Creating Authentic Blended Learning in a Virtual Classroom

By

Edward R. Frison

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF EDUCATION IN EDUCATIONAL LEADERSHIP

VANCOUVER ISLAND UNIVERSITY

We accept the Process Paper as conforming to the
required standard.

Jeff Stewart, Major Project Faculty Supervisor
Faculty of Education,
Vancouver Island University

Harry Janzen, Dean, Faculty of Education,
Vancouver Island University

Copyright 2017
Abstract

The purpose of this project was to explore the effectiveness of online or e-Learning environments by comparing asynchronous modes to a synchronous online virtual cohort model. This was accomplished by establishing a Community of Inquiry to examine both modes of online learning. The author invited participants from Yukon, British Columbia, and Alberta to begin a dialogue comparing the efficacy of the various experiences they had in asynchronous modes to the experiences they were having in the learning community the author established for the discussion. The author designed the community around the model he created for establishing an online virtual school in Yukon Territory. This is the online synchronous virtual cohort model. The dialogue was focused on eight inquiry questions to be discussed over a 4-week period through a synchronous video-conferencing format as well as in an established blog page. The results of this dialogue as well as information critical to the formation of a virtual cohort model were stored in a website as a means to continue the discussions and to further research into the effectiveness of synchronous e-Learning environments, especially that of the virtual cohort model.

http://cohortbasedelearningprotected.weebly.com/

*Keywords: Cohort, e-Learning, Teaching Presence, Social Presence, Cognitive Presence, Synchronous, Asynchronous, Blended Learning, Community of Inquiry*
Acknowledgements

Any worthwhile journey should have elements of exploration, learning, and personal growth. I would say that all of these elements were in abundance in my journey to developing an online school. After 35 years of experience in teaching and administration, I thought I had a good handle on every conceivable method of learning. I was wrong. After agreeing to build online programming for Yukon Territory in a stand-alone distributed learning school, I quickly discovered that I did not have all the tools or knowledge to do justice to the job. Entering the Online Learning and Teaching Diploma (OLTD) program from Vancouver Island University and finishing with the Master of Education in Educational Leadership was the best solution possible. I want to acknowledge the value of the program and thank all the instructors for the wealth of knowledge and the practical set of tools they provided throughout the OLTD program. A special thank you to Mary O’Neill for her encouragement throughout the process and to Jeff Stewart as my Faculty Supervisor. His mentorship and belief in this project moved me past my doubts in the value of this work.

Finally, I need to thank my wife, Leona, for her constant support and encouragement. Her belief in me and her unconditional support of the work I am doing have made this journey, like all others, one in which I knew I was not alone.
# TABLE OF CONTENTS

Abstract...............................................................................................................................................ii

Acknowledgements..................................................................................................................................iii

List of Tables ..........................................................................................................................................vi

List of Figures .........................................................................................................................................vi

Chapter 1- Introduction........................................................................................................................1

  Context..................................................................................................................................................1
  A New Paradigm....................................................................................................................................2
  Definitions.............................................................................................................................................5
  CoI Framework and Presence in Program Design...............................................................................6
  Validity of School Programming Design and Implementation..............................................................7
  Methodology .........................................................................................................................................9
  Summary.............................................................................................................................................11

Chapter 2- Literature Review................................................................................................................12

  Introduction..........................................................................................................................................12
  Student Success in Online Learning.....................................................................................................13
  Community of Inquiry............................................................................................................................17
  Blended Learning..................................................................................................................................20
  Online Communities..............................................................................................................................23
  Digital Citizenship..................................................................................................................................26
  Conclusion..........................................................................................................................................29

Chapter 3- Procedures and Methods.....................................................................................................31

  Major Project Design............................................................................................................................31
List of Tables

Table 1. Major Project Timeline…………………………………………………………………………………36

List of Figures

Figure 1. Community of Inquiry Model. Garrison, Anderson, & Archer, 2000………………15
Chapter 1 – Introduction

Context

Few would argue that education is in a state of transformation. This could be in the move from Platonic didactic to project based learning or from homogeneous classroom grouping to individualized student centric focus. What has recently accelerated and fueled the change process is the introduction and inclusion of technology in designing educational environments. Many mistakes have been made in thinking that technology will be the answer to lagging student engagement. Using technology to drive at the heart of pedagogical change has failed. A notable example of this is the failed educational reform instituted by Los Angeles Unified School District trying to mandate that every child would have an iPad preloaded with curriculum materials from Pearson Publishing (Lapowsky, 2015). Thinking that technology could become the pedagogy rather than simply a new tool, proved disastrous. Like any other tool used in a learning environment, it is to be noted that technology is just that – a tool. Pedagogy has always determined how these tools are used and this is no different with integrating technology into learning environments. In essence, how to utilize technology as a way to provide programming in an engaging manner to students is at the heart of this project. How technology can be integrated into, and enhance, sound pedagogical practice is the focus for the creation and delivery of programming through the Aurora Virtual School in Yukon. This whole project is an attempt to begin this process by answering the critical question: ‘How does a virtual cohort-based model, using synchronous online course design based on the Community of Inquiry Framework, increase student engagement and completion rates in Grades 8 – 12?’

Answering this question effectively, required more than just textual research. Due to the very nature of the question, there is little concrete research into synchronous online cohort
models. The project entailed finding teachers and administrators in BC and Yukon that would be willing to enter a dialogue that examined aspects of synchronous versus asynchronous models of distance learning. The results of the dialogue seemed to confirm what the author was trying to create with synchronous cohort-based virtual programming. These conversations occurred as an experiment in creating a small, focused Community of Inquiry. The conversations, along with a variety of assessment tools and resources, made the bulk of the project which is housed in a website so as to provide one place for anyone interested in creating similar programming in their district. Details of the project are described in detail in Chapter 3.

A New Paradigm

The project really starts within the context of the current evolution of blended learning in North America. For the purpose of this paper, blended learning is defined using Horn and Staker’s (2015) definition of blended criteria.

A formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home. (p. 3)

Their definition has created a continuum that has a variety of blended models falling somewhere between the extremes of totally face-to-face and totally online. This project is a reflection on the work done by the author in creating a Distributed Learning (DL) school in Yukon to eliminate our reliance on British Columbia providers of distance learning programs and courses. This project is also an attempt to broaden the parameters of what constitutes authentic blended learning as represented in Horn and Staker’s (2015) definition. If blended learning provides opportunities to improve best practice, then it makes sense to incorporate these elements into
new designs of learning environments. Using the Community of Inquiry Framework (Garrison, et. al., 2000) as a way to allow a cohort of students to construct meaning in their learning, this project shows that the 100% online cohort model is as legitimate as any other model of blended learning.

Perhaps the biggest challenge in meeting the educational needs of students in Yukon Territory is trying to create equity in learning opportunities so that students living in small rural communities and isolated family homesteads have the same level of access to courses as the students living in larger urban centers. The emergence of blended learning models combined with improved online technologies to deliver content and make connections with students seemed to be part of the answer. Given the reality that small rural community schools are not able to offer a comprehensive slate of core and elective courses to high school students, it was felt that providing online versions of the courses, with the support of a local teacher might be the solution. Course shells were imported into a Territory Moodle® server from the British Columbia Learning Network and schools were given access to them to meet specific demands within their local student population. A number of blended learning models were adopted to support the students in their program. However, due to the large number of specialist courses requested by students, and the limited number of teachers in rural schools, students began to be placed in asynchronous online courses with little support from local teachers. This is not to say that the local teachers lost interest in providing support, but rather the increase in course demand and specialization overwhelmed the capacity of the school. As a result, students were faced with being isolated in their studies and completion rates continued to maintain levels similar to those experienced in ‘correspondence school’ models. These completion levels, over a 5-year period from 2010 to 2015, had a rolling average of approximately 28%. The tensions created by
inequity, capacity, and completion rates have resulted in a demand for exploration of blended learning models that create sustainable engagement for students not only to lessen these tensions, but to improve the overall success that students experience in any given course.

For any distance education program to succeed, considerable effort has to be put into course design so that the focus is on student engagement. Engagement can be defined as students being energized by success, curiosity, originality, and satisfying relationships. Conversely, non-engagement could be characterized by having to do repetitive tasks that require little or no thought and are imposed by someone else (Strong, Silver, and Robinson, 1995). As Yukon’s distance education school, Aurora Virtual School (AVS) was tasked with providing students access to courses regardless of their personal circumstances. These circumstances included students in isolated family homes, small rural communities, as well as the larger urban centers. This project is part of the overall evolution of best-practice within the growth of Aurora Virtual School. As with any new undertaking, it was prudent to look at how successful previous attempts of distance education were within the Territory.

As was discovered, student engagement in asynchronous distance learning courses could not be effectively assessed due to the high incidence of low completion rates. When asked, most students involved in asynchronous distance courses said they often felt totally isolated and unsupported by the content or a teacher. When required to be totally self-motivating, the majority of students confessed to not having the ability to stay with these courses on their own. After being an educator for over 30 years, the author felt that the answer to this should be obvious. First, teenagers, by nature, are social creatures, and due to their relative age and maturity, are not fully able to work independently with limited feedback or structure to their
learning environment. Second, part of human nature is to be relational. In learning environments, this is a critical element in the design of the environment and the courses within it.

Definition of Terms

Asynchronous Online Learning: Students engage in their learning ‘Any Time, Any Place, Any Pace’. Generally accomplished individually and independent of other people, wherever the student is physically, and on a timeline generally dictated by the student.

Cognitive Presence: The extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication. (Garrison, Anderson, Archer, 2001)

Cohort: A group of students collectively working individually and/or as a group in one or more K-12 grades/courses. Requires opportunities to regularly meet together as a group, with a teacher, to investigate common learning outcomes at individual paces that are similar with some possible variance.

Digital Citizenship: The norms of appropriate, responsible behavior with regard to technology use.

Online Community: Wikipedia defines an online community as a virtual community whose members interact with each other primarily via the Internet. An online community can act as an information system where members can post, comment on discussions, give advice or collaborate. Commonly, people communicate through social networking sites, chat rooms, forums, blogs, e-mail lists and discussion boards.

Social Presence: The ability of learners to project their personal characteristics into the community of inquiry, thereby presenting themselves as ‘real people.’ (Garrison, Anderson, Archer, 2001)
Synchronous Online Learning: “Regular Time, Virtual Place, Similar Pace”. Generally accomplished by working together or at least in a group environment with regular scheduled meetings, with a teacher, and common starting and ending points.

Teaching Presence: the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes. (Garrison, Anderson, Archer 2001)

Community of Inquiry Framework and Presence in Program Design

Central to the creation of a cohort-based model of online learning was the framework developed by Garrison, Anderson, and Archer (2000) to describe an educational community of inquiry.

An educational community of inquiry is a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding. The Community of Inquiry theoretical framework represents a process of creating a deep and meaningful (collaborative-constructivist) learning experience through the development of three interdependent elements – social, cognitive and teaching presence. (p. 2)

While the framework was originally designed to look at asynchronous models, the elements within the framework were very applicable to this project. To establish any online community, it was felt that the traditional model of independent distance education through primarily asynchronous means would not be effective. If students were reporting that they were not engaged in the course of study they signed up for because they felt isolated and unsupported, a different approach was necessary. The importance of social presence in a high school learning environment is very evident within the 13 to 18 year-old demographic. The framework helped to
highlight the inclusion of social presence in course design as well as that of the content that was being studied (cognitive presence). It is teaching presence that, as Garrison, et. al. describes as being the element that binds the community together. In fact, preliminary analysis of our project suggests that those students working independently and asynchronously are far less likely to engage in a distance learning course or complete it. Those courses where students and teacher meet regularly as a group in a virtual classroom space are far more likely to have students engage with the content, each other, and with the teacher. The need to validate cohort-based course design led the author to invite teachers that were experienced in teaching within a distance learning model to explore the efficacy of asynchronous versus synchronous modes of course design and delivery.

Validity of School Programming Design and Implementation

A large part of the author’s appreciation of the precepts of blended learning is that most of the models look for ways to include time for the student to be with the teacher and other learners as well as time for the student to be on their own with the content. While blended learning looks at incorporating students interacting with technology in all the models, any successful classroom uses similar relational and interactive aspects to engage student learners. What all successful learning environments appear to have in common is that they are active and dynamic, where the student is engaged with the teacher, other students, and what they are learning, rather than passive and static where the student is isolated and has no active role in the creation of cognitive presence or, are not able to construct meaning through sustained communication and interaction with others. Further study of these environments led the author to look at how synchronous models compared to asynchronous in both design and efficacy.

Chapter 2 of this paper, looks at research related to components of this comparison and to
related issues when trying to answer the critical question. The research is grouped into broad categories looking at: student success in online learning; the Community of Inquiry; blended learning; online communities; and digital citizenship.

These elements of research supported the author’s exploration of how to create a virtual blended learning environment. The format and design of a purely online model of blended learning is not widely accepted or considered at this time. This project explored ways to utilize existing technologies to replicate the required component of physical face-to-face time within the course. As was stated earlier, the best learning environments, by design, will include opportunities for students to develop a relationship with the teacher, other students, and the content so as to construct deeper meaning within the course of study. The author found that the Community of Inquiry Framework (Garrison, Anderson, & Archer, 2000) most closely describes the interaction of these three relationships in what they define as teaching presence, social presence and cognitive presence. The most difficult aspect of building a virtual blended model was finding how to create social presence in a totally online format. The answer appeared to partially lie in how people, especially young people, experience community in online groups. Some of the research points out that social media allows for growth of a sense of community and, when this community awareness is experienced in virtual spaces, academic rigor is not compromised (Smith & Maiden, 2015). Picciano (2002) also sees online communities as having a sense of presence in much the same ways as a physical environment even though actual physical contact is not an option. While Horn and Staker (2015) have identified a working definition of blended learning, they would not see a totally online environment as meeting their definition as our model has no physical face-to-face instructional component. However, they would not see a totally face-to-face classroom that incorporates online tools as blended either.
Rather than being held back by static definitions, this project is attempting to create a best-practice model based on blended learning environments, through the use of a cohort model incorporating both synchronous and asynchronous modalities, while being purely online.

As with the development of any new community, there has to be a sense of broadly accepted expectations to be a citizen of that community. Thus, the research also looked at how the development of digital citizenship expectations and responsibilities must become part of the process of course design. Some research suggests that the conditions for belonging to a digital community are basically the same as belonging to any physical one with some additional considerations (Ribble, 2012). Ribble identifies nine key elements that define citizenship in a digital world: online access; commerce; communication, etiquette; laws; rights; health; and security. This body of research led the author to believe that the program design was on the right track as the whole concept of social presence is entrenched in the framework of community membership, be it physical or digital.

**Methodology**

While the first two years of program delivery using a virtual cohort model have been very successful, it was felt that further research is needed into whether regular, teacher-led synchronous class sessions made a significant difference in completion and success rates when compared to more common independent asynchronous models. To do this, the author contacted a number of distributed learning schools in British Columbia to invite administrators and teachers to participate in creating a community of inquiry to discuss this topic. The staff of Aurora Virtual School were also invited to participate. The invitation resulted in 8 participants led by the author, discussing 8 focus questions regarding this topic. The sessions were held weekly for 4 weeks with 2 focus questions per session. The sessions were held synchronously.
with participants meeting using an integrated video conferencing program (Zoom®). The author also created editable documents for each session using Google Docs® that were used to provide an option for participants to write their thoughts on each question during the synchronous sessions or asynchronously when they had more time to devote to the process. The author also created a blog to continue discussion around each question with postings occurring prior to each synchronous session. The blog was created to be an on-going repository for professional dialogue around the comparison of online learning modalities.

To be able to share the efforts of this community of inquiry formed by teaching professionals, the author created a website hosted on Weebly®. The website is designed to be viewable by the public. The site contains a homepage describing virtual cohort-based learning environments and the importance of teaching presence, social presence, and cognitive presence in the design. The blog around the comparison of online learning models has its own page on the website with the intent that it can be contributed to on an ongoing basis. There is a resource page that hosts a summary of our Community of Inquiry discussion of online learning (Appendix A), a student survey to help evaluate the program design (Appendix C), a rubric to categorize responses into the three presences (Appendix D) and a self-assessment tool for teachers working within the model (Appendix E). Another page is devoted to a template for designing a synchronous virtual cohort model describing technology and workspace requirements, as well as district level supports needed (Appendix F).

It must be noted that, in order to appropriately meet the requirements of this process paper, the original website could not be linked to this document due to privacy concerns. Thus, a duplicate site was created with some of the content deleted so as to protect the identities of participants in various components of the site. It is this site that is linked in this document.
Summary

Being immersed in creating sustainable and flexible learning environments that need to be totally online has been challenging. There is a complex recipe for school and course design. On one hand we had to meet requirements that satisfy systemic demands. On the other, we still needed to allow for student-focused operational processes to occur. Using blended learning as a baseline for effective use of technology in learning environments has proven to be very beneficial in terms of planning and course design as well as providing ways to look at effectively engaging students in non-traditional learning environments. Trying to create a blended learning model that was 100% online was the most challenging. Developing a virtual cohort-based model that combines regular, teacher-led, synchronous sessions with continuous access to course content through asynchronous means was, by far, the most challenging, and the most rewarding aspect of this project. Finding that the topic of comparing the efficacy of different online learning modalities is a something that many professionals are interested in was somewhat surprising. Having some of those professionals willingly give up their evenings to participate in discussions around these topics was even more rewarding. Using the same technology and design premises as was developed for our online courses to host these sessions, made it clear that what we are doing is worth pursuing. The final project’s merit is borne out by a comprehensive Literature Review as presented in the next chapter.
Chapter 2 – Literature Review

Introduction

Creating a 100% online learning environment that meets the criteria of blended learning models requires the serious consideration of a number of topics. An examination of relevant research into how online environments have evolved and how teachers and students have experienced success in these environments suggests five main themes related to the overall task of answering the critical question: How does a virtual cohort-based model, using synchronous online course design based on the Community of Inquiry Framework, increase student engagement and completion rates in Grades 8 – 12? For the purpose of this review, the author would define a virtual cohort as a group of students and their teacher that meet synchronously in a regularly scheduled virtual classroom.

The overarching theme that emerges would be that of student success in online learning programs as measured by engagement and completion. This theme sets the tone for how we look at online environments and the efficacy of the particular model or mode chosen to determine best practice for teaching and learning. An examination of the Community of Inquiry Framework (Garrison, Anderson, and Archer, 2000) is necessary as the interaction of the three “presences” described within the framework were foundational in establishing the current model of program design. Of course, as this model challenges the basic definition of blended learning (Horn & Staker, 2005), a look at the various models of blended learning is essential to create a credible comparison. From blended learning, an examination of research into how online communities are formed and how these communities can replicate the requirements accepted for basic historical definitions of community was beneficial in looking to expand them into ones that are purely digital. Finally, in challenging the status quo on blended learning definitions, and bringing online
communities into real-world consideration for how students interact in social and relational ways, research into the development of digital citizenship criteria and policies needed to be examined, so that the learning environment could be organized in safe and respectful ways.

**Student success in online learning.**

Anderson (2008) said that both teaching and learning are essentially the same in online and other formal educational environments. That is, that a student’s needs are determined, what is to be learned is negotiated, or in some cases, prescribed, lessons are made, and learning is assessed. Labonte’s (2011) claim is that success in e-learning environments is due in part to educational technologies. He indicates that these technologies, although pedagogically neutral, have the potential to be transformative for learning. Anderson’s (2008) four transformative results of using technology to create learning environments supports this. First, that technology can shift the time and place of education; second, that content can be portrayed in multiple media formats; third, students and teachers can access huge amounts of information on any topic via the Net; and fourth, human and machine interaction is supported in both synchronous and asynchronous modes.

Other research has also shown that online technologies enable more programs that are innovative and learner-centric, using interactive programs in both synchronous and asynchronous modes. (Beyth-Marom, Saporta, Caspi, 2005) They go on to state that, due to the flexibility of technology in time and place of learning and how learning is delivered, there is likely a better match between the learner and the pedagogy that matches their specific learning style. Considerable effort has gone into the development of synchronous and asynchronous online learning models to meet these varied learning styles. Regardless of the modality, online learning must be solidly based in effective pedagogy.
Pelz (2004) has identified three principles of effective online pedagogy. Principle one is that students should do most of the work. The more time that the student spends engaged with content, the more content they learn. This can only happen if the teacher makes the shift from “sage-on-the-stage” to “guide-on-the-side”. He goes on to identify five activities to help this transition for teachers and students. His second principle is that interactivity is the heart and soul of asynchronous learning. He indicates that this interactivity is what separates effective online courses from high-tech correspondence courses. His idea is that some interactive models are better than others. Face-to-face interactive sessions require talking and listening which, in his mind, is inferior to online interactive models that require reading and writing. This interaction can take place between students and students and between teacher and students.

His third principle of effective online pedagogy is that you must strive for presence. He aligns himself with the work done by Garrison, Anderson, and Archer (2000) where they identify some critical interactions for effective learning to take place. In this they identify three presences that make a community of inquiry; social presence, teacher presence, and cognitive presence. Pelz has identified these presences as essential to effective online pedagogy. It is in the aspect of the social presence that he feels participants can establish a learning community by presenting themselves as “real people”. Cognitive presence is developed so the teacher and students can construct and confirm meaning through discourse, while teacher presence ensures that learning and interactions are guided either by direct instruction or facilitating discussions. Of these presences, social interaction plays the important role of giving students the feeling that they belong to a community and have value as a contributor. In online courses, social interaction seems to be crucial for retaining students in the course (LaBonte, 2011).
Obviously, success in any online learning environment is dependent upon the design and implementation of the program. While much work must go into establishing best practice, which needs to be based on relevant learning theories, delivery of the course is also important. Having appropriate technologies in place to be able to effectively deliver programing online has a profound impact on the retention of students within the program. Organizationally, a good Learning Management System (LMS) is a reasonable starting point for developing an online course. The LMS provides a way to manage, deliver, and track online instruction and student outcomes. An LMS forms a bridge between the teacher and the student. Teachers load the LMS with course content and provide students access to the content through the LMS. The LMS provides the means for teachers and students to meet in virtual classrooms. Teachers can monitor student progress. Students can learn at individual paces and in multiple locations, and assessment can be differentiated with multiple opportunities for practice. (Cavus, Uzunboylu, & Ibrahim, 2007) As well, Garison et.al. (2000) would agree that choosing an effective LMS is important to adequately ensure each of the three presences in a community of inquiry.

A Hanover Research Council report on Best Practice in Online Teaching Strategies (2009) identifies five benchmarks loosely grouped into two categories: Online Teaching and Learning and Course Development. The benchmarks in online teaching / learning include, (a.) student interaction with the teacher and other students is essential, (b.) feedback to students is constructive and timely, and (c.) students are shown how to properly do research and how to ascertain the validity of resources. The course development benchmarks identified are that course development, design and delivery follow guidelines to ensure minimum standards are met, while learning outcomes determine what technology is used, and that instructional materials are reviewed periodically to ensure standards are met.
The report also links Pelz’s three principles to Savery’s (2005) key characteristics used in effective online teaching. Savery coined the acronym VOCAL (Visible, Organized, Compassionate, Analytical, and Leader-by-example) to encapsulate these characteristics. He indicates that online teachers must make certain to find ways to be visible to their students to ensure that the students have a sense that there is someone there they can rely on as facilitator and mentor (teacher presence). The teacher must be organized as the expected flexibility of course work requires clear expectations and timeframes. The teacher must be compassionate towards students’ feelings and needs due to the increased sense of intimacy that can occur as a result of the sense of privacy various methods of online communication can provide. Teachers need to be analytical to be able to manage student assignments ensuring that they have analyzed the student data and returned the feedback in a timely manner. Finally, the teacher needs to lead by example by modeling best practice strategies and behaviors.

Mohr (2007) looks at the importance of making changes to how we teach and learn in incremental steps. This is especially true when looking at innovations around online environments. He identifies three strategies to keep in mind when implementing new innovations. We need to keep the momentum started by having a clear and convincing vision and our strategies are easy to communicate. We must be prepared to take little steps. This ensures that the change agents overwhelm no one. Providing continuous information and ongoing support are examples of this strategy. Finally, he suggests we need to implement constant change as a learning organization. This must be done to shift from organizing our teaching to enabling our learning.

Overall, reflection on the various sets of standards and the benchmarks that have been established by various agencies, one should notice some of the similarities and differences found
among those key elements selected to determine the overall quality of the online learning. There appears to be an underlying notion within this set that quality in online instruction depends on the quality of the interactions and experiences with the teacher, the learner, and the content. (Holmes, Singer, & MacLeod, 2010)

**Community of Inquiry.**

From the direction and findings of the research on quality online course design and delivery, it is evident that the Community of Inquiry Framework (Garrison, Anderson, and Archer, 2000; Wanstreet & Stein, 2011) is important when considering building an interactive virtual program. Garrison et.al. provide a meaningful way of examining the interrelationships that need to exist in order to build a successful way to teach and learn online. They have built a model that looks at the interactions and relationships between three “presences” found in effective learning environments. They have called this a Community of Inquiry (CoI).
Garrison, Anderson, & Archer, (2001) describe cognitive presence as the extent to which the members of a particular community of inquiry have the ability to construct meaning through sustained communication. Pelz (2004) also notes that cognitive presence can be demonstrated by introducing various types of knowledge into a discussion. Anderson, et.al., emphasize the importance of recognizing that cognitive presence focuses on higher-order thinking skills as opposed to just specific learning outcomes.

Social presence, according to Rourke, Anderson, Garrison, & Archer (2001), is a learner’s ability to project their personal characteristics into the community of inquiry. In doing so, they present themselves as ‘real people’. Computer conferencing, forums, blogs and so on, enable high levels of student-to-student and student-to-teacher interaction. This interaction supports online models of teaching and learning that are highly interactive. Pelz (2004) describes
three types of social presence: Affective, which allows the expression of emotion, feelings, and mood; Interactive, which shows evidence of thinking, reading and understanding other people’s ideas and responses; and Cohesive, which are responses based on group or common goals and objectives that provide a sense of belonging to individuals in the group. Research around online learning seems to support the assumption that social interaction is important for experiencing success. Much of this research looks at student perceptions about the quantity and quality of these interactions and whether they learned anything in the online course. (Picciano, 2002)

Anderson (2008) also discusses the importance of these presences. He has looked particularly into the effect of teacher presence on the effectiveness of online learning. His research identifies three roles teachers perform that are critical when developing teacher presence. Teachers are responsible for designing and organizing the learning experience that takes place for students. Teachers also devise and implement activities that encourage discourse among students, individually or in groups, between the teacher and students, and between students and the learning content. Finally, the teacher needs to incorporate a variety of direct instructional forms so the class can go beyond simply moderating the learning experiences. As this model of teaching evolves, teaching presence can also be either delegated or assumed by the students as they contribute their own skills and understanding to the community.

Recognizing the importance of designing learning environments as critical communities of inquiry, it is possible to see how the three presences in CoI models can replicate the conditions required to meet Horn and Staker’s (2015) definition of blended learning. The biggest stumbling block to meeting the definitional values of learning at a distance online as well as learning in a face-to-face setting can be overcome when examining how social presence and teacher presence can be achieved in an online environment. This is especially true when looking at how students
in grades 7 through post-secondary use social networks and social media that do not differentiate between belonging to a physical or virtual community.

To move forward in the development of a virtual blended model, one cannot overlook the value that the Community of Inquiry brings to the effective development of online learning environments. A recent study of teaching and learning in an online environment combined the elements of the CoI with the Structure of Observed Learning Outcomes (SOLO) taxonomy. (Shea, Gozza-Cohen, Uzumer, Mehta, Valentinova, & Vickers, 2010) The study found that understanding of online instructional effort, processes, and learning outcomes may be improved by using this combined approach. Although some research has used models other than CoI, the ever-growing number of researchers that have included the CoI model in their studies provides evidence of how this model can evolve to meet the changing climate that online learning exists in.

The idealized view of education, as a critical community of learners, is no longer just an ideal, but has become a practical necessity in the realization of relevant, meaningful, and continuous learning. It is within such a community of learners that the potential of e-learning will be fully realized. Garrison & Anderson, 2003, p. 3

**Blended Learning.**

A much-used definitional framework of blended learning comes from Horn and Staker (2015). They characterize blended learning with three distinct elements:

Blended learning is any formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace. The student learns at least in part in a supervised brick-and-mortar location away from home, and, the modalities along each student’s learning path within a course or subject are connected to provide an integrated learning experience.

Horn & Staker, 2015, pgs. 34-35
Horn and Staker see blended learning as being a disruptive innovation that provides services that are not mainstream but potentially will be the method of choice for many schools and districts. They identify four main types of blended models. The rotational model design has courses where the student rotates between the modalities of online and face-to-face. There are five versions of this rotational model. The a la carte model provides some courses that are 100% online while others are 100% face-to-face. The flex model has students taking a course mostly online and supported with as-needed or on-demand teacher support. The final model is the enriched virtual model. This is where the student is taking their courses mostly online, but with required face-to-face meetings with a teacher. The virtual cohort model proposed may sound similar to this, but meets the required face-to-face component in the virtual classroom.

In a recent study on the effectiveness of blended learning environments at the university level, students took a course online, face-to-face, and in a blended format. Results from polling the participating students showed that students felt they learned more effectively in a blended learning environment. (Eryilmaz, 2015). Collopy and Arnold (2009) found that blending face-to-face and online environments created a structure for learning that reciprocated support. Team development, commitment and accountability were supported by the face-to-face component while time to think and process and out of class conversations was supported by the online component. According to O’Byrne and Pytash (2015), blended learning models are expanding as individual teachers are creating online learning environments for their students. They see blended learning having the potential to provide transformative experiences for students. This will challenge teachers to use different modes of teaching to find the best ways to educate their students. They too, see blended learning as sustainable and disruptive innovation opportunities needed to overcome some of the challenges facing traditional learning models. For the purposes
of meeting the objectives of this project, a look at the integration of the CoI Framework into blended learning models is required. Vaughan, Clevelan-Innes, and Garrison, (2013) provide an in-depth look at how this is possible.

By focusing primarily on teaching presence, they used the CoI framework to derive seven principles of blended learning. These seven principles will be critical in the ongoing development of developing a virtual blended model. They provide a qualitative definition that distinguishes blended learning as an approach that addresses educational needs through thoughtful fusion of the best online and face-to-face learning activities. They outline the ideas that are inherent to critical learning communities and that provide the foundation for implementing blended learning. Vaughan, et.al. organized their seven principles around elements of teaching presence: design, facilitation, and direction. The seven principles include planning for open communication, trust, critical reflection and discourse; establishing community and cohesion and purposeful inquiry; sustained respect and responsibility as well as inquiry that moves to resolution; and ensuring assessment is aligned with intended processes and outcomes.

It is important to note that these seven principles, although anchored to teacher presence, actually embed the development of social and cognitive presence within them. The first two principles address the social and cognitive challenge of making blended learning a collaborative experience. The third and fourth principles look at how to use social and cognitive presences to facilitate a community of inquiry, and the last three look at how the teacher needs to incorporate the social, cognitive and assessment responsibilities to be able to achieve the planned objectives or outcomes. Perhaps a more succinct definition of blended learning might be, “the organic integration of thoughtfully selected and complementary face-to-face and online approaches” (Garrison & Vaughan, 2008, p. 148). In a study by Schaber, Wilcox, Whiteside, Marsh, and
Brooks, (2010), it was found that students identified a significantly better understanding of the topics covered in a blended environment. In this mode, they felt that reading, online discussions, and student initiated out-of-class discussions contributed more to their learning than contemporaries in a classroom setting only. All of this research leads us to understand the inherent importance of seeing online and blended learning as being reliant on the building of a sense of ‘community’ in both synchronous and asynchronous settings.

**Online Communities.**

A large part of the rational used by the author to adopt a model of online teaching and learning that replicates a blended learning model is based on the concept of building community in a virtual space. Research examining a correlation between student success and perceptions of belonging to a learning community supports this idea. Whether a learning community is virtual or not, it has to have the general characteristics of a community in the wider sense. This can become a group of people with different experiences that voluntarily meet to consistently learn together so as to solve problems (Jezegou, 2010). This is very much based in constructivist theory, which is an integral component of the CoI framework.

Picciano (2002) also talks about community in terms of a sense of presence, or being in a place and belonging to a group. He identifies how physical presence in a face-to-face course provides this sense of belonging. There is opportunity to raise a hand to comment, answer or ask a question. Here students can form relationships with other students to discuss class topics outside of class. This, of course has varying degrees of accuracy dependent on the individual student’s desire or ability to engage in social interaction. Picciano sees similar opportunities in online courses. Students, through the use of familiar social media, feel a sense of presence in basically the same ways although physical contact is not an option. In online environments, this
definition of presence is growing to include telepresence, social and cognitive presence, and
teaching presence. If the term ‘presence’ refers to a group of people belonging to a social unit or
class community, then new terms such as communities of inquiry, communities of learners, and
knowledge-building communities can apply to online examples.

The importance of social presence in the development of online communities cannot be
overstated. When developing a community of inquiry in an online environment, students must
have the ability to project themselves socially and affectively into the community (Garrison,
(1999) on the effects of social presence in an asynchronous computer conference based course
found that social presence created higher levels of student success in the course. At the time, they
indicated that more research needed to be done to refine the instruments used to gather data on
social presence and subsequently on those of cognitive and teaching presences as well.

Online communities appear to have grown exponentially in the last few years. For the
most part, they have been communities outside of educational networks. These have been largely
social networking sites, video and audio sharing sites, wikis and blogs. These types of online
spaces provide people places where they can interact, collaborate, publish, share and
communicate with like-minded others in a virtual setting. The things that attract people to form
groups like these are no different than what has already been discussed. That is, they are looking
for a sense of community. This sense of community is what attracts people and allows them to
persist in keeping the community active. This could be incorporated into an online learning
environment where a sense of community may improve student retention and engagement
(Lambert & Fisher, 2013). Although there is merit in looking at what makes social networking
sites capable of such sustained growth, there are different requirements for online educational
communities that need further research. Individuals that engage in collaborative reflection and
discussion so as to construct meaning and mutual understanding, by contrast, typify an online
learning community. This study done by Lambert and Fisher found that the use of the CoI
framework helped guide the design of an effective online course.

Smith and Maiden (2015) also look at how social media sites demonstrate the growth of
communities in online or virtual spaces. They have looked at how the strengths of belonging to a
community can enhance student learning without compromising academic vigor. One element
they identified as having a negative impact on student engagement and success was a feeling of
isolation in many asynchronous online courses. They found that students tended to stay in online
courses longer and were more successful when opportunities for collaboration were present.
Students that learned the most from online courses had instructors that organized their course to
maximize student participation. This lessened the sense of isolation and frustration that resulted
in more opportunity to focus on achieving the learning goals of the course.

Others have looked at how social networking sites can be used as educational
opportunities and tools themselves. Social networking sites are no longer just for making and
maintaining friendships or establishing romantic relationships. They are very sophisticated
services allowing users to create profiles, form networks, and share information with others.
Social networking is very popular with teenagers ranging between ages of 16 to 19. This makes
using these tools and techniques very appealing to educators (Callaghan & Bower, 2012).
Utilizing these popular methods and other contemporary online activities such as gaming, online
educational course design can provide community-based activities that engage students and
provide interactive environments similar to those they are already familiar with.
More research needs to be done in this area especially when considering the push-back one is likely to get from educational authorities regarding using contemporary media in classroom settings. The whole premise of Grade 7 – 12 students and their teachers using social networking and gaming to develop effective online communities will require significant guidance and development to make their use safe and efficacious. Developing comprehensive digital citizenship policies will help in all areas of online course design that uses community as a basis for its overall design.

**Digital Citizenship.**

Digital citizenship is a modern and evolving concept that has its roots in traditional understanding of community. There are three particular elements within any definition of citizenship: citizenship occurs within a given community, where community is central to the definition; members of the community have rights; and with these rights comes responsibilities or boundaries in which the community members must live (Alberta Education, 2012). While digital citizenship reflects the same characteristics, a more careful consideration in defining how it is different needs to be looked at.


- Citizenship requires digital access for full electronic participation. Schools need to help students understand this by showing them what tools exist for this in school and at home.

- Citizenship requires digital commerce. Schools will need to provide students the knowledge and protection to participate in the digital marketplace.
Citizenship requires digital communication. Schools must help students understand the various options for digital communication and when different modes are appropriate.

Citizenship requires digital etiquette. Schools need to teach students about online standards and procedures and how to respect others and themselves while online.

Citizenship requires digital law. Schools must teach students about electronic responsibility for their online actions and deeds.

Citizenship requires digital rights and responsibilities. Schools need to show that everyone in the digital community share the same rights and responsibilities.

Citizenship requires digital health and wellness. Teachers must inform students about their physical and psychological well-being and help them understand the risks in using these technologies.

Finally, citizenship requires digital security. Schools must help students understand how to protect themselves while online and to safeguard personal information.

Hengstler (2015) calls this managing your digital footprint. She maintains that managing your footprint online is not only critical for students, but essential for teachers as well. However, rather than giving in to fear and hiding from using potentially risky online tools (such as an ostrich hides when faced with a potentially dangerous unknown), with appropriate training and exposure, people can be free to use today’s technologies while professionally, actively, and responsibly managing their digital footprint.

These recommendations are based on extensive research on current literature as well as ongoing and structured discussions from a wide range of experts, professional educators, and community members. The document identifies Ohler’s (2010) eight criteria on the nature of citizenship and considerations for digital citizenship. He states that citizenship:

1. Requires working to high moral principles. If communities are composed of individuals, they must be principled to create effective community.

2. Requires balancing personal empowerment and responsibility with the community’s well-being. There must be equilibrium between the good of the individual and the good of the community.

3. Requires participation. Members must participate in the community for it to have meaning.

4. Requires education. Guidance from elders (teachers) is required to provide direction for all members.

5. Is ever evolving. Thus, it requires ongoing conversation and debate, especially to educate youth in the new realm.

6. Must be inclusive. No one culture or community can have greater citizenship rights than any other. This is especially important in K-12 education where this must be based on a child’s development and readiness.

7. Is closely linked to advances in media. Only through media forms are digital communities possible.

8. Is intimately tied to community. Citizenship cannot exist in a vacuum. It must have community. Digital citizenship results in communities that are global, multi-cultural, highly focused and long lasting.
With the complexity of digital citizenship, it is apparent that much effort must be made to ensure that educators are not left on their own to determine how it is defined. There has to be opportunity for many voices to be heard in the description and formulation of a citizenship policy. Regardless of how the definition is derived, it must be done in the context of community.

**Conclusion**

How can a virtual cohort model of online learning best support the objectives of a blended learning program? This has been the driving question for this project all along. The underlying premise of the project has been to answer the critical question in the affirmative. This has been supported by an examination of relevant research and on the ongoing experiences gained as the project evolves. In looking to research for support of the project, the author looked at how the face-to-face component of blended learning environments could be met by regular meetings in a virtual classroom. This required challenging the status quo of an established definition requiring this happen in a physical location. The research examined centered on how students are most successful in online learning. As learning in isolation is the least successful, it made sense to look at research into effective online learning communities. Communities of inquiry are perhaps the best example of this type of learning community. There is sufficient evidence to show that the presences identified in this model are adaptive to changing times and pedagogies and are very applicable in supporting work in this project. Looking at the definitions and models of blended learning ensured that the direction posed by the critical question had sufficient depth to qualify the challenge as valid. If we are to assume that students and teachers can create realistic sense of community online, then developing a framework for how to best interact in that community is essential. Research into digital citizenship provided a solid
background to why this direction is important and how to establish a framework to reference the creation of any applicable policies.

Future considerations for ensuring the ongoing evolution of the project have suggested some gaps in the research that would benefit this work. There do not seem to be any significant studies done that look into how adolescent notions of online social networking provides them with authentic feelings of community. Is this possibly replacing the need for physical connections for children? Are high school students beginning to non-differentiate between face-to-face in virtual versus physical environments? Another question for future studies may be in the area of seeing blended learning as a disruptive innovation. It appears that these innovators are only providing information based on a business model, which may not really be applicable for education. Their focus has been mostly on content and assessment innovations and has ignored the social / relational aspect of learning. This results in looking only at knowledge outcomes rather than including social learning outcomes. Eventual research and studies into these areas will further support the direction this project is taking.
Chapter 3 - Procedures and Methods

Major Project Design

When given the task of creating online programming for Yukon Education, the author determined that ensuring social and teacher contact had to be deeply integrated into any model that was developed. A five-year period of student data was initially examined to provide suggestions on how to increase local completion rates and overall student success in Distributed Learning courses. Evidence seemed to suggest that most issues concerning these two elements related directly to extreme levels of disengagement within students involved in these programs. Some research into why e-Learning might be unsuccessful looked at factors of unsupported learning (Pelz, 2004; Anderson, 2008). Student completion rates and their feelings of success in the author’s own district underscored the importance of relationships between the teacher and student and other social factors as described by Garrison, Anderson, & Archer (2000). When queried, students reported feelings of isolation and lack of support. The assertion that asynchronous models of course design and delivery contributed to these feelings seemed to be common sense to the author. To many students, the content seemed overwhelming in this modality. Having no social contact while learning and minimal teacher feedback or personal connection resulted in feelings of isolation and many students simply do not complete the course.

The growth in experimentation with various blended learning options seemed to hold great possibility for addressing the needs of these students. Blended learning, as defined by Horn and Staker (2015) seems to be a fantastic way to increase student engagement and provide for more individual determination in how personal learning occurs. However, when compared to their definition, Horn and Staker would dismiss the Virtual Cohort Model as “blended” because it is delivered 100% online with no physical face-to-face component. The author felt that, given
the current growth in online communities and social networks, this definition was too restrictive and a needless handicap to possible learning environments that could meet blended criteria in a purely virtual platform which a very real social community. To make a virtual blended program possible, the author relied on the Community of Inquiry Framework (Garrison, Anderson, and Archer, 2000) to ensure that course design incorporated the elements of Social, Teaching, and Cognitive Presence as described in the framework (see Figure 1, pg. 18). This led to the critical challenge of determining how a virtual cohort-based learning environment, using synchronous online course design based on the Community of Inquiry Framework can increase engagement and completion rates in secondary online courses.

This final project grew out of the fact that there is insufficient scholarly research into the efficacy of synchronous virtual cohort models. In creating an opportunity to engage other teachers and administrators in a dialogue that compared current asynchronous models to the cohort model, the author hoped to shed light on the effectiveness of the cohort model. The project was designed with four phases: a) designing a community of inquiry around the critical question; b) inviting participants to the discussion; c) creating a format for the meetings / discussions to occur; and d) designing a website to host the findings in order to provide the opportunity for continued discussion, and, share information and resources on the cohort model.

**Major Project Development**

**Developing a Community of Inquiry.** The author’s idea was to engage other teachers and administrators to create a small community of inquiry to discuss and compare the efficacy of both, synchronous, and asynchronous online learning environments. Forming a synchronous cohort that was similar to those used in his school program would provide participants with direct experience in the model he was presenting as well as the best environment to foster a
realistic critique of both models. It was hoped that participants would be representative of the various online programs in use across Yukon, British Columbia, and Alberta. To ensure facilitation of open discussion and participation, an optimal size of 10 participants was set.

**Inviting Participants.** To ensure that feedback through discussion of the topic was focused on the role of the teacher and course design, it was felt that participants should be either teachers or administrators actively working in e-Learning environments. The author sent an open invitation to principals of 6 selected Distributed Learning Schools from BC and Yukon, as well as approximately 60 current and past students in the Online Learning and Teaching Diploma program from the Vancouver Island University via their G+ OLTD Community forum (Appendix G). Of those invited, 14 responded with a final count of 2 principals, 1 university instructor, and 5 teachers that agreed to commit to the required time period and meeting frequency.

**Major Project Delivery / Implementation**

**Meeting Format.** The author set up a virtual meeting space using Zoom® (https://zoom.us/) which is the same video and web conferencing service Aurora Virtual School (AVS) uses for delivering synchronous programming to its students. This was to provide first-hand experience in a virtual cohort environment. Participants in the community of inquiry were to meet once a week in this synchronous setting over a 4-week period. The author was to serve as moderator of the discussions and created the following focus questions to guide the weekly discussions:

**Week 1:**

1. What constitutes engagement in online environments?
2. Are completion rates and student success reflective of each other? How are they tied to engagement?

Week 2:

3. What are the perceived strengths and weaknesses of each online model?

Week 3:

5. Does learning in a cohort more readily provide the elements necessary for individuals within the group to experience the 3 forms of presence than learning independently?
6. (How) Can a cohort, meeting synchronously in a virtual environment with a teacher meet the requirements of any definition of blended learning?

Week 4:

7. Does a cohort model of online learning need to have a synchronous component in order to be effective and/or successful?
8. Are there different learning needs for students in online environments when they live in urban versus rural/remote locations?

These synchronous discussions were to be recorded by the moderator and used to provide a synopsis of the viewpoints of the participants.

To more closely replicate a blended environment, the “course design” needed to incorporate asynchronous components. The author regularly communicated with the participants via email and created a blog page where each week’s focus questions were presented as well as reflections by the author on the previous meeting’s discussions and encouraging the participants
to continue the dialogue started with comments posted to the blog. The blog was intended to remain open to participants so they could provide asynchronous feedback to the CoI and then become public once this process was complete. For the purposes of this paper, a mirror site of this blog was created where participants names and places of employment were deleted so as to protect their privacy.

**Website Design.** The final phase of the project was to build a website to host information found throughout the project as well as information and resources directly connected to development of a virtual cohort model. The website also served as a method to provide specific information on the debate around the closed definitions of blended learning, to provide an overview of the Community of Inquiry and its role in the development of the cohort model, and references to any research around synchronous online learning. The website was also chosen to be the vehicle to host the blog which would allow participants a place to share their thoughts and ideas in an ongoing asynchronous environment. This form of discussion allowed the dialogue to continue throughout the project and past its publication if desired. The website was also to provide a number of resources on pertinent topics for development of a synchronous virtual cohort online learning environment. Pages will be dedicated to a description of this model and factors to consider when developing it, what the Community of Inquiry Framework is, what blended learning is, the blog page, and resources to help refine and promote the model and the skills teachers and students need to flourish within it. The website can be found at: [http://cohortbasedelearning.weebly.com/](http://cohortbasedelearning.weebly.com/)

Table 1 outlines the major project timeline as created and followed by the author.
Table 1

*Major Project Timeline.*

<table>
<thead>
<tr>
<th>Project Element</th>
<th>Date / Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of intent and ideas of major project to supervisor. (Chapter 1)</td>
<td>September 6 – December 16, 2016</td>
</tr>
<tr>
<td>Write invitation and send to designated DL schools and post to OLTD G+ Community.</td>
<td>October 1, 2016</td>
</tr>
<tr>
<td>Close invitation and notify participants of expectations and poll them for suitable meeting dates and times.</td>
<td>October 15, 2016</td>
</tr>
<tr>
<td>Create website with only a Blog page visible.</td>
<td>October 20, 2015</td>
</tr>
<tr>
<td>Meet synchronously using Zoom for 4 discussions scheduled for 7:00 pm.</td>
<td>October 27, November 3, 10, and 17, 2016</td>
</tr>
<tr>
<td>Moderate asynchronous blog discussions.</td>
<td>October 25 – November 20, 2016</td>
</tr>
<tr>
<td>Summarize findings and produce final copy of Chapter 1 of process paper and submit to supervisor.</td>
<td>November 20 – December 16, 2015</td>
</tr>
</tbody>
</table>

The purpose of the project design was three-fold. First, to validate the synchronous virtual cohort model as an effective way of increasing student engagement and success in online learning. Second, to show that blended learning is not restricted to Horn and Staker’s definitions in that authentic face-to-face components do occur virtually. Finally, to demonstrate how the Community of Inquiry Framework provides the necessary elements of social and teacher
presence that are essential aspects of engagement and which ensures the authenticity of a blended environment. The resultant impact of these three elements is shared in Chapter 4.
Chapter 4- Field/Beta Testing and Findings

Methods and Process

Since its inception in 2013, Aurora Virtual School (AVS) has been using and refining the synchronous virtual cohort model of blended e-Learning. In reality, these past 4 years have been the ultimate test of finding out where the successes and failures of the model are. However, due to the lack of research in synchronous models in K – 12, there is a need to find some evidence as to whether this model really shows more promise than existing asynchronous programs.

Examination of archival records from 2010 to 2014 showing individual completion data in senior high school distance learning (DL) courses for the Yukon Territory indicated that the self-directed asynchronous model was not working. The average DL course completion rates prior to 2015 were approximately 30%. A review of literature on synchronous cohort-based models revealed minimal research at the post-secondary level and non-existent research at the K – 12 public school level. It was imperative to go directly to those schools involved in delivering school programming asynchronously and look into the perspectives of both administrators and teachers working with this model. The critical challenge question emerging from this inquiry was, how does a virtual cohort-based model, using synchronous online course design based on the Community of Inquiry Framework, increase student engagement and completion rates in Grades 8 – 12? This question provided the focus needed for the author to invite other educational professionals to begin a dialogue comparing the efficacy of both types of models.

The conversation surrounding the efficacy of synchronous versus asynchronous e-Learning environments is the basis of the major project.

To initiate the conversation, the author wanted to give any participants an experience in the online environment that closely replicated the model used in Aurora Virtual School to deliver
programming to its students. The Community of Inquiry Framework (Garrison, Anderson, and Archer, 2000) is at the heart of the synchronous cohort model. Developing an actual community of inquiry around the critical challenge question seemed to be a practical way to engage participants in the discussion. An invitation was devised and sent out to a number of Distributed Learning schools in British Columbia, the staff at AVS, and posted to the G+ community forum of the Online Learning and Teaching Diploma (OLTD) program from Vancouver Island University (Appendix G). After acknowledging their interest in the project, respondents were polled on their ability to commit to 4 synchronous sessions at a mutually acceptable day and time. This resulted in the meetings being set to run every Wednesday from 7:00 to 8:00 pm from October 27 to November 17, 2016. 8 people plus the author made the commitment to be part of the community of inquiry for this topic.

Prior to the first meeting, community members were given a link to the blog page in the author’s supporting website. They were provided with introductory comments and focus questions 1 and 2. They were asked to make any comments on the initial reflection and focus questions which would be reviewed and further discussed at the synchronous meeting. Initial responses were hesitant and limited in depth.

“Engagement to me includes, logging in, responding to one on one emails, opening and closing course files, asking a question, answering a question, sharing a link, showing up to video conf / teleconference class, staying for the duration of the class time, adding to chat room sessions and so much more.” (Participant “A”)

This fit with the author’s prediction of how social communication would become better with increased social contact.

The first meeting allowed the participants to introduce themselves and become familiar with the technology of the online video conferencing tool used by the author. Each participant was given the time to provide a brief biography of their past and current teaching experiences
with online or distance learning. The author was pleased with the representation as it provided a balance of perspectives in e-Learning. There were 2 principals of Distributed Learning schools in British Columbia, and 2 BC teachers, one of which had many years’ experience with asynchronous DL programs and the other with experience working in an Independent Learning Center supporting students learning online. As well, there were 3 Yukon teachers working in the synchronous virtual cohort-based model and a professor from the OLTD program at Vancouver Island University who was able to provide a national perspective on e-Learning. The author provided an administrative perspective as the creator of the synchronous virtual cohort-based model and served as moderator of the meetings.

Discussion of the first 2 focus questions during the first session was lively and thoughtful. In hindsight, the author believes that 5 sessions rather than 4 would have benefited as more time could have been given to these initial focus questions. The introductions and building of a social presence and feeling of community took too much of the allotted time during the inaugural meeting. It was somewhat surprising though, to see how the participants went back to the blog page after the meeting to deepen their initial comments or to add new insight into the questions.

“Many online courses are not so different from the old paper package variety. Students are primarily reading materials on the screen, and then taking quizzes, tests, or writing essays. Perhaps there are a few videos links thrown in. This is not always very engaging.” (Participant “B”)

This pattern of synchronous and asynchronous activity continued throughout the following three weeks. There was lively and thought-provoking dialogue around the focus questions in both the synchronous meetings and via the on-going commentary in the blogs.

“The issue is how we organize for learning. I look at the DL teachers in BC and elsewhere as having two hands tied behind their back because of the model. It is amazing that they have the successes they do…” (Participant ‘C’)
Each synchronous session was recorded so that the author was able to review discussions and synthesize key comments and feedback into summary statements (Appendix A).

The supporting website was completed and provided links and descriptions of key models supporting the critical challenge question, such as the Community of Inquiry and Blended Learning. The site also provided the blog page which, in the live version, is still an active portal for continuing dialogue on the comparative merits of each model. Finally, a page was dedicated to resources on the supports needed to develop this type of online model (Appendix F) as well as evaluative tools for refining best-practice in online environments (Appendices B, C, D, and E).

**Findings**

After the initial synchronous meeting, it was noteworthy to see how quickly the participants bonded and were all eager to engage in the CoI as it was their daily work that it references, critiques, and analyses. The author was very pleased with how the participants became a cohort and entered willingly into the discussions around the focus questions. The 1-hour target for each meeting was very easily filled during each session. Further evidence of community building could be seen with some members wanting to stay longer at the end of every session, while others immediately sought to connect outside of the CoI, to continue a particular thread of discussion or share ideas. As had been expected, the group developed a social cohesion and became more at ease with each other and willing to enter into dialogue as familiarity and trust grew.

"(Participant) ‘B’, you have nailed it.. responsive, reciprocal , respectful connections. When I first began at (### School) those 3 R's were highlighted." (Participant A)

That social presence had been developed was evident in the level of participation in both the synchronous meetings as well as the commentaries being carried on in the blog posts.
“Wow, incredible engagement, suggestions, and passion here. I am looking forward to connecting tonight after being away.” (Participant ‘C’)

Participants became interested in each other and what they were doing independently of the specific topics discussed around the focus questions. This upheld the premise of how Rourke, Garrison, Anderson, and Archer (2001) show that social presence is seen as the ability of learner to project their own characteristics into the learning community whereby they present as real people rather than just names on a roster. Pelz (2004) also feels that social presence allows participants to present themselves as ‘real people’ which is critical in the creation of a community of learners. The social presence that developed in the CoI was real. Participants were connecting and co-constructing meaning around the critical question and session questions. It is evident from the participants’ desire to stay after the prescribed meeting time that LaBonte (2011) would confirm that social interaction is necessary for retaining students in an online course.

Teacher presence was also evident in the level of questions participants posed to the author as well as using him as a conduit to garner contact information from other participants so as to collaborate on other topics of interest to them. Teaching presence was definitely evident in the synchronous sessions as the author was clearly seen as the person to provide structure to the discussions and to support the topics with expertise that the participants felt they lacked. One of the benchmarks in online teaching / learning as identified by the Hanover Research Council (2009) is that student interaction with the teacher and other students is essential for best practice. The author felt that teaching presence in the cohort model used in this project effectively demonstrated Garrison, Anderson, and Archer’s (2000) criteria for this presence. That is, that the course design, facilitation, and direction of course activities, both social and cognitive,
focused on having the participants realize personally meaningful and worthwhile learning outcomes.

Cognitive presence was certainly evident with the fact that the focus questions were closely tied to the overall critical question and in the depth to which participants became involved in examining their own practice and comparing it to the cohort model being looked at. If cognitive presence is the extent to which participants in the community of inquiry or learning community are able to construct meaning through sustained communication, then the discussions in the synchronous meetings and asynchronously in the blog provided ample evidence of this.

Throughout the project, the author noted that, while participants obviously became interested in the discussions and the direction it was going, they were still somewhat protective of their particular circumstances and the current model of e-Learning that they were engaged with.

“... the social component. Is it a must? Not in my books. I can spend time with one while others work at their pace.” (Participant ‘A’)

The author did not see this as an impediment to the discussion or limiting in how open-minded the participants were to the cohort model. Rather, it was heartening to see the obvious passion each person had for working with students and their desire to do their best, whatever environment they were immersed in. They were all very intrigued with the cohort model and felt that having a regular synchronous session in online environments provides a level of teacher–student interaction not seen in asynchronous models. Once the beta-testing period was over, all participants described how their involvement was a worthwhile professional development activity that gave them ideas and tools that they could take into their own classrooms, be they online, blended, or face-to-face.
If one of the goals of the project was to demonstrate that engagement in online learning increases when participants feel that they belong to a community, then the experience overall was a success. The levels of participation and the depth of the conversations around the focus questions were, without a doubt, a reflection of a very high level of engagement in all aspects of the dialogue. Research around how online communities can replicate most of the elements of a face-to-face community (Jezegou, 2010, Picciano, 2002) support the author’s assertion that the synchronous online cohort model has the potential to increase student success in online learning. Forming a community of learners in an online environment using the Framework of the Community of Inquiry has shown great merit to the author and has provided the impetus to continue developing this model.
Chapter 5 – Conclusions and Recommendations

Summary

For many years, distance learning in Yukon, British Columbia and Alberta has, by and large, been confined to some version of an asynchronous model. When correspondence type learning was all that was available, students received packages of course materials in the mail and worked through a stipulated timeline on the content and sent work away to be evaluated by a teacher living somewhere else. Other than grades, little feedback was provided for student growth. In the digital age, distance learning schools mostly transferred content to a digital format and made it available to students online. Neither teacher nor social presence was involved in this format of instruction and learning. The result once again was that the student received little feedback from the teacher.

When the author was tasked with creating an online school in Yukon Territory, initial encouragement was to follow the same format of schools in British Columbia as the Territory shared a common curriculum with them. The author examined archival records of completion certificates issued to students enrolled in distance learning courses for historical success rates and found that less than 30% of high school students from the Territory ever completed courses they enrolled in. It made no sense then to replicate a model that seemed ineffective. In looking for best practice, the author drew on his own experiences as a teacher as well as experiences of other educators. Two basic factors emerged that seemed to underscore the lack of success of the online asynchronous model previously used. These were the relationship between the student and a teacher, and the relationship between students. Course content did not seem to be an issue as, with digitization, efforts had been made to make content more interactive with the use of many different digital tools available on the Web. The deficit that did exist was in the effort to
ensure that there was opportunity to create the relationships needed to engage students. These teacher and student relationships were the critical missing factors. The relationship between the student and the teacher is seen as a critical component in any effective classroom anywhere, yet little opportunity for this relationship to develop was evident in the secondary asynchronous model. The other relationship is the one between students themselves. Anyone who has worked with teen-age students will attest that they are very social creatures so to isolate them from their peers in their learning environment seemed to lend to the lack of success they experience when taking asynchronous courses online. This isolation is a product of both policy and design.

The intent of this project was to create a community of inquiry with professional educators involved with both synchronous and asynchronous models of online environments. Through a series of focus questions, the author moderated a dialogue examining the successes and short-comings of asynchronous models used in British Columbia compared to those of the synchronous cohort-based model being used in Yukon. These discussions were carried out synchronously through 4 regularly scheduled meetings via interactive video-conferencing, and asynchronously through a blog page created specifically for this project. The results and content of these discussions are digitally stored in a website the author created as the major deliverable for this project. The overall goal of the project was to provide data that would help to answer the author’s critical challenge question: How does a virtual cohort-based model, using synchronous online course design based on the Community of Inquiry Framework, increase student engagement and completion rates in Grades 8 – 12?

**Literature**

The author believed that the key to successful learning is found in relationships. This belief was the foundation for the design of a virtual learning environment based largely on the
Community of Inquiry (CoI) Framework (Garrison, Anderson, and Archer, 2000; Wanstreet & Stein, 2011). The Framework describes how the interaction of the three presences, Teacher, Student, and Cognitive, create the most positive engagement in learning. The author was also intrigued by the success found in blended learning models as described by Horn and Staker (2015) and looked for ways to replicate a blended model in a virtual environment. To truly understand the blended methods and to find a way to have a virtual model be considered blended, the author also looked at research into the efficacy of how online communities are formed and how they can replicate the face-to-face criteria in Horn and Staker’s definitions of blended learning. Research looking into the correlation between student success and their perceptions of having a sense of belonging is central to the creation of the virtual cohort model (Jezegou, 2010; Picciano, 2002). Finding research that links the Community of Inquiry with Blended Learning, (Vaughan, Cleveland-Innes, and Garrison, 2013) proved that best practice in blended models needs to be grounded in the principles of the CoI. Finally, knowing that placing high school students in a 100% online environment poses certain risks, research into digital citizenship and how it can shape online behaviors and community responsibility was prudent (Ribble, 2012; Hengstler, 2015).

While the research was very supportive of the overall direction the author wanted for the synchronous virtual cohort model, he did discover some gaps that bear further consideration. These included social networking sites creating authentic feelings of communities in adolescents, and the social / relational aspects of learning in blended environments.

**Successes and Limitations**

The author felt that the project was very successful. Those professional educators that participated in the dialogue were highly engaged in the process and discussions. Even though
the process was conducted over a five-week period, the sense of belonging to a unique community was very evident. In that sense, the creation of an online community working on common goals, in a set timeframe with regularly scheduled synchronous meetings, verified the author’s premise that a synchronous virtual cohort model based on the Community of Inquiry Framework is superior to many current asynchronous models used in e-Learning environments. Participants felt connected to each other and to the content, which, in this case was the discussion around the focus questions, and saw this experience as an excellent professional development opportunity. The website that was created for hosting information, resources, and the asynchronous blog page for ongoing commentaries has been well received by participants and others.

Limitations on the success of this project all stem from common factors, which are time and sample size. While the discussions that occurred were very successful, in both the synchronous meetings and asynchronous blog page, the author recognizes that the strength of the feedback would be greater if the process was carried out over a more protracted time frame. This proved to be impossible in order for the author to meet the deadlines imposed by the university requirements. Meeting the privacy requirements for the Master’s program also impacted the validity of the website in some ways. By creating a mirror site that removed the personal information shared by participants limited how long the conversations could continue asynchronously in the blog page. This may be mitigated somewhat when the original site can go ‘live’ again, however, much impetus will have been lost.

**Recommendations**

This project served to underscore the importance of relationships in any learning environment. If we truly want to evolve our e-learning systems into student-centric models,
recognition of the critical nature of these relationships in how students are engaged in their learning and how they achieve success is essential. When we talk about learning environments that require technology to deliver programming, these relationships are just as important as they are in face-to-face situations. While blended learning models as described by Horn and Staker (2015) certainly make efforts to harmonize technology and teacher-led instruction, they fail to recognize the impact technology has made on creating authentic learning communities that are 100% online. Based on research and the success of the cohort model, the social presence experienced in online communities can be as real as any physical face-to-face situation. It is hoped that this work will broaden the definitions of blended learning so as to encourage more research and experimentation in virtual cohort course design.

Schools delivering some form of e-Learning programming need to pay careful attention to course design to ensure that efforts are made to incorporate the relationships that make success more likely. These relationships are best described in the Community of Inquiry Framework. Utilizing technologies that enhance the opportunities for developing teacher presence, student presence and cognitive presence, as described in the CoI benefits both totally online models and blended models. These technologies must incorporate some method of allowing the social interactions between the student and the teacher as well as between students. The opportunity to develop a sense of community in the learning environment is essential. For any school or district looking to improve student engagement and success in distance learning, serious consideration should be given to the synchronous virtual cohort-based model described in this document. While this model is by no means the ultimate method of delivering quality distance programming, it has shown significant improvements in engagement and completion in Yukon students based on a comparison between student records from prior to 2015 to current results.
Further development of this model by more than one district can only improve it and ensure positive growth in the evolution of best-practice.

**Conclusion**

The initial intent of this project was to lend credibility to the synchronous virtual cohort-based model of e-Learning by incorporating the elements of the Community of Inquiry Framework into a 100% online virtual blended learning program. To do this, a number of educators from various backgrounds and teaching assignments from BC and Yukon were invited to participate in a comparative discussion on the merits of the cohort model and the more common asynchronous model of distance learning. In effect, they became a virtual cohort that met synchronously and had asynchronous opportunities to create the dialogue around the topic. Similar outcomes were displayed by the group in comparison to Grade 8 – 12 students in coming together to build a community of learners. As the process of meeting together to discuss the focus questions progressed, the participants developed higher levels of trust with each other and the moderator, entered deeper into the synchronous and asynchronous, discussions, and genuinely looked forward to the next meeting. The learning created by the discussions was taken to even greater depth by some of the participants desiring and sharing personal contacts with each other to share ideas on best-practice in various online environments.

Feedback from the participant group was very positive and consistent in the message that the work of improving online learning with the inclusion of teacher driven synchronous elements needs to continue and professional dialogue on the successes and issues around this topic must expand. The feedback and experiences generated by this project have left no doubt in the author’s mind that the design of the cohort model and the pedagogy underpinning it are important and worth continuing to develop and refine.
References


http://dx.doi.org/10.1080/15391523.2005.10782436

http://viu.summon.serialssolutions.com/2.0.0/link/0/eLyHCXMwY2AwNtIz0EUrE9JARzuZGyRaAnsPBqlpxqlJaQbJwNojKcnE0CjNNBH1Ijr4HrEwz1DEYmmcp9bamgOTJngzObDtDjo_3yIoDHwpELD3YmQJbl9Aj3aC8UGb2covS5HqETdBtZU0OYCIQam1DxhBg7YqnNh0OXJ0UWJgwKwKt8AD28EENYIX8NAWnHPA4tQL0LNRL0UQYZN9cQZw9doPHx0PGXeFcnH4gDjCYYWIB9-IQJBgUDY2BwJKaZmIIJ0ObRVOO0FJNks8RkszRDM3NJBlGsRkJhEJdm4ALW5EaQsQ EZBpaSotJUWbAvAakxaEc

doi:10.1080/09523987.2012.662621

Chen, B. (2015). Exploring the digital divide: The use of digital technologies in ontario public schools. *Canadian Journal of Learning and Technology, 41*(3), 1. Retrieved from http://viu.summon.serialssolutions.com/2.0.0/link/0/eLyHCXMw1V1LS8QwEA67e_IiPvGxQkDwIpW-H4IHzn4gIHtzF45K0qfZgC27X328mmaZhC3v3VggTPrn5_F1MkNJ4F-5zppNSNFiIURQleNcqCiJVpyfw0L1yeqMZMiiC60YuhzIbjjv4v8H1VHCUD9UnjAW RVzhw19VYzDWD3y0afr1S5VmXb3UrU-gGOT3s1Lm041jT1MAMAkFB71gW4-CFlfycTYKgx-MLDZ0g1eJEpS0XI6BVGG1UDCrS2tic1aUpT1MFFkJdZFlamWE4c4wWYd_Ts3s6s6z7YaH6BZaN9XrXZQoKZZQHPVfTzLuAlunfRZW3N6J25u9jmYN-nSZdraxcdum5WtkGThiFV3Mds2vkV6q-HcJSNR78FEBxZxEffJhYKUSVorLUQ3rNZWgUgkqbuqzZINKq5oiqFSDShHA3L-9Di7f3Y6yRaoZMuFPnKnPBnOhDMqmbWhr RGkU-y8KY53nKQs4KLmJuY4-Uh34uchYfk-mmnu42L5-SrV4jpmTS_qzEGRn_Vqs_WgLfw


BLENDED VIRTUAL CLASSROOMS


Edmonton: School Technology Branch, Alberta Education.


doi:10.1080/15391523.2015.1103147


http://www.viu.ca/education/faculty_publications/hengstler/EducationforDigitalWorld2.0_1_jh89.pdf


Vaughan, N. D., Garrison, D. R., Cleveland-Innes, M., & Canadian Electronic Library (Firm). (2013; 2014). *Teaching in blended learning environments: Creating and sustaining communities of inquiry*. Edmonton [Alberta]: AU Press. Retrieved from http://viu.summon.serialssolutions.com/2.0.0/link/0/eLvHCXMwdV1LT8MwDLZgXlGgB41G2oVw5DLVpm6ZnxMQZTVyjZE3RJRN0CF-PnZIWVfRY2spjtNHbMefP4CUP8Tz3j_BrFKTrYq61KJKCA5JbdwkN5moai5rc0hE9xc3_neA-rXe7Q9QMTwRHR6HXj1zpcvr-3blJAnjMEFoblK3KRzkUkemjy118UQ2ojol_TWugO_8xhVdzafxRmcWElknMORdRdEs xxKMsZwvwy1kGztmHn32WwWeCDeWBfdDgl3i6fl4_McB1chZaNwEq1t6RWM3MbZG2CVrKi5DYZEeZzZuNaJcqa481cGJ2LCKZdY9T2t1-FQo8FvzIZwbXtCYKOCYY9SfPddKRxvaq2mga_jMIl6DPFeczVFebagm3asbkKe8JHJhnM6AybeDkgmccck9HQSmQKYyaj52d-efyA5u4zQ

Appendix A
Synopsis of key comments from synchronous meetings on Oct. 26, Nov. 2, 9, & 16, 2016 at 7:00 pm

These notes are a summary of the comments made via Goggle Docs during synchronous sessions.

Meeting 1

1. What constitutes engagement in online environments?
   - Engagement can be parsed into two categories: what occurs when the teacher and the student are able to meet together; and, what occurs in the meeting between the student and the content.
   - Students are engaged when they enjoy the content and methods within the LMS and respond to questions quickly.
   - When students attend synchronous class times consistently and are prepared to ask questions.
   - Maturity matters. There is a continuum of possible engagement in online environments where the younger a student is, the less able they are to engage in online learning activities.
   - The ability of students to negotiate an individual learning plan to meet the course objectives increases engagement. This is easier when there is more choice in content components and the number of courses available.
   - Technology is an important factor for engagement.

2. Are completion rates and student success reflective of each other? How are they tied to engagement?
   - Completion is determined by starting and finishing a course and is not reliant on a pass/fail designation.
   - Success is not necessarily related to completion. It is tied to the level of engagement in how invested the student is in the course. It is also seen in the level of relationship between the student and the teacher, as well as content, both academically and socially.
   - Success and completion are somewhat more closely tied as the student approaches graduation through their senior years.
   - Success can be individual when the student feels like they have accomplished something that, to them, is important. It can also be institutionally set when predetermined achievement markers are established to show that a certain amount of work or number of courses have been completed.
   - In BC, because every student enrollment is tied to funding, it is more important to ensure registrations than success. This impacts teachers to the point where some may not want high engagement as that would mean more work due to the high numbers in teacher/pupil ratios.
Meeting 2

Please add your thoughts and opinions on the following focus questions. Here are a few links to explore comparing asynchronous and synchronous e-Learning models:

https://www.mindflash.com/elearning/asynchronous-synchronous/

3. What are the perceived strengths and weaknesses of each online model?

- Synchronous provides real-time engagement that allows us to build off each other’s ‘in the moment’ comments
- Online video sync, or f2f classroom sync, offers us body language, visual expression and a level of social engagement not found in asynchronous, so basically another channel (recorded video gives us some, but only a part of that)
- Asynchronous provides for reflection, time to consider responses and to edit before posting (thank you default LMSs for allowing me to redo what I posted!)
- I think an element to consider is the demographics of the school. Elements such as continuous entry (or not), funding, critical mass, staff capabilities are factors that determine which model is viable to an extent.
- Another concept to throw into this discussion is the online of personalized learning. One definition of that is establishing a baseline and measuring milestones in the student’s progress and base evaluation on progress made instead of grade levels reached. A combination of asynchronous and synchronous models “blended” together might be viable in achieving “personalized learning”.
- Individual learning styles and needs dictate ability to succeed in synchronous or asynchronous - how we structure for that individual flexibility is the question for me
- In the synchronous model, we learn fairly quickly (within first month) students who need more time, less time, or will do only what you say to do when you say to do it. Through that relationship, we can work on their individual learning plan and structure for success
- Asynchronous allows students with mental or physical health issue to access learning in a safe and supportive environment.
- Synchronous provides a structure that is time bound which many learners need and, ultimately, thrive within.

4. How can a sense of ‘presence’ as defined by Garrison, et al, in CoI, be manifested in each model?

Please see the CoI website for the framework model:
https://coi.athabascau.ca/coi-model/an-interactive-coi-model/

- Teacher Presence
  - Relationships
  - Role model for work ethic
  - Interactive lessons
  - Dialogue
  - Personal interest in subject and students
• Social Presence
  o Relationships
  o Get to know student’s personality
  o Dialogue
  o Encourage group thinking / problem solving
  o Incorporate humor into lessons
  o Group work

• Cognitive Presence
  o Relationships
  o Someone who can direct (or teach concepts to) students to acquire info needed to learn what has to be learned. Strict asynchronous does not allow this.
  o Teacher passion about subject
  o Allow for tangential investigation

Meeting 3

5. Does learning in a cohort more readily provide the elements necessary for individuals within the group to experience the 3 forms of presence than learning independently?
   • I have trouble seeing asynchronous format allowing for social presence - bulletin boards and chats, forums and blogs tend to be impersonal.
   • “****”’s response is… it depends on the teacher and instructional model used
   • Synchronous easily meets the 3 forms of presence, asynchronous has a more difficult time with social presence but it can still be present through videos, conversations/questions in chat and through feedback with students on assignments. We see this everyday with students forming friendships/relationships over social media.

6. (How) Can a cohort, meeting synchronously in a virtual environment with a teacher, meet the requirements of any definition of blended learning?
   • “****” believes so… And tries to create that in my own online instructional practice
   • A concern is that someone will have a prescribed notion of the term ‘blended learning’ and that definition becomes both action and the way ‘it’ needs to be done. We need to have a flexible interpretation of Blended Learning. But perhaps what Blended Learning is not, is the better way to go.
   • Yes, especially if we are focusing on the blended learning definition that it includes the three presences
   • It also is important that the definition is clear not so much for teachers/ admin but for parents/ students

Meeting 4

7. Does a cohort model of online learning need to have a synchronous component in order to be effective and/or successful?
• “****” here: I am in “####’s camp… It depends, I think a good teacher reads their students and situation and adapts - so sometimes sync, sometimes/oft-times asynchronous. Teachers have to be in the learning moment of students. That means that they need to be accessible, and that students know how to, and are not intimidated to, reach out to them

• “****” again: A synchronous model in K-12 typically means a live talking teacher video connection that is really more of a one-way transmission model

• Independent learning is an oxymoron. Very few students can make independence work. Problem solving is not a strong aspect for many kids in the on line learning (or in F2F settings with the teacher in the room)

• Synchronous has different forms. Still dependent on relationships and sense of community.

• Connections make all the difference- thanks “^^^^”! :) I agree with “****” that a mix of asynchronous and synchronous is needed to be successful. No matter what, students need constant communication/ correspondence with teacher.

8. Are there different learning needs for students in online environments when they live in urban vs rural/remote locations?

• Yes! Yes!!

• Bandwidth, bandwidth, bandwidth… In urban environments we have way more opportunity to use connective technologies, so these students become both immersed and conversant with them.

• Yes, education backgrounds tend to vary. There are so many different learning needs to be met.

• Gives students the opportunity for courses they could not receive in their rural/remote location.

• Opens doors/ expose students to new jobs, careers, opportunities!

• Digital divide is alive and ugly.

• This difference makes synchronous cohorts essential to helping them feel that learning is important.

• Helps them build relationships with peers in their cohorts.

Summary:

Recommendations for changing or improving the cohort model of online learning:

• More time to develop interesting/relevant course content

• Understand the flexibility of the model of online learning

• The start anytime, self-paced, end anytime is not a realistic experience for the majority of students - I would argue perhaps 10 percent of the student body can do this. The other 90 percent of students require a connection to some structure or time of learning/space (as “****” expressed)

• I agree, especially regarding self-pacing- whether synchronous/ asynchronous they need communication/ timeline/ deadlines from their teacher

• The optimum size for online class size is 14 - as per research findings.

• Consider teacher course load / prep and base class size on that as well.

• Time to create / update / design courses.
Appendix B
Community of Inquiry Survey Instrument (draft v14)

Teaching Presence

Design & Organization
1. The instructor clearly communicated important course topics.
2. The instructor clearly communicated important course goals.
3. The instructor provided clear instructions on how to participate in course learning activities.
4. The instructor clearly communicated important due dates/time frames for learning activities.

Facilitation
5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.
6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.
7. The instructor helped to keep course participants engaged and participating in productive dialogue.
8. The instructor helped keep the course participants on task in a way that helped me to learn.
9. The instructor encouraged course participants to explore new concepts in this course.
10. Instructor actions reinforced the development of a sense of community among course participants.

Direct Instruction
11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.
12. The instructor provided feedback that helped me understand my strengths and weaknesses.
13. The instructor provided feedback in a timely fashion.

Social Presence

Affective expression
14. Getting to know other course participants gave me a sense of belonging in the course.
15. I was able to form distinct impressions of some course participants.
16. Online or web-based communication is an excellent medium for social interaction.

Open communication
17. I felt comfortable conversing through the online medium.

18. I felt comfortable participating in the course discussions.

19. I felt comfortable interacting with other course participants.

Group cohesion
20. I felt comfortable disagreeing with other course participants while still maintaining a sense of trust.

21. I felt that my point of view was acknowledged by other course participants.

22. Online discussions help me to develop a sense of collaboration.

Cognitive Presence

Triggering event
23. Problems posed increased my interest in course issues.

24. Course activities piqued my curiosity.

25. I felt motivated to explore content related questions.

Exploration
26. I utilized a variety of information sources to explore problems posed in this course.

27. Brainstorming and finding relevant information helped me resolve content related questions.

28. *Online discussions were valuable in helping me appreciate different perspectives.*

Integration
29. Combining new information helped me answer questions raised in course activities.

30. *Learning activities helped me construct explanations/solutions.*

31. *Reflection on course content and discussions helped me understand fundamental concepts in this class.*

Resolution
32. I can describe ways to test and apply the knowledge created in this course.

33. I have developed solutions to course problems that can be applied in practice.

34. I can apply the knowledge created in this course to my work or other non-class related activities.

5 point Likert-type scale
1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree
Appendix C

Aurora Virtual School Student Feedback Survey

Hello. At Aurora Virtual School, our goal is to provide our students with the best learning experience we can. We hope you will help us do that. Your opinion is important to us, so we would like you to take a few minutes to answer the questions in this survey. Please read the questions carefully and provide the best answer you can. If you do not understand the question, please ask your teacher for clarification. Your answers will be used to assist us in further refining our methods of designing and delivering courses to our students through the use of internet-based technologies. Thank you for your help. Please proceed to the survey questions.

To answer the questions, please use the following rating scale:
1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

A: My Teachers

A-1
1. My teachers clearly communicate important course topics.

2. My teachers clearly communicate important course goals.

3. My teachers provide clear instructions on how to participate in course learning activities.

4. My teachers clearly communicate important due dates/time frames for learning activities.

A-2
5. My teachers are helpful in identifying areas of agreement and disagreement on course topics which helped me to learn.

6. My teachers are helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.

7. My teachers try to keep the class engaged and participating in productive dialogue.

8. My teachers keep the class on task in ways that helped me to learn.

9. My teachers encourage us to explore new concepts in this course.

10. My teachers’ actions reinforce the development of a sense of community among the class.

A-3
11. My teachers focus discussion on relevant issues in a ways that help me to learn.
12. My teachers provide feedback that helps me understand my strengths and weaknesses.

13. My teachers provide feedback in a timely fashion.

**B: My Class**

B-1:
14. Getting to know other classmates gives me a sense of belonging in the course.

15. I was able to form distinct impressions of some other participants.

16. Online or web-based communication is an excellent medium for social interaction.

B-2
17. I feel comfortable conversing through the online medium.

18. I feel comfortable participating in the class discussions.

19. I feel comfortable interacting with other classmates.

B-3
20. I feel comfortable disagreeing with other class members while still maintaining a sense of trust.

21. I feel that my point of view is acknowledged by other class members.

22. Online discussions help me to develop a sense of collaboration.

**C: What I’m Learning**

C-1
23. Problems posed increase my interest in course issues.

24. Course activities pique my curiosity.

25. I feel motivated to explore questions related to what I am learning.

C-2
26. I utilize a variety of information sources to explore problems posed in my courses.

27. Brainstorming and finding relevant information help me resolve questions related to what I am learning.

28. *Online discussions are valuable in helping me appreciate different perspectives.*

C-3
29. Combining new information helps me answer questions raised in course activities.
30. *Learning activities help me construct explanations and/or solutions.*

31. *Reflection on course content and discussions help me understand fundamental concepts in this class.*

C-4

32. I can describe ways to test and apply the knowledge created in my courses.

33. I have developed solutions to some course problems that can be applied in real life.

34. I can apply the knowledge created in my courses to other activities not related to class.
Appendix D
Community of Inquiry Coding Template

This template is to be used to group responses from the Student Survey (Appendix C) to help evaluate how well the learning environment meets the elements of the CoI Framework.

<table>
<thead>
<tr>
<th>Elements</th>
<th>Categories</th>
<th>Survey Totals</th>
<th>Indicators (examples only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Teaching Presence</td>
<td>1. Instructional Management</td>
<td>Defining &amp; initiating discussion topics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Building Understanding</td>
<td>Sharing personal meaning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Direct Instruction</td>
<td>Focusing discussion</td>
<td></td>
</tr>
<tr>
<td>B: Social Presence</td>
<td>4. Emotional Expression</td>
<td>Emoticons</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Open Communication</td>
<td>Risk-free expression</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Group Cohesion</td>
<td>Encouraging collaboration</td>
<td></td>
</tr>
<tr>
<td>C: Cognitive Presence</td>
<td>7. Triggering Event</td>
<td>Sense of puzzlement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Exploration</td>
<td>Information exchange</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Integration</td>
<td>Connecting ideas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Resolution</td>
<td>Apply new ideas</td>
<td></td>
</tr>
</tbody>
</table>

Appendix E
Template for Professional Reflection on Instructional Practice

A. As an online learning teacher, what do you do to create a teaching presence in your classes?

1 Communicate course topics, goals, timelines, and expectations regarding assignments?
2 Provide instruction to students about participation in activities, productive dialogue, and task expectation, as well as providing instruction to help students master content and achieve learning outcomes?
3 Guide students to help identify areas of agreement / disagreement on course topics, help clarify students’ thinking about course topics, focus discussion on relevant issues, and help students explore new concepts in the course?
4 Foster the development of a sense of community among course participants, and provide relevant and timely feedback to students?
5 Select appropriate resources and/or develop learning materials and content for your students that meet the highest standards for quality and student usability?

B. As an online learning teacher, what do you do to create a social presence in your classes?

6 Create a sense of belonging and community for students?
7 Support student expression in online discussion, building a sense of collaboration?
8 Foster the use of a variety of communication strategies, including online strategies, for social interaction among students and teacher?

C. As an online learning teacher, what do you do to create a cognitive presence in your classes?

9 Foster student interest in course issues and content, while supporting the development of new perspectives through student reflection?
10 Encourage students to use a variety of information sources, techniques, and approaches to solutions when exploring problems posed in the course?
11 Support the testing and application of new knowledge for students?
Appendix F
Supports Needed For Virtual Cohort Model Design

District Level
- LMS Server
  - Moodle; D2L
- Course Shells
- Course Development
- Technology

School Level
- LMS Hosting
- Manageable Class Size
- Appropriate Technologies
  - Technology Hardware / Software
- In House Tech Support
  - Support and Service
  - Appropriate Workspace
  - Flexible Scheduling
  - Course Development Time
Appendix G
Invitation for Participation in Professional Community of Inquiry

Hello colleagues. I am looking for help and input to assist me in gathering data for my final project in MEDL. To this end, I am hoping to find 5 or 6 individuals that have extensive experience in teaching in an asynchronous DL model of online learning. My goal is to generate a dialogue focused on comparing the efficacy of an asynchronous DL model vs a synchronous cohort-based model. The discussions would be filtered through a lens using the Community of Inquiry Framework (https://coi.athabascau.ca/) as the core of how to develop a template to evaluate the efficacy of these models of online instruction. Thus, we would develop a CoI around this topic. The discussions would take place in 4 wholly synchronous sessions starting in October to mid-November. To help provide further focus, I am hoping to enlist the help of experienced DL teachers that have taught, or are teaching online. We will be looking to expand the nature of Blended Learning to include virtual classrooms as valid expressions of face-to-face experiences. If you are interested in participating in these discussions and furthering the research into alternate online learning environments, please contact me by October 10, 2016. I look forward to initiating this conversation amongst my colleagues from Yukon, BC and across Canada. Thank you in advance of your response.

Edward Frison