the delivery of ministry training programs. The final study may be shared internally within the ministry, or between ministries or agencies of the BC Provincial Government for educational purposes.

Data from the study may be used as part of future research. Results of this study may be reported for recognition awards within the provincial government, or presented at learning or Human Resources conferences outside the provincial government.

FUTURE CONTACT

I am interested in being contacted about future research studies:

☐ YES  ☐ NO

PARTICIPANT CONSENT AND SIGNATURE PAGE

Taking part in this study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason and without any negative impact on your employment.

• Your signature below indicates that you have received a copy of this consent form for your own records.
• Your signature indicates that you consent to participate in this study.

__________________________________________________________
Participant Signature

Date MM/DD/YYYY

_______________________________________________
Printed Name of the Participant signing above
Appendix B.

Self-reflective writing

Please describe your experiences of interacting with the course content. (Content includes: SharePoint, Concept Maps, Guiding Questions, Online Discussions, Case Briefs and the Live Meeting 'Debrief')

Please describe your experiences of interacting with the learners in your discussion group. (This includes the online discussions and any offline interactions - DO NOT NAME INDIVIDUAL LEARNERS)

Please describe your experiences of interacting with your Co-moderators. (This includes both online discussions and offline interactions - DO NOT REFER TO YOUR MODERATORS BY NAME)
Appendix C.

Interview protocol

Please describe your experience of using the SharePoint Learning environment.

• Describe your experiences of using the concept maps.
• Describe your experiences of using the worksheets and guiding questions.

Tell me about your interactions with other learners.

• What was most helpful part of learning as a member of a group?
• What was the most challenging aspect of learning as a member of a group?

Describe your interactions with the moderator(s).

• Describe your ONLINE interactions with the moderator(s)
• Describe your OFFLINE interactions with the moderator(s) (i.e. phone, text/video chat, etc.)

Describe your experience of balancing this training with other job responsibilities.

• Describe how colleagues, who were not part of the training, reacted to your participation.
• Describe how your supervisor reacted to your participation in the training.
• Describe your experience of completing the Learner Agreement with your supervisor.
• Approximately, how many hours did you spend in the training each week?

Describe your experience of the case scenarios.

• The first two scenarios were presented as text; the third scenario was presented as a video. Describe any differences between the two formats.
• Which format did you prefer and why?
Appendix D.

Case brief template

SCENARIO:
A family unit of four (mom, dad, and two kids) arrived from Quebec and applied for income assistance—they were found eligible four months ago. They have been collecting regular assistance ever since. Mom and Dad come into the office to discuss Mom’s recent PWD approval. Now you, the worker, have reviewed the file and discovered that at intake Dad had declared that he has an out-of-province warrant. The worker sent off the warrant check referral at the time of intake and it came back confirming that Dad does have an existing out of province (PQ) indictable warrant. An eligibility alert for the outstanding warrant was added to the file when it was confirmed; however the alert was never actioned.

CASE UPDATE:
After discussing the matter with the family, the father makes a decision to return to Quebec and resolve the outstanding warrant. Given this new information, plea se prepare your case brief by responding to the following questions (refer to Sample Case Brief for guidance on how to proceed.)

WHAT EVIDENCE WAS USED TO ARRIVE AT THIS DECISION?
• Which pieces of evidence—as presented in the case scenario and the case update—were most relevant to this decision, and why?

EXPLAIN HOW YOU ASSESSED ELIGIBILITY
• Which pieces of evidence influenced this decision and why?
• Which criteria, as outlined by the regulations/schedules, were met or not met?
• What next steps need to occur as a result of this decision?

DOCUMENT THE DECISION (putting it all together)
• Specify what evidence was used to arrive at the decision.
• Outline a logical set of reasons for the Ministry’s decision.
• Identify the next steps for both the client, and for the Ministry.
Appendix E.

Sample case brief

SCENARIO:
A single employable female with no dependents has been on Income Assistance for a year with no history of crisis supplements. The shelter information form on file states that monthly rent is $700. Her case has been selected for review.

According to the client, two roommates moved into the residential unit three months ago, but she did not inform the Ministry. There are no concerns regarding the client's bank profile and statements. The client submitted a new shelter information form indicating that the $700 rent is equally shared three ways. The client also provided copies of hydro and gas bills totalling $150 per month. The landlord confirms that three residents currently reside in the rental unit.

WHAT EVIDENCE WAS USED TO ARRIVE AT THIS DECISION?
There were no problems with the submitted bank profile and statements. The client stated during the review that she began sharing with two roommates three months ago, and this was confirmed by the landlord. The new shelter information form the client submitted indicates that her rent is equally split three ways. The client also provided copies of her utility bills ($150/month).

EXPLAIN HOW YOU ASSESSED ELIGIBILITY
The bank profile and statements show nothing of concern. The updated shelter information is consistent with client and landlord statements that three months ago the client acquired two roommates to share expenses. When the new shelter information form is compared to the existing shelter information form, the Ministry would conclude that the client was overpaid for three months.

DOCUMENT THE DECISION
The client continues to be eligible for income assistance. Client and landlord statements confirm that the client is now sharing with two roommates, resulting in an overpayment for the last three months. Based on this new information, the client's portion of rent is $233.30. The client provided hydro and gas bills in the amount of $150 per month, but since these expenses are also shared, the client's portion of utilities is $50. The client's total shelter allowance is $283.30. The client will be provided with an overpayment chart detailing the debt being added to her file, and informed of her Right to Reconsideration. If she agrees with the overpayment chart, a repayment agreement will be produced and signed, with the debt added to her file and monthly repayment collected from her income assistance cheque.
Appendix F.

Case brief grading protocol

Training of Graders

• Graders 1, 2 and 3 have been provided with Case Brief Sample 1 and the Grading Rubric for Case#1 to learn how to grade.
• Grader 3 has been provided with additional sample data to grade independently
• Grader 2 has been provided with additional sample data to grade independently
• Grader 1 has been provided with the same sample data as Graders 2 and 3, to grade independently, followed by comparison and discussion with Graders 2 and 3.
• You may not consult your co-graders during the grading process.

Grading Rules

• Only one point may be awarded in each category as outlined in the Grading Rubric (no double points may be awarded. Saying something twice does not double your points!!)
• It is not necessary to go into great detail or to include all relevant information
• For example, if the case brief discusses eligibility in a general way, that is sufficient for awarding a point. We just want to confirm that the concept is on their radar.
• Some learners go into greater detail, but that doesn’t earn them extra points
• No points are deducted for wrong answers
• Graders must not award additional ‘discretionary’ points for any reason. A poorly written brief that contains all the essential parts of the rubric will score higher than a well-written brief that misses important points.
• You will meet your co-graders ONLY during approved times (more on this later).

Grading Disputes

• When the Graders meet to discuss their scores, they should address discrepancies in the following ways:
• The first coder will explain in a non-defensive way his or her reasons for awarding, or not awarding, a point in any given category
• The second coder will then explain in a non-defensive way his or her reasons for awarding, or not awarding, a point in a given category.
Sample case brief for grading

**SCENARIO:**
A family unit of four (mom, dad, and two kids) arrived from Quebec and applied for income assistance—they were found eligible four months ago. They have been collecting regular assistance ever since. Mom and Dad come into the office to discuss Mom’s recent PWD approval. Now you, the worker, have reviewed the file and discovered that at intake Dad had declared that he has an out-of-province warrant. The worker sent off the warrant check referral at the time of intake and it came back confirming that Dad does have an existing out of province (PQ) indictable warrant. An eligibility alert for the outstanding warrant was added to the file when it was confirmed; however the alert was never actioned.

**CASE UPDATE:**
After discussing the matter with the family, the father makes a decision to return to Quebec and resolve the outstanding warrant. Given this new information, please prepare your case brief by responding to the following questions *(refer to Sample Case Brief for guidance on how to proceed.)*

**WHAT EVIDENCE WAS USED TO ARRIVE AT THIS DECISION?**
The family moved from Quebec, and has been receiving regular assistance for the past four months. The client declared having an outstanding warrant at intake, and the warrant check referral came back confirming the warrant, an eligibility alert was placed on file but it was not actioned (Ministry error).

**EXPLAIN HOW YOU ASSESSED ELIGIBILITY (see the R.E.A.D Model handout)**
Reviewed file to see what has already been done about the warrant. I would review the 80A and 80 to ensure proper consent. I would also review the result of warrant check, and information on the OLR regarding warrants. I would discuss the Ministry error with supervisor. I would then contact the clients to discuss eligibility.

**DOCUMENT THE DECISION (see to the R.E.A.D Model handout)**
The family unit will continue to be eligible for disability assistance while the father is out of the province dealing with his warrant. They will receive shelter assistance for all 4 family members (mom, dad and 2 dependents), but will only get support assistance for mom and the dependents. Since mother is PWD, the EAPWD Acts and Regs apply. This situation will remain until the dad returns or if he is still out of the province after three months, the eligibility will change and the shelter amount will be reduced to reflect the mom and 2 dependents.

The dad would be eligible for the warrant transportation supplement to help with his travel costs. From here, confirmation would be needed that the client has left the province to go deal with the warrant. If the client doesn’t leave to deal with the warrant, then eligibility should be reviewed. A review for any possible overpayment should be done as well.
Appendix H.

Grading rubric, case 1

1 point is awarded for each of the following:

___Father declared out of province warrant during intake
___Warrant check came back positive but was not actioned (Ministry Error)
___The father has agreed to return to Quebec to resolve the warrant
___Overpayment amounts must still be recovered from the family unit
___Family unit is eligible for Repayable Warrant Supplement to prevent undue hardship
___Transportation supplement to cover the costs of father returning to Quebec
___Family unit has up to three months to address the outstanding warrant
___Family Unit remains eligible at PWD rates (mother is PWD)
___Offered Right to Reconsideration (R2R)

Total score
/9
Appendix I.

Grading rubric, case 2

1 point is awarded for each of the following:

___ Grandmother previously on band assistance

___ Verification and Eligibility process (brief provides some reference)

___ Direct parents to file taxes and apply for child tax benefit

___ Family Maintenance referrals required for missing Grandfather

___ Three generation policy (PDC, Three Gen. Families, 2 files / 1 roof)

___ MCFD referrals for applicants under the age of 17

___ Supervisor Approval is required for underage applicants

___ Employment Plans / referrals to EPBC / Activities Towards Independence

Total score
/8
Appendix J.

Grading rubric, case 3

1 point is awarded for each of the following:

___ Clients meet the Ministry definition of ‘Marriage-Like Relationship’

___ No FM referral required (both applicants are bio-parents)

___ Joel has open MSO file / PWD Status / EAPWD Acts and Regulations apply

___ Verification/ Eligibility process (last pay, shelter docs, etc.)

___ Referral to EPBC for Joel who wants to explore retraining

___ Referral to community resources for family

Total score

/6
### Appendix K. Levels of interaction operationalized

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learner-Learner</strong></td>
<td>I agree that <em>learner name</em> has identified the key issues on warrants &amp; eligibility from a policy perspective. I also agree that her discretionary call that the process should begin when the error was discovered and not be retroactive is bang on...</td>
<td>Acknowledging another learner by name</td>
</tr>
<tr>
<td>Interaction</td>
<td>…<em>learner name</em> also indicated (and this is important) that this initial discussion about the matter with the family needs to be &quot;information gathering&quot; in case there is mitigating factors which may permit an exemption from this piece of policy.</td>
<td>Building on the contributions of another learner</td>
</tr>
<tr>
<td>Interaction</td>
<td>Great points, <em>learner name</em>. I think most of us need to step back for a moment and ask ourselves these questions. On one hand we must desensitize (or risk becoming emotionally overwhelmed by the crisis of our clients) and on the other remain aware of the impact our decisions can make to living, breathing people’s lives. It is a fine balance, for sure.</td>
<td>Personal reflection based on the contributions of another learner</td>
</tr>
<tr>
<td><strong>Learner-Content</strong></td>
<td>As Lynne Garner so accurately notes, 'we cannot know and consider all the ramifications of each client situation' but 'it is equally true that we cannot make sensitive discretionary decisions based on &quot;bloodless facts&quot;'...</td>
<td>Making specific reference to course readings</td>
</tr>
<tr>
<td>Interaction</td>
<td>…conducting a Marriage-Like Dependency Spouse Assessment is our best option in providing the client a fair decision based on all of the information.</td>
<td>Making specific references to policy and/or legislation</td>
</tr>
<tr>
<td>Interaction</td>
<td>In summary, this case is not straightforward because there are so many layers of personal information and history to take into account while making a sound decision that is grounded in legislation...</td>
<td>Summarizing the content of several previous posts</td>
</tr>
<tr>
<td>Interaction</td>
<td>Unfortunately they will most likely meet the criteria for &quot;marriage-like&quot; relationship and will be asked to apply together. If the applicants want their independent, one applicant will need to make a huge sacrifice and move out. This will add additional stress on everyone. Will this delay the male applicant from getting better and returning to work? What hardship will this cause the single mother?</td>
<td>Analysis or critique on the implications of policy</td>
</tr>
<tr>
<td><strong>Learner-moderator</strong></td>
<td>Well Done Team!!! I really like the way I see learners acknowledging and building on the ideas of others. The discussion on marriage-like relationships is coming together really nicely.</td>
<td>Acknowledging the group</td>
</tr>
<tr>
<td>Interaction</td>
<td>Great thread! You guys are already heading down this road, but let's be more specific... How does Garner speak to the issue of rushing to judgment without taking into account all the variables of a case? (Garner: Abuses of Discretionary Authority).</td>
<td>Asking Questions</td>
</tr>
</tbody>
</table>
Through discretionary authority, we are given the chance to not narrowly focus on rules and limit the scope of consideration. We are able to reach a decision that will most effectively meet client need as well as the objectives of the Ministry.

<table>
<thead>
<tr>
<th>Responding to Questions</th>
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Appendix L.

Main codebook
Appendix M
Codebook Variant (moderator interviews)