Effective strategies for supporting faculty in teaching high quality e-learning courses in post-secondary education

by

Stephanie L. Boychuk

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Liesel Knaack

Dr. Liesel Knaack, Major Project Faculty Supervisor Date:
Faculty of Education, Vancouver Island University

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Abstract

Online and blended (e-learning) delivery models were shifting the face of post-secondary education. That shift caused gaps in the understanding of good practice for high quality e-learning course delivery, leading to a need to support teaching faculty in the development of new competencies. This major project sought to develop effective strategies to support teaching faculty in their development of the competencies needed to deliver high-quality e-learning experiences. A fully-online learning resource was planned in conjunction with the Centre for Innovation and Excellence in Learning at Vancouver Island University and a review of the current literature. High quality e-learning was defined using two quality frameworks. In order to address all aspects of quality, three quality assurance tools were chosen to assess the learning resource. Constructive alignment was used to ensure the learning outcomes, content and activities were mutually supportive, and two design cycles were chosen to frame development. Two delivery models were chosen for future offerings of the learning resource. Beta testing revealed where the learning resource was not fully aligned to the quality frameworks or quality assurance tools. Improvements were made to the learning resource, and recommendations were made for its initial offering. Future research should include a research ethics approval so robust feedback can be gathered on the effectiveness of the learning resource in developing the competencies teaching faculty need to teach high-quality e-learning courses.

Learning Resource: https://d2l.viu.ca/d2l/home/80771 (please contact author for access)

Keywords: online, blended, e-learning, support, quality, frameworks, faculty, development
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Chapter 1 – Introduction

Purpose of the Major Project

The location of this project was Vancouver Island University (VIU) which had over 800 teaching faculty and 17 000 learners. Most of teaching faculty and learners were separated geographically across two campuses and three sites throughout the lower mainland of British Columbia. For the past few years, more learners and teaching faculty had become engaged in learning experiences beyond the classrooms of VIU. Many Faculties had been investigating the move to blended and fully online (e-learning) models of delivery in order to better meet the needs of their learners and expand their offerings to a wider audience. This growing interest in e-learning delivery had meant an increased demand for professional development offerings and support around how to teach and design e-learning experiences.

At VIU, the Centre for Innovation and Excellence in Learning (the Centre) focused on supporting the growth of teaching faculty. The Centre offered professional development offerings and individualized support to teaching faculty. The staff focused on developing competencies in teaching faculty so they would become more confident and independent users of technology. The Centre employed a team-based support model which paired teaching and learning specialists with technology support specialists thereby creating a holistic approach to educational development and technology use. The support model encouraged deep learning through intensive and immersive learning series (workshop-type experiences), in addition to individual consultations. The Centre did not have a learning series dedicated to e-learning, as it handled all e-learning support requests through individual consultations. This practice was not sustainable or scalable, especially due to the growing interest in e-learning at VIU.
To address and fill this gap, I proposed a fully-online learning resource which addressed e-learning pedagogies, especially around how to teach effectively in the online environment. The creation of this learning resource was influenced by the need to develop not only e-learning competencies in faculty members, but also a greater awareness of the linkages between content, pedagogy and technology knowledge. The TPACK framework described the interrelationships between these three types of knowledge within a specific context (Koehler, Mishra, & Cain, 2013). Teaching faculty were encouraged to contextualize and link the new technology knowledge to their existing content and pedagogy knowledge. Guided reflection and peer-interaction also encouraged teaching faculty to develop their understanding of e-learning pedagogy and its relationship to their current pedagogy.

This resource was delivered as a fully-online learning resource for a few reasons. The first reason was because many teaching faculty did not have experiences as students in fully-online environments to help them scaffold their understanding of e-learning. Fully-online delivery of this learning resource gave them a student experience in a high-quality model of e-learning delivery. The second reason this learning resource was delivered fully-online was to better meet the needs of all teaching faculty at VIU, and not just those who could travel to the main campus. Fully-online delivery allowed those teaching at any of the VIU campuses, sites, or distant locations to participate. The resource was designed to also encourage cross-departmental collaboration by providing a platform to meet, discuss and learn together. The development of an online learning community allowed teaching faculty to develop a network of peers to support their growth outside of the learning resource as well.

The fully-online resource also gave teaching faculty experiences using the suite of educational technology tools offered at VIU in our learning management system (LMS),
VIULearn. Even those teaching faculty with experience teaching online benefitted from an exploration of the many tools available and how they were used effectively to meet their needs and the needs of their learners. This experience allowed teaching faculty to learn new tools for their programs.

Given that this learning resource was the first exposure to e-learning pedagogy, design, and delivery for some teaching faculty, great care was taken to ensure that the learning resource was high quality. Careful examination of a variety of quality frameworks for design and delivery of e-learning resources was conducted before the resource was created. Quality assurance tools were used throughout the build to ensure the end result would be an acceptable model for teaching faculty. The course structure and learning experiences were engaging while encouraging active, deep learning and reflection. A series of learning paths through the content were developed to allow teaching faculty choice and flexibility, as well as modeling best practice for online delivery for adult learners (Cornelius & Gordon, 2009).

This major project was a necessity for the Centre given the interest in e-learning design and delivery at VIU, and the growing population of teaching faculty in need of pedagogy and educational technology support. In order to best meet the needs of the learners at VIU, the Centre met the needs of the teaching faculty in a way that developed their independence and supported their growth as educators.

**Justification of the Major Project**

Post-secondary education had begun to shift due to the emergence of e-learning teaching and learning models, both for distance learners and learners on campuses (Arinto, 2013; Crews, Wilkinson, & Neill, 2015; Garrison, Anderson, & Archer, 1999; Motte, 2013). Due in part to the increased demand by learners for the flexibility afforded by e-learning, many post-secondary
institutions were feeling pressured to expand their e-learning offerings in order to retain or attract learners (Kim & Bonk, 2006).

E-learning was a field in a state of growth and change, leading to challenges for implementation at both the institutional level and classroom level. Many teaching faculty struggled to adapt their current practices to an e-learning context; and those adaptations were ineffective if there was not a corresponding shift in pedagogy (Bell & Morris, 2009; Huss, Sela, & Eastep, 2015; Kim & Bonk, 2006; Koehler & Mishra, 2009). Teaching practice and pedagogy was not able to change without first developing an awareness that a shift is needed. Teaching faculty needed to be supported through that shift using a variety of faculty development techniques (Arinto, 2013; Bell & Morris, 2009; Koehler & Mishra, 2009). Once an awareness was developed and a shift had taken place, there was still a need to develop specific e-learning competencies of teaching faculty in order for effective practice to develop.

Kim & Bonk (2006) reported that the rapid shift toward e-learning at the post-secondary level had created gaps between perceived effective practice and what e-learning actually looked like. Their survey of members of Multi-media Educational Resource for Learning and Online Teaching (MERLOT) and the Western Cooperative for Educational Telecommunications (WCET) revealed that many teaching faculty believe pedagogical and technical competency in the e-learning environment will be the second and third most significant factors in the success of an e-learning program (the first being monetary support). The survey respondents also identified the need for the development of additional skills to successfully teach online – including course design and online facilitation or moderation.

Although much research had focused on e-learning course development and delivery (Branch, 2010; Crews et al., 2015; Huun & Hughes, 2014; Moloney et al., 2010; Salmon, 2004;
University of British Columbia Wiki, 2015), there was less research available on best practices for developing e-learning competencies in teaching faculty (Arinto, 2013; Bell & Morris, 2009; Huss et al., 2015; Koehler et al., 2013; Lane, 2013). Most of the research focused on professional development for teaching faculty related to process-oriented actions, such as writing discussion prompts. Larger e-learning pedagogy studies were more difficult to find, or suggested practices were not congruent with the Centre’s current support model. Professional development models generally advocated for online or open professional development that provided an authentic learning experience, which encouraged community development and reflection on current practice (Arinto, 2013; Bell & Morris, 2009; Koehler et al., 2013; Lane, 2013).

Although a variety of MOOCs and stand-alone resources have existed to train teaching faculty for e-learning design and delivery, the quality of some of these offerings was difficult to assess accurately without fully taking or engaging with them. In the case of MOOCs, there was the added difficulty that content would not be focused on the Canadian or British Columbian context, which would cause the development of misinformation for faculty. Koehler et al. (2013) discussed the context-specific nature of TPACK knowledge, emphasizing there was no “one size fits all” answer when it comes to pedagogy and technology. By developing a more VIU-specific learning resource, existing high-quality resources were tailored and contextualized as needed for our teaching faculty. A VIU-specific resource also encouraged teaching faculty to interact with their peers at VIU, which developed more robust professional learning communities within our own campus community.
Critical Question

The purpose of this study was to answer the critical question: What are the most effective strategies for supporting teaching faculty new to e-learning in teaching high quality e-learning courses for learners in post-secondary education?

Definition of Terms

e-Learning - an umbrella term to describe both fully-online and blended course delivery.

Fully-online delivery - all course structures, communications, assessments and interactions happen online

Blended delivery - portions of the course are delivered face-to-face and other portions are delivered fully-online

Teaching faculty or teaching faculty member - used to represent a professor, instructor, teacher, or facilitator

Learner – used in place of student or participant

VIULearn – the learning management system employed by VIU, software is Brightspace by D2L

Learning management system (LMS) – “a means to design, deliver and build online learning environments for a course” (Lai & Savage, 2013, p. 4) which usually contains both synchronous and asynchronous communication tools, assessment and evaluation tools and administration and user management tools

Synchronous – real-time communication or activities

Asynchronous – communication or activities that do not happen in real time

VIUOnline Rooms – a synchronous web conferencing system employed by VIU, software is Blackboard Collaborate by Blackboard
HTML - Hypertext Markup Language, which uses “tags” to describe how web content displays to users (Refsnes Data, n.d.)

The Centre – The Centre for Innovation and Excellence in Learning, VIU’s teaching and learning centre

**Brief Overview of the Major Project**

The major deliverable for this project was a fully-online learning resource developed for teaching faculty at VIU. This learning resource included activities and learning experiences to increase content and pedagogy knowledge in the context of e-learning delivery in VIULearn. When teaching faculty completed this learning resource, they had the competencies needed to successfully deliver high-quality e-learning experiences.

The major project deliverable was developed using the PDPIE and ADDIE development frameworks, discussed in detail in Chapter 2. Both development cycles were used in order to leverage the literature supporting quality design with ADDIE framework and the post-secondary education focus of the PDPIE framework. Summarized below are the stages of development for my major project, organized according PDPIE, with the support of ADDIE where noted.

**Planning Stage.** Following the first stages of both ADDIE and PDPIE, the project began by analyzing the needs of teaching faculty at VIU in comparison to the current offerings at the Centre. The initial structure of the learning resource was developed by considering successful methods of professional development from the Centre, in addition to the other methods found from a literature review. Quality frameworks and assurance tools were chosen to define and assess the quality of this learning resource.

**Design and Development Stage.** Once the initial structure was decided upon, a review of the literature and consultations with the Centre led to the development of six major
competencies and twenty-seven learning outcomes for the learning resource. After the learning outcomes were clearly defined, appropriate assessments of these learning outcomes were created. With both the learning outcomes and assessment drafted, a search for appropriate content was conducted and gaps in available content were identified.

**Production Stage.** Content, including text and media, was loaded into VIULearn using accessible HTML templates. The internal VIULearn tools were used to create assessments, which included individual and group work, as well as synchronous and asynchronous communications. Throughout this process, drafts were reviewed by the director of the Centre and feedback was collected.

**Beta Testing / Evaluation Stage.** The content and assessments were reviewed by the Centre team according to the Quality eToolkit. Teaching faculty were asked to review the learning resource according to a modified version of the Quality Online Learning and Teaching (QOLT) rubric. The teaching faculty review focused on specific learning paths through the series, which allowed teaching faculty to examine materials of the greatest interest to them and customize their learning experience. When both quality assurance tools were used, all aspects of the major project were able to be assessed. Following the evaluation phase, improvements were made to the learning series to reflect areas of need or gaps that were identified.

**Implementation Stage.** The learning resource was implemented with a group of teaching faculty in Spring 2016. During implementation, two models of e-learning delivery, the Five-Stage Model of e-Moderating and the Community of Inquiry (COI) were used. Both the Five Stage Model and COI framework presented challenges to e-learning delivery when used alone (Arinto, 2013; Garrison & Arbaugh, 2007; Lisewski & Joyce, 2003; Moule, 2007), so to overcome these challenges the frameworks were blended together for course delivery. During
the initial implementation, feedback was gathered from participating faculty members throughout the process and adaptations were made as needed.

Summary

This major project met a current need for the Faculties and teaching faculty at VIU. The learning resource allowed teaching faculty to become more confident and independent when delivering e-learning experiences for their learners. Teaching faculty also had the opportunity to reflect on their teaching practice and engage with their peers in order to better develop their pedagogy for e-learning.
Chapter 2 – Literature Review

Online and blended (e-learning) course delivery is growing in popularity, and with it the need to better prepare faculty members to design and deliver high quality learning experiences in this medium (Arinto, 2013; Branch, 2010; Garrison et al., 1999; Lane, 2013; Online Learning Consortium, 2015b; Salmon, 2004) so that optimal student learning is achieved. Currently, there are no formalized faculty development opportunities for teaching faculty at Vancouver Island University (VIU) wanting to develop e-learning courses outside of one-on-one consultations. While consultations benefit faculty with their specific questions, they do not contribute to being a sustainable or scalable practice for a teaching and learning centre to use as a core form of faculty support. In an effort to fill this gap, I am going to create a fully-online faculty training program to support the design and delivery of high quality e-learning modules and courses. For this literature review, I will begin by discussing case studies of effective online faculty development, and then define the quality frameworks which I hope to use. After outlining the quality frameworks, I will compare and contrast different quality assurance tools which can be used to ensure the faculty development meets needs and suggested learning outcomes. Finally, I will discuss online design and delivery models, which will inform the creation and delivery of faculty development, and serve as a model that faculty members can use in their own teaching practice.

Creating Effective Online Faculty Development

There are many different examples in the literature describing faculty development opportunities in the online environment focusing on preparing faculty for e-learning design and delivery. Some of the most common benefits of conducting faculty development in an online environment include: learning online allows faculty members to better understand the challenges
their students face; it allows them to become more comfortable with different models of e-learning delivery, and it is an opportunity to provide exemplars to and scaffolding for faculty members (Arinto, 2013; Bell & Morris, 2009; Huss et al., 2015; Lane, 2013; Lisewski & Joyce, 2003; Motte, 2013).

Faculty members must recognize the need for a shift in practice before they can make changes in their work. Faculty development must make them aware of the pedagogical benefits and challenges for the online learning environment (Arinto, 2013). The use of purposeful reflective triggers can help faculty apply their learning from the lens of their own teaching methods, which adds context and meaning for them (Arinto, 2013; Bell & Morris, 2009). Successful faculty development will incorporate peer interactions in order to build effective faculty support communities (Arinto, 2013; Bell & Morris, 2009). In order to highlight existing exemplary practices, experienced online faculty members should act as mentors for faculty members new to e-learning (Lane, 2013). Examples of good e-learning practice should utilize existing exemplary course materials to allow faculty members to incorporate others’ ideas into their own practices (Huun & Hughes, 2014). Faculty development must also be transformative, as many faculty members admit to being strongly influenced by negative past teaching experiences when choosing strategies for their online courses (Huss et al., 2015). In order to frame online faculty development to create shifts in practice, faculty members’ expert content and pedagogical knowledge should be respected and used as a scaffold for further development.

**TPACK Framework.** The TPACK framework (Figure 1) describes the interrelated nature of faculty members’ content (CK), pedagogy (PK) and technology (TK) knowledge (Koehler et al., 2013). According to the TPACK framework, it is critical for faculty members to understand how particular technologies influence content and pedagogy, so usefulness and
limitations of the technologies can be properly assessed. Faculty members must also understand how the interactions between their CK and PK create specific approaches to delivering course materials, which influences how they choose and apply technologies for their context (Koehler & Mishra, 2009). The TPACK framework is meant to be situated within a specific context, emphasizing there is no “one size fits all” solution to teaching with technology (Koehler et al., 2013).

Figure 1. The TPACK framework, showing the linkages between technological, pedagogical and content knowledge. Reproduced by permission of the publisher, © 2012 by tpack.org.

According to Koehler et al. (2013) there are a variety of approaches to developing faculty members’ TPACK knowledge. Arinto (2013) discusses a holistic method of faculty development focused on TPACK competencies, not focusing on technology, pedagogy or content knowledge in isolation. However, it is also possible to use existing PK and CK to inform technology knowledge, by reflecting on what technology integrations would be most effective in the individual faculty members’ context (Koehler et al., 2013). Given that technology
integration requires significant faculty buy-in before adoption will take place (Huun & Hughes, 2014), starting with faculty members’ strengths will likely foster a more positive experience. In order to develop high-impact, quality e-learning experiences for faculty members, it is important to first understand the frameworks which can be used to define quality in e-learning experiences.

**Frameworks for Defining Quality in e-Learning**

The quality of e-learning has many different dimensions, including “effectiveness of instruction, student learning, and understanding of how the participants perceive online learning” (Hirner & Kochtanek, 2012, p. 123). The establishment of a single framework for quality in e-learning is difficult. Although some structures were designed specifically for e-learning, other previously established structures should also be used to support a richer understanding of quality in e-learning design and delivery.

**Online Learning Consortium (OLC)’s Five Pillars of Quality Online Education.**

OLC (formally The Sloan Consortium) originally developed the Five Pillars of Quality Online Education to assess the quality of asynchronous learning networks in the late 1990’s. The pillars are: Learning Effectiveness, Scale, Access, Faculty Satisfaction and Student Satisfaction (Moore, 2005; Online Learning Consortium, 2015b). Each pillar represents goals, processes and progress indicators that can be used to assess a variety of different types of traditional and e-learning experiences (Laumakis, Graham, & Dziuban, 2009; Moloney et al., 2010; Moore, 2005; Online Learning Consortium, 2015a).

The OLC Five Pillars are effective in assessing the quality of a variety of program types because the pillars are easily transferable to a variety of teaching contexts from large-scale blended courses to smaller, cohort-based online programs (Laumakis et al., 2009; Moloney et al., 2010). Laumakis et al. (2009) used the OLC Five Pillars to holistically assess the overall quality
of a single course to identify areas where continuous developments were possible. The OLC Five Pillars have also been used to identify and assess the common characteristics of four different successfully blended programs (Moloney et al., 2010). Moore (2005) discussed course quality concerns, such as how to motivate students or engage faculty members, and looked at how they can be analyzed from the perspective of each pillar.

**Seven Principles of Good Practice in Undergraduate Education.** Chickering & Gamson (1987) developed the seven principles of good practice in undergraduate education based on years of research on how students learn. *The seven principles are:*

1. Good Practice Encourages Student-Faculty Contact
2. Good Practice Encourages Cooperation Among Students
3. Good Practice Encourages Active Learning
4. Good Practice Gives Prompt Feedback
5. Good Practice Emphasizes Time on Task
6. Good Practice Communicates High Expectations
7. Good Practice Respects Diverse Talents and Ways of Learning

(Chickering & Gamson, 1987, p. 2)

Crews, Wilkinson, & Neill (2015) discussed the Seven Principles in the context of e-learning. The authors conducted a survey of approximately 180 students in a fully-online undergraduate course to assess the course’s quality from the perspective of the Seven Principles, as well as determine which of the principles were most closely associated with student success. The study indicated Principles 2 and 5 required additional development, and the authors suggested these principles may be more challenging to achieve in online courses. When commenting on what helped them to be successful in the course, the students with grades of A or
B indicated aspects of all seven principles. This study indicates all seven principles are important factors in the quality of e-learning experiences.

Both the OLC Five Pillars and Chickering & Gamson's (1987) Seven Principles can be used as framework for quality in e-learning courses. The OLC Five Pillars focus on larger, highly transferrable program or course goals and the Seven Principles focus more specifically on factors aligned with student success. Using these two frameworks together allows for the development of a more robust collection of quality measures.

**Instruments for Quality Assurance**

Although both the OLC Five Pillars and Chickering & Gamson’s (1989) Seven Principles can be used to define quality, it is important to assess e-learning quality comprehensively at a more granular level. Quality assurance instruments should include aspects of both design and delivery of e-learning experiences in order to assess overall quality.

**Quality Matters (QM) Rubric.** The QM rubric is a set of standards for the design of e-learning courses which MarylandOnline began developing in 2003 (MarylandOnline, 2014b). Since then, the QM process and rubric have grown into the most commonly used standard for e-learning, supported by a robust research-based community (Huun & Hughes, 2014; MarylandOnline, 2014b). The QM rubric allows the assessment of course design quality through peer review, either officially through QM-Certified Peer Reviewers external to the institution, or unofficially at the institution level. The main QM principle is that course change and design is a continuous process that should be pursued in a collegial and collaborative environment (Huun & Hughes, 2014; MarylandOnline, 2014a, 2014b). The QM rubric assesses course design quality across eight standards with 58 objectives:

1. **Course Overview and Introduction**
2. Learning Objectives (Competencies)

3. Assessment and Measurement

4. Instructional Materials

5. Learner Activities and Learner Interaction

6. Course Technology

7. Learner Support

8. Accessibility and Usability (MarylandOnline, 2014c)

The standards and objectives can be reviewed in detail in Appendix A.

Huun & Hughes (2014) used the QM rubric to help redesign nursing courses. The authors identified common issues faced by students; which included a lack of clarity in areas such as file delivery, layout, assignments and navigation. In this study, faculty members created a rubric for course expectations and aligned it with the QM rubric. The QM rubric was used for alignment as it was seen as a credible “expert” tool, external to the institution, which created increased faculty buy-in to the redesign process (Huun & Hughes, 2014). From the QM aligned rubric, a course template was generated to allow faculty members to see the rubric “in action” to aid in course redesign. When students were surveyed on their course experiences after redesign, there had been improvements of student perceptions in all areas.

One downside of the QM rubric is that materials associated with the rubric standards require a paid subscription to access. This creates a barrier to access high-quality support resources and makes adoption of the rubric difficult. The QM rubric also focuses mostly on design of quality e-learning, and has very few standards that can be used to assess delivery.

**Quality eToolkit.** The Quality eToolkit was developed by eCampus Alberta to assess whether the quality expectations were being met for the courses they offer (eCampus Alberta,
Most elements of the Quality eToolkit focus on e-learning design. Through an extensive literature review, updated in 2013, eCampus Alberta created three levels of achievement – essential, excellent and exemplary – across seven categories with 27 objectives:

1. Course Information
2. Organization
3. Pedagogy
4. Writing
5. Resources
6. Web design
7. Technology (eCampus Alberta, 2013)

The categories and objectives can be reviewed in detail in Appendix B.

Each objective has a collection of online resources that are accessible without a subscription. There are also example materials at each level of achievement. Unlike the QM rubric, the Quality eToolkit currently has no peer-reviewed published materials evaluating its use. However, the Quality eToolkit borrows elements from a variety of tools that are peer-reviewed, provides access to a variety of supports, and presents those elements in a very clear manner (eCampus Alberta, 2013).

The Quality eToolkit has the added advantage of being licensed through Creative Commons, allowing free sharing and adaption of materials with attribution (CC BY), which allows the tool to be customized to specific contexts. The Quality eToolkit can be used to assure most aspects of quality in e-learning defined in the Frameworks for Defining Quality in e-learning section with resources that are freely available. It cannot be used alone as it focuses
almost exclusively on e-learning design. Both the QM Rubric and Quality eToolkit lack the ability to effectively assess quality in e-learning delivery, so another tool must be used.

**Quality Online Learning and Teaching (QOLT) Rubric.** QOLT was developed by the California State University Academic Technology Services, and is an improvement on many aspects of the Chico Rubric for Online Instruction (ROI), which had been used by California State University to assess quality on online instruction (California State University Chico, 2009; Center for Distributed Learning California State University, 2013). Unlike the two previously discussed instruments, QOLT seeks to access e-learning design and delivery. QOLT contains nine mandatory and one optional categories with 43 objectives:

1. Course Overview and Introduction
2. Assessment and Evaluation of Student Learning
3. Instructional Materials and Resources Utilized
4. Students Interaction and Community
5. Facilitation and Instruction
6. Technology for Teaching and Learning
7. Learner Support and Resources
8. Accessibility and Universal Design
9. Course Summary and Wrap-up
10. Mobile Design Readiness (optional) (Center for Distributed Learning California State University, 2014)

The categories and objectives can be reviewed in detail in Appendix C.

The categories are influenced by both the ROI and the QM rubric, but are also informed by research on effective practices such as Chickering & Gamson's (1989) Seven Principles.
Although QOLT does not have peer-reviewed literature examining its effectiveness, its structure comes from a variety of peer-reviewed sources (Center for Distributed Learning California State University, 2013).

QOLT allows open access to a variety of support resources, repository of example materials, and a “before and after” course exemplar. QOLT is also licensed through Creative Commons, allowing free sharing and adaption of materials with attribution for non-commercial purposes (CC BY-NC), allowing the tool to be adapted to specific contexts.

None of the instruments for quality assurance provide adequate coverage of all aspects of quality defined by the OLC Five Pillars or Chickering & Gamson's (1989) Seven Principles alone. The QM rubric and Quality eToolkit provide quality assurance and supports for e-learning design, whereas QOLT can provide assurance and support for design and delivery. All quality assurance instruments are structured to be readily useable and transferable to a variety of teaching and learning contexts, so careful adaption of all tools would ensure all quality definitions are met.

**Frameworks for e-Learning Design**

Once quality has been defined and instruments have been identified to assure that quality is achieved, it is possible to focus on specific frameworks to support e-learning design. Any framework utilized for e-learning design should consider what choices need to be made to align learning outcomes, assessment, and content. Additionally, the frameworks used should purposefully reflect on the nature of the subject matter, the learners, and the available tools and resources (Arinto, 2013). The ADDIE Framework is one of the most commonly used frameworks for course design, but the PDPIE Framework may be a better framework for faculty developing courses outside of teams.
**The ADDIE Framework.** ADDIE stands for *Analyze, Design, Develop, Implement* and *Evaluate* (Figure 2). The ADDIE framework was originally developed as a product development paradigm, but it has been applied to many e-learning design processes (Branch, 2010; Huun & Hughes, 2014). In general, the ADDIE framework is meant to be used with a course development team (including instructional designers, web developers, and faculty members) and is project-focused (Branch, 2010).

Branch (2010) lists the main procedures in the ADDIE framework at each stage. During the Analyze stage all stakeholders identify which aspects of e-learning design they want to develop or correct (the performance gap) and determine goals for the course. They will evaluate the kinds of learners who may take the course, consider what resources and timelines they are working with, and then create a project plan. The Design stage is characterized by examining the different tasks that will need to be completed and creating milestones for the project. The Develop stage deals with selecting, modifying or creating materials; including developing support materials for faculty members and students, and conducting a pilot test. The course runs during the Implement stage. During all of the four stages the project, the Evaluate stage is revisited in order to ensure the goals have been met.
In one study, ADDIE was used in conjunction with the QM rubric to develop learning management system templates and a support matrix for faculty members (Huun & Hughes, 2014). The authors note that ADDIE was utilized to prescribe how the project would be developed. During the Analysis stage student feedback was used to identify the perceived challenges students were facing in the online environment, which informed the project progression. The project underwent continuous evaluation which lead to an understanding of the additional needs faculty members had. Huun & Hughes (2014) describe moving through the ADDIE framework in a cyclical manner, as different aspects of the project were completed.

Although the ADDIE Framework is commonly used for e-learning design projects, it was not designed specifically for that task (Branch, 2010; Huun & Hughes, 2014). Generally it is paired with a quality assurance instrument, such as the QM rubric, or with a specific quality framework.

**The PDPIE Framework.** Unlike the ADDIE Framework, the PDPIE Framework (Figure 3) was developed from the perspective of instructional designers, specifically for online
course development; and can be applied to course design teams or individual faculty members (University of British Columbia Wiki, 2015). PDPIE stands for Planning, Design/Development, Production, Implementation and Evaluation. Where the central piece of ADDIE is continuous evaluation; PDPIE has quality assurance, with a much more robust evaluation stage at the end. PDPIE’s approach to quality assurance means that a variety of quality measures can be used during different stages of design, so a variety of quality assurance tools can easily be used in combination with this framework (University of British Columbia Wiki, 2015).

The stages of PDPIE are explained in detail by the University of British Columbia Wiki (2015). The first phase of PDPIE, Planning, involves analyzing the needs of the learners, indicating instructional goals, and outlining teaching methodologies; as well as describing project timelines and the roles and responsibilities of all stakeholders. During the Design/Development phase, there is a focus on selecting, modifying and/or creating the course content while utilizing a quality framework or assurance instrument. The Production phase entails building all of the content from the previous space into the online environment, including a focus on selecting the best technology for the educational goals while following accessibility guidelines. During the Implementation phase the course designer will ensure all necessary supports are in place after reviewing and testing the course. Finally, during the Evaluation phase, feedback is gathered from the students and faculty member(s) to inform reflection and improvement of the course.
The PDPIE framework has a variety of supporting documentation available online through the UBC Wiki, including peer-reviewed resources and quality assurance support.

Although no peer reviewed literature is available on PDPIE, the focus on educational design and feedback from faculty and students gives this process more validity from the perspective of post-secondary education.

**Teaching Models for e-Learning Delivery**

Just as there are many frameworks to aid in e-learning design, there are a variety of teaching models for e-learning delivery. Delivery models and frameworks should be reflected upon in the context of the faculty members’ practice and should not be used “off the shelf” without careful analysis and reflection (Lisewski & Joyce, 2003). Any delivery model employed should be flexible enough to support faculty members’ teaching styles and adjust to a variety of
contexts, while allowing for subject-specific adaptations. A challenge to adopting e-learning delivery models is the tendency for faculty members to avoid good methods that have been perceived to “fail” in the past (Huss et al., 2015).

**Five-Stage Model of e-Moderating.** Salmon's (2004) Five-Stage Model of e-Moderating (Figure 4) describes learners developing the knowledge, skills and attitudes necessary to interact and build knowledge together in an e-learning environment. The five stages are: **Access and Motivation, Socialisation, Information Exchange, Knowledge Construction, and Development.** Each stage has different considerations for technical support and e-moderating. As students move up the levels they interact more with their peers and tend to use more advanced online tools. This model is closely aligned with social-constructivist learning theory (Moule, 2007; Salmon, 2004).

The Access and Motivation stages happen when students get ready for e-learning and access the system. During the Socialization stage students establish their identities and interact with others, while the e-moderator guides students through the process. In the next stage, Information Exchange, students exchange course information with each other, while still receiving some guidance and prompts from the e-moderator. In the Knowledge Construction stage, students take more control of their learning and interactions, and the e-moderator serves as a guide. For the final stage, Development, students reflect on and integrate course learnings into their own personal context (Salmon, 2004).
The Five-Stage Model provides extensive support for the role of moderator in e-learning modes, and outlines many of the technical concerns that learners will face (Moule, 2007; Salmon, 2004). It also offers a robust model for transitioning learners from face-to-face or offline environments into an e-learning environment, through the increasing interactivity levels as learners move through the stages (Salmon, 2004). However, there is some concern that the Five Stage Model can be too restrictive, and does not offer a full explanation of the different aspects of e-learning.

Lisewski & Joyce (2003) found that the Five Stage Model did not allow enough flexibility for the different learning styles of the participants in a faculty development course. Additionally, the complexity of the work required in the higher stages of the Five Stage Model made participants feel that the course work was not evenly spread out (Lisewski & Joyce, 2003).
Similarly, Moule (2007) found that the Five Stage Model did not offer sufficient explanation or support for the role of the learner in e-learning. There is also evidence that the Five-Stage Model is difficult to apply to a blended learning environment and is better suited for fully-online courses (Moule, 2007). The lack of flexibility means care must be taken before using this teaching model (Lisewski & Joyce, 2003; Moule, 2007).

The Five Stage Model has many strengths, including highlighting the technical and facilitation considerations needed throughout the progression of the course. There is a strong focus on socially-constructed knowledge and the underlying assumption that faculty members should act as guides during e-learning experiences. However, the concerns with the model mean that other models should be considered to support a richer e-learning experience for both faculty members and students.

**Community of Inquiry (COI) Framework.** Garrison, Anderson, & Archer's (1999) COI framework (Figure 5) describes three elements in an online community – social, cognitive and teaching presence and their interrelationships. The social presence element describes how learners engage socially and emotionally with others, the faculty member and the course materials. The cognitive presence element describes how learners construct knowledge through interactions with their peers, the faculty member and the course materials. The teaching presence element describes the faculty member providing the appropriate design, facilitation and support for a cognitive and social presence in the course (Garrison & Arbaugh, 2007).
Figure 5. The Community of Inquiry Framework, showing the overlapping of social, cognitive, and teaching presence to create an educational experience. Reproduced from Garrison & Arbaugh (2007).

The COI framework has considerable attention in the research community. A search on Google Scholar reveals it has been cited more than 2700 times as of May 2015. Some of the strengths of the COI framework include its applicability to established learning theories, such as cognitive-behaviorist, social-constructivist, and connectivist; as a framework for e-learning delivery (Lane, 2013). The “Setting Climate” (Figure 5) piece points to the need for familiarity between students and between students and teacher, which can increase the desire to interact and helps students engage emotionally with the course and materials (Hew, 2014). Additionally, “Supporting Discourse” leverages social and emotional engagement to develop academic engagement which leads to a strong student-centered learning experience (Garrison & Arbaugh, 2007). In contrast, teacher-centered courses can lead to a decrease in learner autonomy and will have a low quality student-student dialogue (Huss et al., 2015).

Despite the many positive aspects of the COI framework, it can be challenging to build community in online courses. There have been calls for more rigorous research into aspects of
COI (Arinto, 2013; Garrison & Arbaugh, 2007; Huss et al., 2015; Lane, 2013). Perhaps the biggest challenge for integrating the COI framework is the need for faculty members to help students develop their community with appropriate tools and strategies, which many faculty members do not have experience with (Huss et al., 2015). When community is not created, students report that a lack of social and teaching presence in their online courses leads to feeling isolated and disappointed (Huss et al., 2015).

Both the Five Stage Model and COI framework are effective models for e-learning delivery, but both have challenges that need to be addressed when they are implemented. It is possible to blend the two models together during implementation in order to address some of the challenges. The Five Stage Model provides scaffolding support for technology and e-moderating and the COI framework provides a support for developing and utilizing the online community for learning.

**Conclusions**

Faculty development must be a process of continuous development coupled with experimentation, peer support, and critical reflection (Arinto, 2013; Bell & Morris, 2009; Lane, 2013). Leveraging the online environment to deliver faculty development can be effective. Using the TPACK Framework to inform technology use in practice can lead to transformative faculty engagement (Arinto, 2013; Koehler et al., 2013). When creating faculty development it is critical to understand that although faculty members are in the student role, they will need guidance in transferring the experience into their teaching practice. In order to effectively model high quality e-learning experiences, online faculty development should be informed by quality frameworks, and should be assessed using quality assurance tools (Arinto, 2013; Bell & Morris, 2009; Lane, 2013). By creating online support resources that focus on both quality design and
effective delivery, there is an opportunity to contextualize quality frameworks and assurance tools for faculty members at VIU. The design and delivery of online faculty development should be informed by models and frameworks which can be easily utilized by faculty members for their own practice (Garrison & Arbaugh, 2007; Salmon, 2004; University of British Columbia Wiki, 2015). This will provide opportunities for faculty members to reflect on their pedagogies and critically engage with their peers to create a shift in online practice towards high quality e-learning opportunities for students.
Chapter 3 – Procedures and Methods

Major Project Design

The intent of this project was to create a learning resource that would support the development of e-learning competencies for VIU teaching faculty. Not included in the scope of this major project is the delivery of this resource. The e-learning competencies were composed of both pedagogical and technological learning outcomes. These competencies helped faculty members deliver high-quality e-learning experiences.

The e-learning competencies guided the creation of aligned content, critically reflective activities, and opportunities for teaching faculty to engage with their peers in both synchronous and asynchronous formats. The materials were delivered fully-online using VIULearn in order to give teaching faculty experience as a learner using this learning management system. Delivery via VIULearn also allowed teaching faculty to become more comfortable with VIU’s educational technology tools to integrate into their own teaching.

The design of this major project answered the critical question: What are the most effective strategies for supporting teaching faculty new to e-learning in teaching high quality e-learning courses for learners in post-secondary education? This question was addressed through an analysis of the needs of the VIU teaching faculty and the existing literature. After designing and building the learning resource, input from teaching faculty and the Centre team was gathered to ensure it was an effective learning resource before it was implemented.

Major Project Development

Stages of the Major Project. To answer the critical question, the Centre was consulted on determining the needs of the VIU teaching faculty and what methods of professional development were most effective for their learning. While conducting the literature review, it
was decided that the development of major project would follow the PDPIE framework due to its focus on post-secondary educational design. Since PDPIE does not have the same support in the literature as the ADDIE framework, ADDIE was used as a secondary support for the design of the major project. By using both frameworks, it was possible to combine the many peer-reviewed sources of support for ADDIE with the post-secondary education focus of PDPIE.

PDPIE and ADDIE are closely aligned. The biggest difference between the two frameworks is the formalized Evaluation stage at the end of PDPIE, where ADDIE employs incremental evaluation throughout the development process. Both the incremental evaluation and formalized evaluation were used for quality assurance. The tasks at the Planning and Design and Development stages of PDPIE overlap with those in the Analyze stage of ADDIE, and in that case the PDPIE framework was followed. A summary of the stages of each design framework is available in Figure 6.

<table>
<thead>
<tr>
<th>PDPIE</th>
<th>ADDIE</th>
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<td>Planning</td>
<td>Analyze</td>
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<td>Design</td>
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<td>Implementation</td>
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<td>Evaluation</td>
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*Figure 6. Comparison of the stages of PDPIE and ADDIE.*

The PDPIE stages are referred to throughout this chapter.

**Timelines for the Major Project.** The deadline for the major project was December 2015. This allowed for the Implementation stage to occur after January 2016 to better match the work schedules of VIU teaching faculty. The Planning stage was conducted between April and
June of 2015. During that time the Design and Development stage began and was completed by July 2015. The Production stage started in late July.

The initial draft of the learning resource was completed in time for beta testing to begin in October 2015. The Production stage continued throughout the beta testing in order to make some improvements so better feedback could be gathered. The Production stage wrapped up in early December 2015, in order to make final preparations for Implementation and Evaluation in January to April 2016. These timelines are summarized in Figure 7 below.

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<th>Stage</th>
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Figure 7. Gantt chart detailing the stages of PDPIE, with the applicable stages of ADDIE in brackets, in relation to their approximate month of completion.

**Beta Testing Timeline.** Beta testing began the week of October 5, 2015 when members of the Centre team were invited to provide input. Their initial feedback was gathered for two weeks and used to make critical changes to the learning resource. On October 19, 2015 VIU teaching faculty were invited to provide feedback on the learning resource. The learning resource and feedback survey remained open for them for four weeks until November 13, 2015. Focus groups were conducted on November 16, 2015 and November 18, 2015 to gather additional input from teaching faculty. Between October 5, 2015 and November 20, 2015 the Centre team continued to provide informal feedback on the learning resource.
It is important to note that the Implementation and Evaluation stages fell outside of the scope of the major project deliverable, but represented a continuation of this project as a useful resource for the Centre and VIU teaching faculty.

**Major Project Delivery / Implementation**

**Planning Stage.** The project was designed and developed in consultation with the director of the Centre. It was decided to focus the project on e-learning delivery (teaching of online courses) competencies. E-learning design (interface design and content layout) competencies were not included in the scope of the major project. The review of the literature informed the decision to create a facilitated fully-online learning resource.

A literature review was conducted in order to identify frameworks for defining quality e-learning. It was expected that this learning resource would become a model for teaching faculty in the future, so it was critical that this learning resource served as a model of good course design. The Five Pillars of Quality Online Education (Online Learning Consortium, 2015a) and the Seven Principles of Good Practice in Undergraduate Education (Chickering & Gamson, 1987) were identified as useful frameworks to define quality in e-learning. Both of these frameworks were adopted and used to inform the choices of quality assurance tools.

The QM rubric (MarylandOnline, 2014a), the Quality eToolkit (eCampus Alberta, 2013), and the QOLT rubric (Center for Distributed Learning California State University, 2014) were the quality assurance tools used to evaluate the learning resource. All three tools were used to ensure the learning resource was reviewed from both e-learning design and delivery standpoints. The QM rubric and Quality eToolkit were used as a self-assessment measure, and informed the development of beta testing questions for the Centre team. The QOLT rubric informed the development of the feedback survey used by teaching faculty during beta testing.
**Design and Development Stage.** The learning resource was designed following the principle of constructive alignment. Constructive alignment of the learning resource involved writing specific intended learning outcomes (ILOs) using measurable descriptors, and then aligning assessments and teaching and learning activities to them (Biggs, Tang, & Education, 2011). The assessment, teaching and learning activities, and ILOs create a feedback cycle which aligns all processes learners conduct to appropriate learning tasks. Figure 8 is a graphical representation of constructive alignment.

![Figure 8](image)

*Figure 8.* Constructive alignment of intended learning outcomes, assessment tasks and teaching and learning activities. Adapted from Biggs et al. (2011).

Key competencies for e-learning delivery were identified from the literature and developed based on the past needs of the VIU teaching faculty. Six competencies and twenty-seven learning outcomes were then written, as outlined in Appendix D. The learning outcomes were carefully designed so they were all observable and could be tied to assessments and learning activities. The competencies and learning outcomes sought to address pedagogical and technological outcomes, in order to create a holistic learning resource and develop teaching faculty’s TPACK knowledge (Arinto, 2013; Koehler et al., 2013). These outcomes also included items related to educational technology tools offered at VIU.
Once the competencies and learning outcomes were drafted, consideration was given to how they would align in the learning resource (Figure 9). Each competency was examined and classified as either pedagogy or technology focused. All pedagogy competencies were paired with a supporting technology competency, creating three modules for the learning resource. The modules were designed to ensure pedagogy was linked to technology to support the development of TPACK knowledge. The modules were then sequenced so more complex competencies and those requiring more teaching faculty member independence came at the end of the sequence. This sequencing also helped to inform the structure and complexity of the assessments and learning activities.

![Figure 9](image.png)

**Figure 9.** Pairing of competencies based on either pedagogy or technology focus to create holistic, sequenced modules for the learning resource.

Authentic assessments were developed and closely aligned to the competencies and learning outcomes. These assessments included critical reflection activities which encouraged teaching faculty to contextualize and apply their learning. Assessments also included authentic use of the technology tools. There were many opportunities for teaching faculty to share and discuss ideas together to encourage critical discourse and the development of a professional learning community.

Finally, a review of currently available content and open educational resources (OERs) informed what content could be reformatted and where new content needed to be written. All
content was aligned to both the learning outcomes and assessments. Appendix E outlines the alignment between the competencies, learning outcomes, assessments and content in Module 1.

**Production Stage.** The competencies, learning outcomes, assessments and content were created within the learning management system, VIULearn. A template was created to provide a consistent look and feel for all content. Using this template also ensured content would be accessible to screen readers and meet Web Content Accessibility Guidelines (WCAG) for colours and fonts.

Creation of the learning resource began with building the modules and submodules. Once these were created, they were populated with content and activities. Following best practice, folders corresponding to the modules were also created. This allowed all uploaded or created files and resources to remain organized and easily accessible if edits or troubleshooting was required.

The assessments were created using the tools available in VIULearn. Each activity was created in its own “tool area” in VIULearn. After they were created, the activities were manually added into the modules and submodules. Adding activities to modules allowed them to appear in sequence with related content, making navigation easier for the participant. Content was created by building “files” (HTML pages) within VIULearn. First a file was created, then a style template was applied to the page for a consistent look and feel. Headings and text were added to the file using the HTML source editor in order to maintain the integrity of the style template. Multimedia (images, videos and links) were then added to the file using the WYSIWYG editor. Links to activities within files allowed participants to navigate through the learning resource in multiple ways. Any links to files required for undertaking an activity were then created by
editing the activity. Appropriate descriptive activities (wrappers) were then added to the beginning and ending of each module, and links to content and activities were added as needed.

References to the original work were included when content was reformatted. Original work included academic and non-academic readings, OERs and media produced by both VIU and other organizations. References were used to model best practice for content adaption and aligned with the expectations of the quality assurance tools (Center for Distributed Learning California State University, 2014; eCampus Alberta, 2013; MarylandOnline, 2014c). Wrappers were added to content modules to increase the usability of the learning resources and ensure the resource followed the Seven Principles of Good Practice in Undergraduate Education (Chickering & Gamson, 1987; Crews et al., 2015). Examples of wrappers included: module outlines, checklists of learning outcomes with links to the aligned content and assessments, summaries of required readings and resources, self-assessments for module learning outcomes, and materials to bridge to the next module. A visual overview of the learning resource is available in Appendix F.

Throughout the Production stage, content was reviewed by the director of the Centre in order to maintain consistency and ensure acceptable standards were achieved. The QM rubric and Quality eToolkit were used to self-assess the development of the content and assessments.

Once the learning resource was complete, learning paths were developed. The learning paths were developed to model how learners could be given choice in how they engage with and navigate within the content. Learning pathways allowed adult learners to personalize their learning experience and research indicated that this increases user satisfaction, as long as structure was provided around expectations (Cornelius & Gordon, 2009). The learning paths
provided a structured way for teaching faculty to choose materials in which they were most interested.

The learning pathways were based on the perceived needs of the teaching faculty at different levels of competency for online teaching, and in consultation with the director of the Centre. The following themes were chosen for the learning paths:

1. Path A - Pedagogical Overview of Teaching Online
2. Path B - Using VIULearn to Teach Online
3. Path C - Online Community and Communication Strategies
4. Path D - Assessment of Learners Online
5. Path E - Entire Teaching Online Learning Resource

The details of each path are outlined in Appendix G. Path A encouraged teaching faculty new to online teaching to develop a pedagogically sound foundation and did not address specific technology tools. Path B was created for teaching faculty already familiar with online teaching who wanted to learn more about the technology tools VIU offered. Paths C and D offered both pedagogy and technology content focused on specific tasks related to teaching online. Path E was a journey through the entire learning resource.

**Beta Testing and Evaluation Stage.** Although the Evaluation stage is the final stage of PDPIE, it was critical that more in-depth evaluation of the learning resource was conducted before the Implementation stage, so the more incremental Evaluate stage of ADDIE was utilized to beta test the learning resource.

The director of the Centre sent an email to all current VIU teaching faculty (approximately 800 people) in order to gather feedback from the potential users of the learning resource. The email invited them to preview and provide input on a new learning resource. It
was hoped this approach would attract a random collection of teaching faculty from a variety of disciplines and experience levels. By sending out an email invite to all teaching faculty, potential interest in the learning resource was also able to be assessed. Those interested in previewing the learning resource replied by email. They were enrolled in the learning resource and provided with a follow-up email, containing instructions on how to access the resource, an explanation of the learning paths, PDF files outlining each learning path with both visual and written maps through the content, and an invitation to an orientation to the learning resource if desired. The initial invitation email and follow up email are available in Appendix H.

The learning resource remained accessible to the teaching faculty for one month. During that month, they were encouraged to follow a learning path or to browse anywhere throughout the resource. They were also encouraged to attempt learning activities or assessments if any appealed to them. The options to work with a peer on activities or be involved in a mock-facilitated experience were also offered to teaching faculty. During the month, the learning resource was monitored. Discussion posts were replied to and feedback was provided to participants on some activities and assessments.

A short survey was created with questions based on the nine mandatory categories of the QOLT rubric. The survey questions were designed to be jargon-free so that teaching faculty without a teaching or technology background would feel comfortable answering them. The first section of the survey had questions about the experiences teaching faculty have had online as both as learner and teacher. The survey also included Likert ratings and open text responses for statements about the introduction, content and activities, interactions and design of the learning resource. The final section of the survey asked teaching faculty to consider what delivery options and timing would work best for them in future offerings of the learning resource. The
survey questions are included in Appendix I. None of the survey questions were mandatory and all responses were anonymous. The survey was built and delivered using Checkbox, an online survey tool which was already in use at VIU and complied with BC Freedom of Information and Protection of Privacy (FIPPA) legislation.

Teaching faculty were also encouraged to attend one of two focus group sessions held after the learning resource was closed. The focus groups allowed for an informal gathering of feedback and for teaching faculty to offer input if they did not wish to complete the survey online. Additionally, some teaching faculty provided feedback outside of the survey and focus group sessions via email or informal conversations. Teaching faculty were reminded about the survey and focus groups three times over the course of the one month learning resource preview, through email as well as within the learning resource itself.

Feedback was also sought from members of the Centre team. The team was invited to provide feedback after an initial overview of the learning resource goals. This feedback was sought because the Centre team would ultimately recommend and deliver the learning resource to VIU teaching faculty. They frequently worked with teaching faculty on teaching, learning and technology concerns. This gave them an insight into the needs of teaching faculty. The Centre team were encouraged to access and review the learning resource before teaching faculty were invited to do so, and were given additional opportunities to review the learning resource during the same period as the teaching faculty.

The initial feedback gathering from the Centre team was completed during a face-to-face presentation outlining the goals of the learning resource coupled with a tour through the content and activities. The initial feedback was mainly focused on the learning outcomes, delivery options and navigation. After the initial presentation, additional feedback was gathered using
informal individual interviews and emails focused on the seven categories of the Quality eToolkit. This feedback was focused on the learning resource structure and underlining e-learning design and delivery choices.

Once feedback was collected from the Centre team and VIU teaching faculty, improvements were made to the learning resource to reflect the feedback, as discussed in Chapter 5.

**Implementation Stage.** The learning resource was implemented during the Spring term of 2016. A combination of a survey along with informal feedback was gathered from participants at regular intervals during implementation. Major challenges experienced by the participants were addressed during implementation where possible. Both the Five Stage Model (Salmon, 2004) and COI framework (Garrison & Arbaugh, 2007) were used during implementation in order to model effective e-learning delivery techniques.

**Evaluation Stage.** Once the learning resource had been successfully implemented, an in-depth evaluation was conducted. During this time, additional feedback and input from participants was collected. Additionally, the facilitator provided input on the e-learning delivery using the QOLT rubric to frame their reflection and input. Both the participant and facilitator input was used to improve the learning resource for the next offering.

**Summary**

In order to answer the critical challenge question, a learning resource was developed after analysis of needs and current literature was conducted. Through the design process, consultations with the director of the Centre ensured the project was meeting expectations and would be valuable to the Centre as well, as the VIU teaching faculty. Once the learning resource
was developed, additional input was gathered from teaching faculty, as well as members of the Centre team in order to assure the learning resource would benefit the target audience.

The design process followed both the ADDIE model supported by the current literature and the newer post-secondary focused PDPIE model. These design cycles were chosen in order to model best practice for teaching faculty and to assure quality of the completed learning resource. In the following chapter the beta testing results from teaching faculty and the input of the Centre team will be summarized.
Chapter 4 – Field / Beta Testing and Findings

Beta Testing Methods and Process

The intent of my major project was to answer the critical question: What are the most effective strategies for supporting teaching faculty new to e-learning in teaching high quality e-learning courses for learners in post-secondary education? In order to address this question consultations with VIU’s Centre for Innovation and Excellence in Learning (Centre) and a review of the literature on faculty development of e-learning competencies was completed. A fully-online learning resource for VIU teaching faculty was designed and built to support their development of key e-learning competencies. In order to beta test this resource both VIU teaching faculty and the Centre team were invited to explore and provide input into the learning resource, as outlined in Chapter 3.

The input from the VIU teaching faculty was gathered using an online survey based on the QOLT rubric, through the use of focus groups and informal emails or conversations. The Quality eToolkit informed the feedback from the Centre team. The feedback from the Centre staff was gathered during a formal presentation of the resource, informal interviews or email. The feedback from both the VIU teaching faculty and the Centre team was used to assess the effectiveness of the learning resource. This feedback was also used to make improvements to the learning resource before implementation.

Beta Testing Participation. Thirty-two teaching faculty expressed interest in providing input on the learning resource. Twenty-two of them accessed the learning resource in VIULearn, and seventeen submitted the survey. One teaching faculty member chose to attend the face-to-face focus groups and two others provided informal feedback using other methods which were not anonymous.
Four members of the Centre team provided feedback during a presentation, through informal interviews or email. In these cases, the feedback was not gathered anonymously.

**Findings of Beta Testing**

The survey was organized into six categories: demographic information, introduction, content and activities, interactions, design, and future offerings. Feedback from focus groups and the Centre team were reported as part of the major categories of the survey.

Since there were no mandatory survey questions, there were instances where less than seventeen responses were gathered to specific questions. On questions where teaching faculty could select their responses, blank responses could represent either disagreement or choosing not to answer the question. In those cases, positive responses are taken as the only reliable response to the question.

**Demographic Information.** All information in the demographics section was collected through selected responses. Positive responses are the only ones that can be stated with certainty, as a non-response could include someone not wishing to share that information.

**Experience as learners.** Twelve of the seventeen teaching faculty reported being learner in at least one fully-online course. Only four reported having experience as a learner in a blended course.

**Experience as teaching faculty.** All but one survey respondent had taught face-to-face, twelve had taught in the blended format and seven had taught fully-online. Of those that had taught face-to-face, the average number of years they had been teaching was sixteen. In contrast, the average number of years faculty members had teaching in blended or fully-online environments was three and five respectively. Twelve teaching faculty had completed some form of professional development related to e-learning in the past. Many had previously taken
professional development from the Centre, and about half had taken some form of diploma or program related to e-learning.

**Learning path choice.** When asked which learning path they chose to review, seven teaching faculty did not review a specific learning path, six reviewed learning path E, two chose path A, and one chose each of paths B, C and D. At least one teaching faculty member chose multiple learning paths during their review.

The demographic information was used to understand the lenses faculty members interpreted the learning resource through. The responses received in the other categories were developed into five themes: organization and web design, depth and breadth of materials, e-learning design, time and workload, and additional comments. The five themes used to frame the remaining survey data were drawn from the major categories of the QM rubric, the Quality eToolkit and the QOLT rubric, summarized in Figure 10.

<table>
<thead>
<tr>
<th>Themes From Feedback Survey</th>
<th>Quality Assurance Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization and Web Design</strong></td>
<td>Quality Matters (QM) Rubric</td>
</tr>
<tr>
<td><strong>Depth and Breadth of Materials</strong></td>
<td>Course Technology, Accessibility and Usability</td>
</tr>
<tr>
<td><strong>e-Learning Design</strong></td>
<td>Learning Objectives (Competencies), Instructional Materials</td>
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<td><strong>Time and Workload</strong></td>
<td>Assessment and Measurement, Learner Activities and Learner Interactions</td>
</tr>
<tr>
<td><strong>Additional Comments</strong></td>
<td>Learner Support</td>
</tr>
</tbody>
</table>

**Figure 10.** Categories of the QM rubric, Quality eToolkit, and QOLT rubric in relation to the five themes used to organize the beta testing feedback.
The themes were drawn from the quality assurance tools in order to align the feedback to effective e-learning practice.

**Introduction.** Sixteen teaching faculty answered the Likert questions on the learning resource introduction and learning outcomes. Ten teaching faculty also provided additional comments in a separate section of the survey.

**Organization and web design.** The comments indicated that the introductory material was clearly laid out and easy to follow. One teaching faculty member wrote that “[t]he formatting of the course shell makes the information very easy to read and follow. It captures the attention and gives a very positive impression of the course quality.”

**Depth and Breadth of Materials.** Fourteen teaching faculty agreed the introduction material was useful. Two participants reported they did not review these materials. One participant wrote, “I found the Introduction very helpful and would recommend it to anyone exploring on-line teaching.” However, some respondents indicated there was too much material in the introduction, which created a barrier to entering the course. One teaching faculty member wrote: “I was a bit overwhelmed! There is a lot of information. Once I got in to it, it was fine, but initially it was a lot.”

When asked whether or not the learning outcomes of the resource were easy to understand, thirteen respondents agreed or strongly agreed. Many comments from both teaching faculty and the Centre team indicated the learning outcomes were “very comprehensive and specific.”

**e-Learning Design.** The Centre team suggested that the learning resource be offered in “chunks” so they did not overwhelm teaching faculty at first. One teaching faculty member
suggested leveling the learning resource according to number of years of online teaching experience or level of comfort with e-learning.

Many comments were about the desire to have the learning paths clearly labeled within the learning resource itself instead of as separate documents. The Centre team further suggested separating the learning paths into separate course shells within VIULearn to minimize busyness within the learning resource.

**Time and Workload.** There was concern from faculty members about the number of learning outcomes and what was manageable given the heavy workloads many faculty have at VIU. This concern was echoed by the Centre team: “I do think at some point you will need to peel or parse out the paths as the whole course could seem daunting to some.”

**Additional Comments.** Two members of the Centre team offered feedback on the tone of the introduction content, noting it was inconsistent with the rest of the modules: “You sound like you are talking to students in the introduction, and then to faculty in the modules.” They suggested using the introduction materials to better frame the learning resource as a model course, as this was unclear to them. Although they liked the inclusion of learner-focused materials in the introduction, it required a more detailed wrapper to be useful for teaching faculty.

**Content and Activities.**

Sixteen of the seventeen teaching faculty answered the Likert questions which were related to the content. All faculty members felt they understood how the content was related to the learning outcomes. Only one faculty member experienced a technical challenge when accessing the content. Most faculty members appreciated having variety in the course content as
they indicated it helped them to be more fully engaged. This data is summarized in Appendix J, Figure J1.

Sixteen of the seventeen teaching faculty answered the Likert questions focused on feedback about the learning resource’s activities. Seven teaching faculty indicated they completed at least one individual activity in the learning resource and two indicated they completed a class or group activity. The link between the activities and learning outcomes was not as clear to participants as the link between the content and learning outcomes. However, most agreed that activities would help them achieve the learning outcomes. Most teaching faculty found the activity instructions useful, but two did not. This data is summarized in Appendix J, Figure J2.

**Organization and web design.** All of the Centre team commented on the HTML template and how it helped keep the look of the learning resource content consistent and professional. Many teaching faculty were happy with the template and asked questions about having it in their own courses: “The only other thing that I wondered about is the actual layout of the course pages with the blue border - this is fantastic and makes the course more appealing. How do we create these?” One teaching faculty member noted that some headings were inconsistent without noting which pages. Faculty also reported some challenges when accessing transcripts or closed captioning of videos for those who were deaf or hard-of-hearing.

One teaching faculty member commented that the content in the learning resource had too many scrolling pages. Another teaching faculty member commented the there was too much clicking between pages and content should be more condensed, saying “I found the site a bit 'clicky' and would prefer to see more of the links combined to form longer pages.” Two other
teaching faculty wanted pages to be more easily printable or exportable from the learning resource so they could save the content they were interested in revisiting later.

**Depth and Breadth of Materials.** Most teaching faculty commented positively on the variety of methods for consuming content (readings, videos) although some felt the learning resource was still text-heavy. Those that felt there was too much text indicated that the learning resource was not friendly to a variety of learning styles and should include more images and video. It was further suggested that the learning resource could make better use of OERs to provide more variety in the content.

Members of the Centre team were generally positive about the content variety in the learning resource. One person commented that they “actually learned quite a bit from the different resources and found some new go to information.” It was suggested by one member of the Centre team that more materials from their website should be incorporated into the learning resource, and that some of the learning resource materials should also be made available on the website. Three members of the Centre team also mentioned that the wrappers were well-used and helped to frame the learning outcomes. It was noted that although the learning outcomes are part of the content, it might be useful to include a brief statement about how best to apply each learning outcome in order to provide further context for teaching faculty.

One teaching faculty member expressed a concern about the lack of content from practicing teaching faculty. It was suggested that the content could include strategies, stories or small vignettes of faculty members from VIU to lend more credibility to some content while making it more approachable. It was further suggested that “dealing with problematic situations” should be included as part of the learning resource at key points to provide some supports for teaching faculty when things do not go as planned.
About half of the teaching faculty who logged into the course engaged with the icebreaker activity, general course discussions, or “Module 1” activities. Many commented on wanting to integrate similar activities into their own courses, and appreciated the variety of activities: “The learning activities were especially diverse, varied and creative. They engaged learners with a variety of products to demonstrate learning.” Two teaching faculty found the level of detail of the instructions for these activities to be “too much”.

It was noted by one member of the Centre team that being explicit about which activities are models for undergraduates would make these activities more approachable for faculty members. Additionally, other members of the Centre team expressed that some activities, like reflections, may require more scaffolding to be effective for faculty members to use in their own teaching.

**e-Learning Design.** Some teaching faculty expressed a desire for options to complete activities, like the learning paths for content. One teaching faculty member commented specifically on including more activities for each learning outcome in order to reinforce their learning and allow multiple opportunities to practice skills. It was pointed out many activities are highly prescriptive, which did not necessarily follow UDL principles. Some members of the Centre team noted that most activities were highly text-based, and would represent a large workload for the person delivering the course in terms of providing feedback and monitoring discussions.

Of the faculty members who completed activities and left additional comments, most expressed that the activity instructions were clear and that the activities were interesting to them. One respondent stated that they enjoyed how easily the readings and videos fed into the activity.
Time and Workload. It was difficult to gauge time and workload concerns as most teaching faculty and Centre team members did not have sufficient time to engage fully with the content or activities by their own admission. Most concerns mirrored those from the introduction and focused on the volume of information and the time needed to fully engage with the learning resource.

Additional Comments. There was a technical challenge identified by the Centre team for Mac users with two specific pages in the learning resource, which teaching faculty experienced as well.

Two teaching faculty also commented on the “academic” tone of the learning resource. One said:

The lingo was a little ponderous. I'm not so interested in "synchronous" and "asynchronous" or "leveraging" anything, but I am interested in the types of activities included. As an academic, I am always aware of the academic lingo that gets attached to activities. I find it heavy, heady, and inaccessible. You'll find lots of academics who disagree with this statement. I would rather be drawn in with language that's inviting and entertaining, especially in a subject matter that is about the dryness of web design.

In contrast, the academic nature of the tone was appealing to another teaching faculty member, who commented that it helped make the learning resource “feel more professional”.

Interactions. Sixteen of the seventeen teaching faculty answered the Likert questions about the interactions. Twelve faculty members also included additional comments. Although many agreed that real-time communications with other participants and engagement with a
facilitator would be valuable, many others were unsure or disagreed there would be value in additional interactions. This data is summarized in Appendix J, Figure J3.

**e-Learning Design.** Many faculty members stated they found it interesting to interact with others in the discussions for the one month period, and would have liked to have time to do more, whereas others commented that it took too long to get a response from others and was not effective. One participant suggested “I thought I would have learned a lot from the other participants if I had access to synchronous discussions.”

Seven respondents commented on the participant interactions being a rich part of the learning experience for them in other courses, or in this preview, and they saw that as a necessary part of this learning resource. They also mentioned the advantages of offering both face-to-face and online interactions to allow more flexibility for teaching faculty. One participant mentioned that teaching faculty could be encouraged to get together online outside of the learning resource using a tool of their choice to model community building. Another mentioned that peer interaction would be most useful for those in the same or similar discipline, as different disciplines approach e-learning in different ways. It was further suggested that if a large group were to complete this learning resource together, there could be discipline or interest-specific group discussions.

**Time and Workload.** Two respondents indicated a facilitator would be helpful if they kept participants on track and graded activities. One participant elaborated:

One of my biggest challenges in completing an online course as a student is time management. If there were real-time meetings or engagement with a facilitator, this would help to provide a key deadline, providing impetus to structure my time better.
A few teaching faculty mentioned that they would not want facilitator or peer interactions, and would prefer to be able to review the learning resource completely asynchronously.

Two members of the Centre team commented that it seemed this learning resource was designed with interactions and facilitation in mind. Although both members thought a facilitated experience would be best for this learning resource, they both expressed concern over the time commitment facilitation would represent. Further, they were concerned about the time commitment teaching faculty would have to make if they were required to participate both in facilitated synchronous sessions as well as online.

**Design.** All seventeen teaching faculty answered the Likert questions on design, and eleven provided additional comments. Most agreed it was easy to find the things they were looking for in the learning resource, that it was easy to find help information, and that the tools used for activities were easy to use. Some teaching faculty were unsure or disagreed with these statements. One survey respondent did not find the tools, used for activities, were easy to use. This data is summarized in Appendix J, Figure J4.

**Organization and web design.** Six teaching faculty commented on the design being visually appealing and generally easy to navigate. One person commented that they found the internal links on many pages confusing at times, stating “I did find myself briefly confused with whether I should select a link from within a page of content, or just continue through page after page.” There were a few comments expressing an uncertainty of the value of the unit outlines and learning outcome checklists that linked learners to all activities in the course. They commented that there seemed to be a lot of repetition, which resulted in confusion, between the module outline, the learning resource checklist, and the required readings and resources.
Both the teaching faculty and the Centre team commented on needing better labelling of modules, especially if the learning resource would be offered in a learning path or asynchronously.

**E-Learning Design.** Some teaching faculty and Centre staff commented that the design did not include tools outside of VIULearn. Suggestions for other tools that should have been in the learning resource included VIUBlogs, VIUTube, OERs, and Google+.

**Future Offerings.** Teaching faculty did not provide clear answers in terms of their preference for future offerings. The option for a self-directed learning resource was more popular than a facilitated resource, and learning paths were preferred over the whole resource. This data is summarized in Appendix J, Figure J5.

**E-Learning Design.** Some teaching faculty commented on wanting to have structured, synchronous peer interactions when participating in the learning resource, but others insisted on an asynchronous resource. This preference seemed to be linked to a need for a highly flexible, self-directed option.

**Time and Workload.** When teaching faculty were asked what a reasonable amount of time in hours might be to complete this learning resource, answers ranged from six to sixty hours, with four respondents unsure. This may be due in part to some participants choosing learning paths and others choosing to review the entire resource. Some teaching faculty indicated what a reasonable time commitment would be for them, and others commented on the time it would have taken to complete the learning path they reviewed.

Many respondents indicated a willingness to participate in a facilitated experience, given the time commitment is reasonable and the time of year fits with their teaching load. Four
teaching faculty also expressed the desire to have the learning resource remain available in its current form as they wanted to continue to explore it after the review period was over.

Summary

The faculty members and Centre team both provided feedback that was used to improve the learning resource. This feedback was organized into five themes that spoke to the effectiveness of the learning resource: organization and web design, depth and breadth of materials, e-learning design, time and workload, and additional comments. The effectiveness of the learning resource can be improved through making changes based on the feedback and reviewed literature, as discussed in Chapter 5.
Chapter 5 – Conclusions and Recommendations

Conclusions

In order to address a gap in professional development for VIU teaching faculty, a fully-online learning resource dedicated to e-learning delivery was proposed, built, and beta tested. This learning resource sought to answer the critical question: What are the most effective strategies for supporting teaching faculty new to e-learning in teaching high quality e-learning courses for learners in post-secondary education? The identification and use of quality frameworks and quality assurance tools informed the design of the learning resource. Beta testing collected feedback from teaching faculty and Centre team members, and this was used to assess the effectiveness of the learning resource using the QOLT rubric and Quality eToolkit as guides. The following conclusions are organized around the themes identified in Chapter 4. Recommended changes are informed by the QM rubric, the Quality eToolkit and the QOLT rubric. The OLC’s Five Pillars of Quality Online Education and the Seven Principles of Good Practice in Undergraduate Education were used to support the continued development of the learning resource.

Organization and web design. The organization and web design of the learning resource was generally well-received by both teaching faculty and the Centre staff. The HTML template was reported as visually appealing with nicely styled the pages, which created a professional look and feel. A number of changes improved the accessibility and usability of the learning resource, which aligned it more tightly with the Access Pillar of the OLC’s Five Pillars as well as the Accessibility and Usability Standard of the QM rubric. There were suggestions about the consistency of naming headings and the font size of text on pages. These recommendations were acknowledged and the resource has been adjusted with consistent
headings and larger font size of all pages for improved readability. All multimedia not produced at VIU was examined to ensure transcripts or closed captions were available and easily accessible, as some reviewers noted that there were consistency issues here too. Where these items were missing, additional means of representation were created or made available.

Internal links on the content pages were reviewed in the context of the QOLT rubric and the Quality eToolkit. Both instruments spoke to the need for navigation that is consistent and efficient (Center for Distributed Learning California State University, 2014; eCampus Alberta, 2013). The internal links on the pages were consistent throughout the learning resource, but whether they were efficient or not was a matter of personal preference for participants. Some participants felt they created confusion when navigating through the pages. A decision was made to keep the internal links on the pages in order to offer choice in navigation to participants in the learning resource.

There were conflicting comments from teaching faculty about the length of the content pages. The feedback indicated some teaching faculty felt the pages should be one scrolling page, and others felt the pages should be many shorter pages. According to the Quality eToolkit, pages should have no more than a two screen scroll (eCampus Alberta, 2013). With this standard in mind, there were many pages in the learning resource that had already been chunked into multiple pages. Likely faculty were finding the clicking of many pages cumbersome or wanted all the content in one location. Comments also indicated that teaching faculty wanted a way to print or save key information from the modules easily and so this recommendation was readily achieved by adding links to downloadable Adobe PDF files of the module content to the “Additional Resources” page. Some information was also added to the Centre website so it would be accessible outside of VIULearn. This meant the content was available asynchronously
and when there were no current offerings of the learning resource, thereby increasing access to the content in multiple ways and means. By improving access, the learning resource was better aligned with the Scale Pillar of the OLC’s Five Pillars because it allowed more teaching faculty to access the materials with little to no added cost (Online Learning Consortium, 2015a). Providing access to the materials in multiple modes is supported by Chickering & Gamson's (1987) Seven Principles through respecting diverse ways of learning.

Overall, the organization and web design of the learning resource was well reviewed by VIU teaching faculty. Some changes to the template were made so it could be as effective as possible for teaching faculty. Some edits were also made to meet standards for accessibility and web design.

**Depth and Breadth of Materials.** The introductory material in the learning resource was reviewed and feedback indicated that it met the minimum expectations of both the QOLT rubric and Quality eToolkit. Although some teaching faculty found that there was too much material, all materials were needed to meet the QOLT rubric expectations. The Quality eToolkit required slightly fewer materials to be present to meet minimum standards. The amount of material available for faculty to review in the learning resource was reduced by more clearly labelling the material. Materials needed to use the learning resource were distinguished from materials added as additional resources. The additional materials served as a models for them to use with their learners, or supports for those new to e-learning. This enforced the need for certain materials to be available for first-time e-learning students, but also allowed for experienced faculty to streamline their experience. Keeping these materials in the learning resource also models communicating high expectations to the teaching faculty, as outlined in
Chickering & Gamson's (1987) Seven Principles. The decision is also in keeping with both the Learning Effectiveness and Student Satisfaction Pillars of the OLC’s Five Pillars.

The input from the Centre team and teaching faculty indicated that the learning outcomes for the learning resource were comprehensive and easy to understand. The learning outcomes were also reported to be clearly linked to both the learning resource content and activities, according to both the Centre team and teaching faculty. This input aligned with the assessment of the learning outcomes using the QM rubric, the QOLT rubric and the Quality eToolkit; and is aligned with the Student Satisfaction Pillar of the OLC’s Five Pillars.

The variety of content types and formats was viewed differently by teaching faculty. Where some felt there was a good variety of content, others found the learning resource was too reliant on text. This meant that the minimum standards of all three quality assurance tools were not met from some perspectives. Although the learning resource does use some OERs to integrate more multimedia and additional means of representation for materials, there was the opportunity to explore additional materials. Another option was to produce VIU-focused resources to further enhance this learning resource. Many teaching faculty commented on finding value from the perspectives of others, and one suggested that featuring VIU faculty discussing their practice would add value to the learning resource. The integration of VIU teaching faculty perspectives through reusable multimedia (like video or audio recordings) was explored as an option to develop the learning resource further and diminish the reliance on text and better respect diverse ways of learning to align with Chickering & Gamson's (1987) Seven Principles.

According to the feedback received, the activities in the learning resource used a good variety of e-learning tools within the VIULearn system. Using a variety of assessment tools was
one of the Technology for Teaching and Learning Standards in the QOLT rubric (Center for Distributed Learning California State University, 2014). Some teaching faculty found the instructions for these activities to be too detailed, but the level of detail is aligned with the expectations of the QOLT rubric. The detail in some instructions may not have encouraged the level of active learning intended, with is misaligned with Chickering & Gamson's (1987) Seven Principles. The activity instructions were reduced for some activities. In some cases this meant parts of the instructions were reworded or removed. It was also decided to include the video and written tutorials on using the tools in the introductory material. This made them easier to refer to and reduced repetition and length of the activity instructions.

The depth and breadth of materials in the learning resource did not meet the minimum standards for the quality assurance tools, Chickering & Gamson's (1987) Seven Principles, or the OLC’s Five Pillars. There was room for improvement in the variety of content resources and the encouragement of active learning. The effectiveness of this resource was improved by addressing the gaps in the quality standards.

**e-Learning Design.** Many comments from both the teaching faculty and Centre team were about the different ways the content could be labeled and structured. Some suggestions included offering the learning paths in separate course shells, and leveling the material in order of experience or comfort with e-learning. It was also suggested the learning paths should be clearly labelled throughout the learning resource for self-paced learners. Although providing flexible learning paths was indicative of an exemplary learning resource according the Quality eToolkit (eCampus Alberta, 2013), there was room for improvement to make these learning paths more effective for teaching faculty.
A copy of a specific learning path was created in a separate course shell the first time the learning resource was offered. This allowed the wrappers to be tailored to that specific learning path, and allowed modules to be labelled more clearly without causing confusion for other users. This decision aligned the learning resource more tightly with the Organizational Standards of the Quality eToolkit by creating a clearer learning path (eCampus Alberta, 2013). In future asynchronous offerings, the learning paths were available within the learning resource itself, and descriptions were added to the modules to help guide learners.

Participants indicated that the activities in the course did not provide many opportunities for formative assessment or practicing specific skills, which was not aligned with the Assessment of Student Learning Standards in the QOLT rubric (Center for Distributed Learning California State University, 2014) or the Assessment and Measurement Standards of the QM rubric (MarylandOnline, 2014c). When initially designing the resource, the expected time commitment from teaching faculty was balanced against measuring the learning outcomes. While it was possible to provide additional “optional” activities, they needed to be self-sustaining in order to be useful as practice mechanisms. The best option was to create good quality questions with detailed question feedback available to review. This would provide a prompt feedback mechanism aligned with Chickering & Gamson's (1987) Seven Principles without increasing the time commitment from other participants. Teaching faculty could check their own answers and reflect on their understanding, but not require other participants to engage with them.

The prescriptive nature of most of the activities was also mentioned by teaching faculty. Some learning activities were prescriptive by design in order to model specific skills, but this was not clear to teaching faculty or the Centre team. Additional material was added to the instructions of model activities in order to make their role in the learning resource clearer. Other
activities were changed to respect diverse ways of meeting learning outcomes, which modeled UDL principles more effectively and aligned more closely with Chickering & Gamson's (1987) Seven Principles.

All teaching faculty seemed to agree that offering this learning resource in either a blended or fully-online format increased its flexibility for access. Most of the comments centered on the high value placed on synchronous interactions between peers. This is unsurprising given that Chickering & Gamson's (1987) Seven Principles included the development of communication and cooperation between learners. These types of interactions would be easier for most teaching faculty to have in a face-to-face environment. The blended format seemed to have the most appeal for faculty because it balanced quality peer interactions with flexible content delivery and access. Most faculty had some experience in fully-online courses as learners, yet very few had experience in blended courses. This learning resource would then present an opportunity for a quality blended experience, which most teaching faculty have likely not had as learners. However, some faculty members preferred a completely asynchronous, fully-online experience. This indicated there was a need for multiple methods of delivering the learning resource.

When examined through the lenses of the QOLT rubric and the Quality eToolkit, there was a need to improve the clarity of the labelling in the learning resource. Labels ensured the flexible learning paths were not confusing, which increased the effectiveness of this learning resource. Changes were also made to the activity instructions and criteria to better model UDL principles. The need for a flexible delivery model informed the decision for the first offering of the learning resource to be focused on a specific learning path and offered in a blended format.
Time and Workload. Participants shared some concerns over the amount of time needed to engage with the learning resource. They felt a faculty member should focus on a specific learning path the first time the learning resource was offered. Many faculty members, as well as members of the Centre team, were worried about balancing the number of learning outcomes with the current workload of teaching faculty. There was an initial estimate of thirty-five and forty-five hours to complete the entire learning resource. However, faculty members’ estimates of time varied widely. Time taken to review the learning resource was not indicative of time taken to engage with the content or activities. These compounding factors led to the decision to offer a single learning path, in order to better manage expectations for teaching faculty and provide some flexibility to the facilitator for the first offering. Sufficient time was given to engage deeply with the materials in the learning path. Additional activities could be introduced from other learning paths if the initial offering of the learning path took less time than expected.

Some teaching faculty expected the facilitator to keep them on track through the learning resource. The Seven Principles stated that good practice “emphasizes time on task” (Chickering & Gamson, 1987, p. 4), but did not encourage facilitators to manage their learners’ time for them. The QOLT rubric stated that teaching faculty must allow learners to take reasonable ownership of their own learning (Center for Distributed Learning California State University, 2014). With a quality e-learning experience in mind, the expectation of time management needed to be managed carefully by the facilitator, who needed to communicate the expectations of the learners, and the facilitators’ role in supporting them.
Issues of time and workload weigh heavily on teaching faculty, so the first offering of the learning resource was a single learning path. This version focused on a specific learning path in order to provide the facilitator some flexibility when delivering it.

**Additional Comments.** Faculty and Centre staff provided additional comments within their feedback on the learning resource. The tone and approachability of the learning resource had comments submitted by both the Centre team and teaching faculty. The Centre team noted the tone of the introductory materials was inconsistent with the rest of the modules. The teaching faculty noted that the language used in the learning resource was not easily approachable, due in part to the academic jargon used in the text. The writing standards of the Quality eToolkit require a conversational tone and use of clear language as the minimum standard (eCampus Alberta, 2013). Although the course content readability is at an appropriate level, the content may still feel unapproachable, and was therefore not effectively meeting the needs of the teaching faculty accessing it. Edits were made to the tone and language used in the text in order to meet the needs of the teaching faculty.

Other comments included some technical challenges with one of the OERs not displaying correctly. This resource has a clickable interface that is difficult to reproduce in other tools, so the information contained in the OER was reproduced in a more accessible tool to ensure that all learners could access the information.

Changes to the content in the learning resource increased the approachability of the content and resolved technical access issues for faculty. These changes brought the learning resource up to the minimum standards of the Quality eToolkit.
Major Project Limitations

Although the beta testing provided a variety of recommendations to improve the learning resource, there were several limitations to the feedback gathered. The number of respondents was very low, making up less than three percent of the teaching faculty at VIU. Feedback was gathered from participants in the first offering of the learning resource, but a more robust sample of teaching faculty is needed to get a better picture of the effectiveness of this learning resource.

Another limitation of the beta testing was the timing of the call for feedback. Both teaching faculty and the Centre staff had a heavy workload during the period of beta testing, and were not able to commit a large amount of time to reviewing the learning resource. As such, much of the feedback on content and activities is cursory and does not reflect the depth of feedback needed to make strong conclusions about the effectiveness of instructional materials, assessments, or interactions. Additionally, the format feedback was gathered in limited the depth of the answers received. Although the survey did help to organize thoughts and provided space for long-form answers, there was little opportunity to probe answers or encourage participants to expand upon them. Future feedback would be more effective if gathered using personal conversations or interviews.

Most teaching faculty who provided feedback on the learning resource had some experience with e-learning already. Many had been students in a fully-online course or had taught in a blended or fully-online format. For these participants, it is possible that challenges in using the software upon which the learning resource had been built might have affected their overall experience and perception of the resource. Other participants without extensive experiences in the online environment may have found it challenging to access or use the system.
Those participants may not have provided feedback on the learning resource, or may have only provided limited feedback.

The learning resource was assessed using the Quality eToolkit at various points throughout development, but beta testing revealed there were still many opportunities for improvement. It was important to improve this learning resource as the quality of the learning resource affected its effectiveness for teaching faculty. This resource was also a model for future course development, and so there was an onus to at least meet minimum quality standards in aspects of design and delivery. A summarized list of all the edits and changes is available in Appendix K.

The biggest challenge was in keeping the learning resource current in content and practices. Although most practices discussed in the learning resource were supported in the literature, e-learning was still a rapidly growing field. This means the learning resource needed to be revisited often to be updated to reflect current best practice. The technology the learning resource is built on was also in a state of continuous change. In every iteration of the software, there continued to be the possibility that the learning resource would need to be updated to function correctly in the system, or to reflect the current state of the system.

**Summary.** Due to the limitations of beta testing, it was difficult to generalize the effectiveness of the learning resource for all VIU faculty. The timing of the call for feedback likely decreased the number of participants and their engagement with the learning resource. The way feedback was gathered decreased the depth of the feedback. Those less comfortable with the system may not have provided feedback, which may have affected the conclusions about effectiveness. The learning resource needed to be part of a cycle for continuous
improvement in order to keep pace with the changing landscape of post-secondary e-learning development.

**Recommendations**

The process used to develop this learning resource was easily replicable for future professional development opportunities offered at the Centre. The use of the PDPIE framework, supported by the more widely known ADDIE framework, helped create an aligned learning resource that was effective in supporting teaching faculty. The use of mutually supportive quality assurance tools, the QM and QOLT rubrics and the Quality eToolkit, led to an effective learning resource that addresses concerns of the larger frameworks for quality in e-learning.

Implementation of the learning resource was out of scope for the major project. The quality of the learning resource requires a full implementation with facilitation. The implementation should be done after a Tri-Council institutional research ethics process and approval is gained. This will allow the collection of more robust data and better inform future offerings. Data will need to be gathered during and after implementation and should include the use of focus groups or personal interviews. The participants, as well as the facilitator, should be part of the data gathering in order to inform all aspects of offering the learning resource.

Future research should also include a detailed assessment of the effectiveness of the learning resource in developing teaching faculty’s TPACK knowledge. Given the unique characteristics of VIU, teaching faculty learning preferences should also be assessed in more detail. This will better inform timing, structure and design of professional development to maximize effectiveness for teaching faculty. A surprising result of the beta testing was the strong preferences for a blended delivery model or an asynchronous model. The effectiveness of
both of these models should be assessed carefully in order to offer flexibility and choice without sacrificing quality.

**Conclusion**

The shifting landscape of e-learning in post-secondary education had created a gap in professional development opportunities for teaching faculty. The literature discussed a variety of ways to structure professional development for e-learning design, but less had been published on e-learning delivery. This major project sought to create a high quality, effective professional development resource for VIU teaching faculty focused on e-learning delivery.

Quality in e-learning is difficult to define, so two quality frameworks were chosen to describe a quality learning resource. Three different quality assurance tools were used to assure the quality frameworks were met. Two mutually supportive design cycles allowed for the development of the quality resource, and two e-learning delivery models were chosen to plan for facilitation of the resource.

After beta testing with a group of VIU teaching faculty, a variety of improvements to the learning resource were identified. Plans were made to change the learning resource in ways that were aligned to the quality assurance tools and quality frameworks.

Despite the various limitations of the learning resource, the overall alignment of learning outcomes, content and activities was viewed positively by teaching faculty. The learning outcomes were well received and targeted the concerns VIU teaching faculty had about teaching online. After the first offering of the learning resource it was improved upon, making it more effective for teaching faculty. This learning resource required updating and review to remain current, but addressed a significant gap in professional development for VIU teaching faculty.
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pe=ip,cookie&db=nlebk&AN=405333&site=ehost-live

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http://doi.org/10.1007/978-0-387-09506-6


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Appendix A

Quality Matters (QM) Rubric Standards and Objectives

Overview and Introduction

- 1.1 Instructions make clear how to get started and where to find various course components.
- 1.2 Learners are introduced to the purpose and structure of the course.
- 1.3 Etiquette expectations (sometimes called “netiquette”) for online discussions, email, and other forms of communication are clearly stated.
- 1.4 Course and/or institutional policies with which the learner is expected to comply are clearly stated, or a link to current policies is provided.
- 1.5 Minimum technology requirements are clearly stated and instructions for use provided.
- 1.6 Prerequisite knowledge in the discipline and/or any required competencies are clearly stated.
- 1.7 Minimum technical skills expected of the learner are clearly stated.
- 1.8 The self-introduction by the instructor is appropriate and is available online.
- 1.9 Learners are asked to introduce themselves to the class.

Learning Objectives (Competencies)

- 2.1 The course learning objectives, or course/program competencies, describe outcomes that are measurable.
- 2.2 The module/unit learning objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives or competencies.
• 2.3 All learning objectives or competencies are stated clearly and written from the learner’s perspective.

• 2.4 The relationship between learning objectives or competencies and course activities is clearly stated.

• 2.5 The learning objectives or competencies are suited to the level of the course.

Assessment and Measurement

• 3.1 The assessments measure the stated learning objectives or competencies.

• 3.2 The course grading policy is stated clearly.

• 3.3 Specific and descriptive criteria are provided for the evaluation of learners’ work and are tied to the course grading policy.

• 3.4 The assessment instruments selected are sequenced, varied, and suited to the learner work being assessed.

• 3.5 The course provides learners with multiple opportunities to track their learning progress.

Instructional Materials

• 4.1 The instructional materials contribute to the achievement of the stated course and module/unit learning objectives or competencies.

• 4.2 Both the purpose of instructional materials and how the materials are to be used for learning activities are clearly explained.

• 4.3 All instructional materials used in the course are appropriately cited.

• 4.4 The instructional materials are current.

• 4.5 A variety of instructional materials is used in the course.
• 4.6 The distinction between required and optional materials is clearly explained.

**Learner Activities and Learner Interaction**

• 5.1 The learning activities promote the achievement of the stated learning objectives or competencies.
• 5.2 Learning activities provide opportunities for interaction that support active learning.
• 5.3 The instructor’s plan for classroom response time and feedback on assignments is clearly stated.
• 5.4 The requirements for learner interaction are clearly stated.

**Course Technology**

• 6.1 The tools used in the course support the learning objectives and competencies.
• 6.2 Course tools promote learner engagement and active learning.
• 6.3 Technologies required in the course are readily obtainable.
• 6.4 The course technologies are current.
• 6.5 Links are provided to privacy policies for all external tools required in the course.

**Learner Support**

• 7.1 The course instructions articulate or link to a clear description of the technical support offered and how to obtain it.
• 7.2 Course instructions articulate or link to the institution’s accessibility policies and services.
• 7.3 Course instructions articulate or link to an explanation of how the institution’s academic support services and resources can help learners succeed in the course and how learners can obtain them.
7.4 Course instructions articulate or link to an explanation of how the institution’s student services and resources can help learners succeed and how learners can obtain them.

**Accessibility and Usability**

- 8.1 Course navigation facilitates ease of use.
- 8.2 Information is provided about the accessibility of all technologies required in the course.
- 8.3 The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.
- 8.4 The course design facilitates readability.
- 8.5 Course multimedia facilitate ease of use.
Appendix B

Quality eToolkit Categories and Objectives

**Web Design Standards**

- **Format**: The course elements use a logical and consistent structure and design format.
- **Legibility and Readability**: The course is designed to facilitate legibility and readability.
- **Navigation**: Navigation throughout the course is consistent, predictable and efficient.

**Course Information Standards**

- **Course Outline/Syllabus**: A course outline/syllabus and course description is provided.
- **Instructor Communication**: Learners are informed of the ways in which they can communicate with the instructor.
- **Learning Outcomes/Objectives**: Learning outcomes/objectives are achievable, measurable, relevant, clearly stated, and concise.
- **Grading Information**: The grading information is presented to the learners at the very beginning of the course, and is easily accessible throughout the course.
- **Role of Instructor and Learners**: The respective roles of the instructor and the learners in the course in achieving the learning outcomes/objectives are explained.

**Writing Standards**

- **Bias**: The content is free of bias related to age, culture, ethnicity, sexual orientation, gender, or disability.
- **Tone**: The positive tone of the writing contributes to a supportive learning environment.
- **Citations**: All academic content in the course is appropriately cited.
- **Clear Language**: The language is clear and readily comprehensible.
• Mechanics of Writing: The course uses correct grammar, punctuation, and spelling.

**Resources Standards**

• Currency: Learning materials are current.

• Authority: The authority of learning materials is apparent.

• Varied Content Resources: Learners are provided with various types of learning materials.

• Learner Support: A list of learner support resources with links to the sources is provided.

**Organization Standards**

• Learning Path: The learning path guides learners through the entire course. It explains the learning activities and how they are to be used to fulfill the learning outcomes/objectives.

• Learning Material: The learning material is organized to show learners the relationship of the course components to the achievement of the learning outcomes/objectives.

• Time Commitment: Learners are informed of the time commitment expected for them to complete all the learning activities.

**Pedagogy Standards**

• Instructions: Instructions for all activities, graded and non-graded, are clear and complete.

• Marking Criteria: Learners are provided clear details of the marking criteria that will be used for all graded activities.

• Interactivity: Interactive activities are incorporated into the course, all of which facilitate deeper understanding of the content.

• Instructional Strategies: Instructional strategies are designed to be compatible with learners’ different interests, learning needs and preferences.
Feedback: Formal and informal feedback to learners is incorporated throughout the course.

**Technology Standards**

- Multimedia: The course uses basic hardware, and free software plug-ins where required. Learners are informed of any specialized technology requirements.
- Orientation: An orientation to the delivery technologies used in the course is provided.
Appendix C

Quality Online Learning and Teaching (QOLT) Rubric Categories and Objectives

Course Overview and Introduction

- 1.1 Instructor uses course environment to provide clear and detailed instructions for students to begin accessing all course components, such as syllabus, course calendar, assignments, and support files.
- 1.2 Detailed instructor information is available to students and includes multiple formats for being contacted by students, availability information, brief biographical information, and a picture of the instructor.
- 1.3 Course description includes the purpose and format of the course, as well as prerequisite knowledge and competencies, if applicable.
- 1.4 Online etiquette expectations for various forms of course communication and dialog (e.g., chat, "hangout," email, online discussion) are presented and clear to the student.
- 1.5 Academic integrity or "code of ethics" is defined. Related institutional policies for students to adhere are clearly stated and/or links to those policies (e.g., online catalog; institution web page) is provided.
- 1.6 A list of technical competencies necessary for course completion is provided, identifying and delineating the role/extent the online environment plays in the total course.
- 1.7 Instructor provides samples of student work and provides opportunity to students to ask questions.
- 1.8 Instructor asks students to share their own learning goals.
Assessment and Evaluation of Student Learning

- 2.1 All Student Learning Objectives/Outcomes (SLOs) are specific, well-defined, and measureable.

- 2.2 Grading policy is provided in a manner that clearly defines expectations for the course and respective assignments.

- 2.3 The learning activities (including the assignments and ungraded activities) promote the achievement of the SLOs.

- 2.4 The assessment instruments (e.g., rubrics) are detailed and appropriate to the student work and respective outcomes being assessed. This includes assessing modes of online participation and contributions.

- 2.5 Throughout the semester, instructor provides multiple opportunities to give feedback on students learning and to help students “self-check” their learning.

- 2.6 Throughout the semester, instructor provides multiple opportunities to solicit feedback from their students about their learning and on the course for the improvement of the course.

Instructional Materials and Resources Utilized

- 3.1 Instructor provides students with adequate time and notice to acquire course materials.

- 3.2 Syllabus lists whether textbooks and materials are required or recommended.

- 3.3 Instructor articulates the purpose of all materials as to how they are related to the course and module learning objectives.
• 3.4 When possible, instructor provides s options in terms of how students acquire course materials, including Open Educational Resources.

• 3.5 There is a variety of instructional material types and perspectives, while not overly relying on one content type such as text.

• 3.6 Modeling academic integrity, instructor appropriately cites all resources and materials used throughout the course.

Students Interaction and Community

• 4.1 At the beginning of the course, instructor provides an opportunity to have students self-introduce to develop the sense of community.

• 4.2 Instructor provides the information about being a successful online learner/student.

• 4.3 Navigation throughout the online components of the course is logical, consistent, and efficient.

• 4.4 Learning activities facilitate and support active learning that encourages frequent and ongoing peer-to-peer engagement.

• 4.5 The modes and requirements for student interaction are clearly communicated.

• 4.6 Instructor clearly explains his or her role regarding participation in the online environment. Instructor participates and manages, yet lets students take reasonable ownership.

• 4.7 The course learning activities help students understand fundamental concepts, and build skills useful outside of the course.
Facilitation and Instruction

- 5.1 The instructor was helpful in identifying areas of agreement and disagreement on course topics.
- 5.2 Instructor helps students understand importance of course topics and related outcomes.
- 5.3 The instructor helps keep course participants engaged and participating in productive dialogues.
- 5.4 Instructor encourages students to explore new concepts through the course experience.
- 5.5 The instructor helped to focus discussion on relevant issues.
- 5.6 The instructor provides feedback in a timely fashion.
- 5.7 Instructor sends communications about important goals and course topics as opportunities arise.
- 5.8 Instructor sends reminders of due dates and duration of respective modules, as well as other instructions to keep students on task.

Technology for Teaching and Learning

- 6.1 The tools and media support the course learning objectives/outcomes.
- 6.2 Instructor takes advantage of the current tools provided by the Learning Management System (or similar) to enhance learning.
- 6.3 Technological tools and resources used in the course enable student engagement and active learning.
- 6.4 Instructor provides clear information regarding access to the technology and related resources required in the course.
• 6.5 Acceptable technological formats for assignment completion and submissions have been articulated.

Learner Support and Resources

• 7.1 Instructor states her or his role in the support process.

• 7.2 The course syllabus (or related) lists and/or links to a clear explanation of the technical support provided by the campus and suggestions as to when and how students should access it.

• 7.3 Course syllabus (or related) provides an introduction to campus academic (non-technical) support services and resources available to support students in achieving their educational goals. E.g., Disability Support Services, Writing Center, Tutoring Center).

• 7.4 Course syllabus (or related) provides information regarding how the institution's student support (non-academic, non-technical) services and resources (E.g., advising, mentoring) can help students succeed and how they can access these services.

Accessibility and Universal Design

• 8.1 Syllabus (or similar) links to the campus accessible policy, whether it is required or recommended that instructors do so.

• 8.2 Instructor articulated how s/he proactively supports a wide range of learning styles and abilities of all students, as opposed to just making reactive accommodations for those with registered disabilities. Note: This support does not entail sacrificing academic rigor or student learning outcomes. The goal is supporting the needs of all learners as opposed to having an inflexible teaching and learning process.

• 8.3 Students are given accessibility information and policies related to the online course environment.
• 8.4 Students can clearly ascertain the role of the instructor in providing support for those officially registered with the campus disability services office.

• 8.5 Course materials created by the instructor or from external sources are in formats that are accessible to students with disabilities.

• 8.6 All tools used within learning management system or that are third-party are accessible and assistive technology ready.

• 8.7 If accessibility of a particular course resource or activity is not practicable, instructor provides an equally effective accessible alternative for students.

Course Summary and Wrap-up

• 9.1 Instructor provides students opportunities to ask questions as a form of closure and to foster insight into accomplishments.

• 9.2 Instructor provides students with feedback about their overall learning and progress and their experiences of the term.

• 9.3 Instructor provides opportunities for students to reflect on their learning and connect their individual learning goals with the expectations (stated learning objectives and outcomes) of the instructor.

Mobile Design Readiness (optional)

• 10.1 Course content was easy to read on multiple platforms such as PCs, tablets, and smartphones.

• 10.2 Audio and video content displayed easily on multiple platforms such as PCs, tablets, and smartphones.
• 10.3 The number of steps users had to take in order to reach primary content was minimized.
• 10.4 The visibility of content not directly applicable to student learning outcomes was minimized.
Appendix D

Competencies and Learning Outcomes for the Learning Resource

**Communicate Expectations to Learners**

- Describe three essential components of communicating clearly (availability, return time, examples of questions etc) via email, phone, or other communication tools
- Explain why it is important to communicate clear expectations around learners' time commitment and progress through the course materials and activities
- Propose an outline of topics around expectations for learner interactions (etiquette and assessment) before interactions take place

**Utilize Asynchronous Communication Tools**

- Compose an email explaining some aspects of the course to selected students from within VIULearn
- Create and release one News from within VIULearn by demonstrating through a screencast
- Write engaging discussion questions/prompts
- Create a Discussion forum and topic within VIULearn following specific settings and content
- Describe how to make small-group discussion topics using the Discussion and Groups tools

**Utilize Synchronous Communication Tools**

- Create an online room for synchronous meetings within VIULearn by sharing the link with the class
• Explain how students and guests can access the online room from within VIULearn and from outside the system

• Describe how you create and retrieve recordings and save chat logs from within an online room

• Moderate an online room for one question around a topic of choice using three synch tools

• Describe the experience of being in a small-group ("breakout") discussion spaces in an online room

**Facilitate Interactions between Learners to Create an Inclusive Community**

• Describe how an inclusive and safe learning environment is created

• Explain the process of integrating learner interactions in synchronous and asynchronous environments

• Outline how you, as an instructor, will engage and participate in discussions with learners

**Leverage Affordances on Online Environment to Meet Learner Needs**

• Explain why it is important to have multiple ways of sharing knowledge and understanding

• Explain the importance of allowing learners to communicate their understanding of knowledge in diverse ways

• Use at least two ways of displaying information (e.g. video, audio, images) within a discussion post

• Revise one current course assignment to communicate clear expectations and details of assessment and evaluation expectations to learners
• Identify one current educationally-relevant problem and one cloud/web 2.0 tool that may help solve that problem

Leverage Assessment and Evaluation Tools to Provide Meaningful Feedback to Learners

• Demonstrate the steps required to grade Dropbox submissions and include written feedback or feedback using a Rubric

• Define the settings needed to add additional views on Quizzes to allow students to view feedback and review submissions

• Compare and contrast VIULearn assessment and evaluation tools (e.g. Quizzes, Discussions, Surveys) to determine which is best suited for informal assessment in given situation

• Describe how their current course grade structure could be translated into the VIULearn Grades tool

• Explain the steps needed to enter grades either from Enter Grades or Manage Grades view

• Explain how User Progress and/or Content Reports can be used to create an understanding of learner and/or class needs
## Appendix E
### Module 1 Alignment Chart

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Learning Outcomes</th>
<th>Assessments</th>
<th>Content</th>
</tr>
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<tbody>
<tr>
<td>Communicate Expectations to Learners</td>
<td>By the end of this course, faculty will be able to …</td>
<td>Discussion Topic: Discussion of case study outlining “when an online activity goes wrong”.</td>
<td>• Chickering, A. W., &amp; Gamson, Z. F. (1989). Seven principles for good practice in undergraduate education. Biochemical Education, 17(3), 140–141. <a href="http://doi.org/10.1016/0307-4412(89)90094-0">http://doi.org/10.1016/0307-4412(89)90094-0</a></td>
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<td></td>
<td>explain why it is important to communicate clear expectations around learners' time commitment and progress through the course materials and activities</td>
<td></td>
<td>• Educational Development Centre, Carleton University. (2014). Effective communication in the online environment. Retrieved from <a href="https://mediaserver.carleton.ca/media/effective-communication-in-the-online-environment">https://mediaserver.carleton.ca/media/effective-communication-in-the-online-environment</a></td>
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<td></td>
<td>• Self-written case study, wrappers and summaries of content above</td>
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<td>Competencies</td>
<td>Learning Outcomes</td>
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| Utilize Asynchronous Communication Tools | compose an email explaining some aspects of the course to selected students from within VIULearn | Hands On: Email specific classmates - report back on how the email looked and how it was received. | • Content developed by the Centre for teaching faculty training [https://d2l.viu.ca/d2l/le/content/52347/viewContent/572165/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/572165/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/572166/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/572166/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/572167/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/572167/View).  
  • Self-written wrappers and summaries of content above |
|                                      | create and release one News from within VIULearn by demonstrating through a screencast | Hands On + Discussion Topic: Create a screencast of creating and releasing News item, embed into discussion topic for others to view. Briefly (5-8 sentence) reflect on using the “10 steps” to digital assignments sheet as a student. | • Content developed by the Centre for teaching faculty training [https://d2l.viu.ca/d2l/le/content/52347/viewContent/572111/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/572111/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/582965/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/582965/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/572112/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/572112/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/582966/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/582966/View).  
  • Content from Brightspace by D2L [https://documentation.desire2learn.com/en/News](https://documentation.desire2learn.com/en/News)  
  • Digital Assignment Worksheet - Setting Up Students for Success on Digital Assignments guidelines presented by Amanda Dills at the D2L FUSION 2015 conference. Example sheet here: [https://docs.google.com/document/d/1FLU4MqbDICDTjs9Mj26xJAAPLY0KHh19Cxhr6SU5n04/edit](https://docs.google.com/document/d/1FLU4MqbDICDTjs9Mj26xJAAPLY0KHh19Cxhr6SU5n04/edit), adapted for this assignment  
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<tbody>
<tr>
<td>Utilize Asynchronous Communication Tools</td>
<td>write engaging discussion questions/prompts</td>
<td>Quiz: Which of these is a good prompt? How would you fix it?</td>
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<td>• Educational Development Centre, Carleton University. (2014). Effective online discussions. Retrieved from <a href="https://mediaserver.carleton.ca/media/effective-online-discussions">https://mediaserver.carleton.ca/media/effective-online-discussions</a></td>
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<td>Competencies</td>
<td>Learning Outcomes</td>
<td>Assessments</td>
<td>Content</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| Utilize Asynchronous Communication Tools | create a Discussion forum and topic within VIULearn following specific settings and content | Hands On + Dropbox: How would you create a discussion for a specific Discussion use case, and what settings would you choose? | • Content developed by the Centre for teaching faculty training [https://d2l.viu.ca/d2l/le/content/52347/viewContent/583147/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/583147/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/583148/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/583148/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/583157/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/583157/View), [https://d2l.viu.ca/d2l/le/content/52347/viewContent/583158/View](https://d2l.viu.ca/d2l/le/content/52347/viewContent/583158/View).  
• Content from Brightspace by D2L [https://documentation.desire2learn.com/en/creating-discussion-forums-topics](https://documentation.desire2learn.com/en/creating-discussion-forums-topics)  
• Self-written wrappers and summaries of content above |
| Utilize Asynchronous Communication Tools (continued) | describe how to make small-group discussion topics using the Discussion and Groups tools | Discussion: Give us a scenario when you might use small groups, and explain what settings you would choose when creating them. Offer thoughts on each other’s suggestions. | • Content developed by the Centre for teaching faculty training [https://viutube.viu.ca/public/media/Creating+Group+Discussions+and+Dropboxes+0_x60cvub0](https://viutube.viu.ca/public/media/Creating+Group+Discussions+and+Dropboxes+0_x60cvub0), [https://mediawiki.viu.ca/images/8/8a/D2L_Creating_Group_Discussions_and_Dropboxes.pdf](https://mediawiki.viu.ca/images/8/8a/D2L_Creating_Group_Discussions_and_Dropboxes.pdf), [https://viutube.viu.ca/public/media/Creating+Groups/0_he08hkpu](https://viutube.viu.ca/public/media/Creating+Groups/0_he08hkpu), [https://mediawiki.viu.ca/images/6/62/D2L_Creating_Groups.pdf](https://mediawiki.viu.ca/images/6/62/D2L_Creating_Groups.pdf).  
• Content from Brightspace by D2L [https://documentation.desire2learn.com/en/Groups](https://documentation.desire2learn.com/en/Groups)  
Self-written wrappers and summaries of content above |

*Table E1. Summary of the competencies, learning outcomes, assessments and content of module 1. When reading left to right, the competency can be seen with its associated learning outcomes. The learning outcomes will have an associated assessment. The aligned content will be available to the right of the learning outcomes and assessments.*
Appendix F

Overview of all Materials in the Learning Resource

Introduction

Figure F1. Screenshot showing the “Introduction” module of the learning resource, containing eight pages of information for teaching faculty.
General Course Discussions

**Figure F2.** Screenshot of the “General Course Discussions” module of the learning resource, showing the 3 general discussions in the learning resource and their associated instructions.
Module 1 – First Competency

Figure F3. Screenshot of the first content module of the learning resource. There are three pages and a checklist as wrappers, followed by a submodule dedicated to the first competency. Inside of the submodule, there are three more pages, a discussion and a drobox activity.
Module 1 – Second Competency

Figure F4. Screenshot of the first content module of the learning resource. There is a submodule dedicated to the second competency, followed by a self-assessment survey and two pages of wrapper. The submodule contains a variety of pages, discussions, a quiz, and a dropbox activity.
Module 2 – Third Competency

*Figure F5.* Screenshot of the second content module of the learning resource. There are three pages and a checklist as wrappers, followed by a submodule dedicated to the third competency. Inside the sub-module there are a selection of pages as well as a discussion and dropbox activity.
Module 2 – Fourth Competency

Figure F6. Screenshot of the second content module of the learning resource. There is a submodule dedicated to the fourth competency, followed by a self-assessment survey and two pages of wrapper. The submodule contains a variety of pages, a group restricted discussion, and two dropbox activities.
Module 3 – Fifth Competency

Figure F7. Screenshot of the third content module of the learning resource. There are three pages and a checklist as wrappers, followed by a submodule dedicated to the fifth competency. Inside the sub-module there are a selection of pages as well as two discussions and dropbox activity.
Module 3 – Sixth Competency

Figure F8. Screenshot of the second content module of the learning resource. There is a submodule dedicated to the sixth competency, followed by a self-assessment survey and two pages of wrapper. The submodule contains a variety of pages, three discussions, and two dropbox activities.
Appendix G

Learning Paths for the Teaching Online Learning Resource

Please note that full details are available for Path A, Paths B through E contain summaries of the learning paths only.

**Path A: Pedagogical Overview of Teaching Online**

This learning path will give you an overview of what teaching online “looks and feels” like. The content and activities emphasize specific methods you can use when teaching online which will help your learners be more successful. This learning path will also introduce a variety of approaches you can use to make the most out of the online environment. You will also be exposed to some strategies you can use for your teaching which will make teaching online more manageable and enjoyable for you.

The activities in this learning path focus on reflection on your own teaching practice, and sharing your thoughts and experiences with others. There are a variety of academic and general readings, videos, and interactive activities to represent the content. This learning path features discussions, dropboxes, VIUOnline Rooms, and activities outside of VIULearn.

**Overview of the Modules and Activities.** Below you will find a list of the content pages and related activities that are part of this learning path. Content and activities follow one of three formats:

- Individual – requires no interaction with others
- Class – can complete individually or with others
- Group – must interact with others to complete

**Module 1 - Communicate Expectations to Learners.**

- Read an informational page and watch a video (Individual)
• Read a case study (Individual)
• Participate in a discussion (Class)
• Submit to a dropbox (Individual)

_module 2 – Facilitate Interactions between Learners to Create an Inclusive Community.
• Read an informational page and watch a video (Individual)
• Read an informational page (Individual)
• Complete an interactive activity (Individual)
• Submit to a dropbox (Individual)
• Read an informational page, review the digital assignment worksheet, read an informational page and watch a video, communicate with your group members, moderate and participate in an online room (Group)
• Submit a reflection on the activity above to a dropbox (Group)

_module 3 - Leverage Affordances of the Online Environment to Meet Learner Needs.
• Read an informational page and watch a video (Individual)
• Participate in a discussion (Class)
• Read an informational page and watch a video (Individual)
• Submit to a dropbox (Individual)
• Read an informational page and watch a video and complete an individual assignment outside of VIULearn (Individual)
• Participate in a discussion (Class)

Path B: Using VIULearn to Teach Online

This learning path will outline various tools in VIULearn how they can be best used to teach online. The variety of tools available in VIULearn can be used to help better manage your
time, as well as your learners’ time. There is information a variety of communication tools, including non-time dependant (asynchronous) tools like Email, News and Discussions. The real-time (synchronous) tool, VIUOnline Rooms, is also discussed. Finally, assessment and evaluation tools like Dropbox, Quizzes, Grades and User Progress are outlined in the context of using them to provide feedback to students.

The activities in this learning path focus on action oriented activities, and reflection on how those actions fit with your own teaching style. There are a variety of resources including video, text and webpages; as well as some academic and general readings. This learning path features Discussions, Quizzes, Dropboxes, and activities outside of VIULearn.

**Path C: Online Community and Communication Strategies**

This learning path will focus on creating online community and the importance of communication. The content and activities contain a mix of theories and practical applications. There is also some practical information on how the tools available in VIULearn can be used to communicate with your learners. This learning path should give you some strategies to help increase student satisfaction in online courses.

The activities in this learning path introduce theoretical concepts, but encourage practical application and contextualization of those theories. There are a variety of academic and general readings, videos, and interactive activities to represent the content. This learning path features discussions, dropboxes, quizzes, VIUOnline Rooms, and activities outside of VIULearn.

**Path D: Assessment of Learners Online**

This learning path will focus exclusively on assessment and evaluation of learners online. There will be information on how to set expectations for online interactions and assessments. You will also be exposed to strategies to ensure the online environment is meeting the needs of
your learners. Finally, assessment and evaluation tools like Dropbox, Quizzes, Grades and User Progress are outlined in the context of using them to provide feedback to students.

The activities in this learning path focus on applying strategies and tools to your own teaching, and then sharing your thoughts and experiences with others. There are a variety of resources including video, text and webpages; as well as some academic and general readings. This learning path features discussions, dropboxes, and activities outside of VIULearn.

**Path E: Entire Teaching Online Learning Resource**

Unlike the other learning paths, this path does not focus on any specific aspects of teaching online. Rather, this path encompasses pedagogy, VIULearn tools, communication strategies, creating community, and assessment approaches – the learning resource in its entirety.

The activities in this learning path will be encourage reflection of your personal context in relation the materials being discussed, but will also be practical activities that will help you apply materials to your own courses. You will be encouraged to share and discuss your thoughts and experiences with others. There are a variety of resources including video, text, interactive activities and webpages; as well as some academic and general readings. This learning path features discussions, dropboxes, quizzes and activities outside of VIULearn.
Appendix H

Email Communications with VIU Teaching Faculty for Beta Testing

Initial Email

From: Liesel Knaack

Subject: Faculty Input on a New Teaching Resource for Teaching Online

Dear VIU Teaching Faculty,

Are you interested in best practices for teaching online? Are you looking for more information about how to use VIULearn (D2L) to teach online? Are you interested in strategies for engaging learners in an online or blended learning experience?

The Centre for Innovation and Excellence in Learning has designed a fully online learning resource geared to provide support for teaching faculty wanting to know more about online teaching. This resource has been in development for a while and before we finalize it (and open it up to all teaching faculty to freely access), we’d like to invite some of you to give us your feedback.

The resource is called “Teaching Online” and has been designed as a ‘learning course’ in VIULearn (D2L) and so it includes modules, information, activities, checklists, readings, dropbox assignments etc. …to also serve as a model for designing an online course too! So if you are interested in providing feedback, we need you to reply to this email and we’ll add you to the course.

Your feedback will be used to improve this offering before its official launch in Spring 2016. At this time we are looking for Feedback Volunteers (of all experience levels with online
learning, but hopefully with some basic understandings of VIULearn) ….to browse through the modules and activities and share their thoughts via an anonymous online survey.

There is no minimum amount of time you need to commit to providing feedback. By simply participating, you will also be invited to a thank you lunch in November. We will have the learning resource open for feedback from today until Friday, November 13.

Stephanie Boychuk (staff member in the Centre) is my project co-ordinator. I’ve been providing the pedagogical details and learning design elements, while she’s been integrating information on how best to use VIULearn tools and assembling the whole learning resource from beginning to end. She’s going to oversee getting you ‘added’ as a participant, answering any questions you might have, sending you the URL to the survey and collecting your feedback to share with our team.

Kindly email Stephanie.Boychuk@viu.ca.....and you can begin exploring!

Look for the final version to be released in Spring 2016 – and our next fully online resource, “Course Design Essentials: From Learning Outcomes to Student Achievement” coming in 2016 too!

Sincerely,

Liesel

Liesel Knaack, PhD

Director | Centre for Innovation and Excellence in Learning

Vancouver Island University | 900 Fifth Street, Nanaimo, BC V9R 5S5

250.740.6395 | liesel.knaack@viu.ca | B305 - R514

viu.ca/ciel | wordpress.viu.ca/ciel | twitter: LieselKnaack
Follow Up Email

From: Stephanie Boychuk

Subject: Teaching Online Feedback Volunteer Information - Resource open to Friday November 13

Hello,

Thank you so much for your interest in providing input on the new Teaching Online course I’ve designed for faculty members to use next term – after I seek your input and suggestions for enhancements!

You have now been added to the course as a ‘student’. You will see the “Teaching Online” course when you log into VIULearn in the “Under Development” semester. You can also access the course directly using this link: https://d2l.viu.ca/d2l/home/80771

There are a variety of ways for you to provide your input. You can choose to browse the course on your own, follow a “learning path”, or actively participate with others. If you are interested in actively participating with others, please let me know so I can connect you with others. I am hoping you can provide some feedback on either your browsing, taking a path or interacting with others between now and Friday, November 13, including completing a short survey.

A Learning Path allows you to focus on the portions of the course that are of interest to you. A ‘guide’ to each of the Learning Paths is attached – each as a separate PDF document and labelled according to each of the five paths:

- Path A: Pedagogical Overview of Teaching Online
- Path B: Using VIULearn to Teach Online
• Path C: Online Community and Communication Strategies

• Path D: Assessment of Learners Online

• Path E: Entire Course

You may wish to attend a **short orientation to the course** (either face-to-face or online) to get an overview of it and learning paths. The dates and times are:

• Thursday, October 22nd at 2:00 pm (Building 305 Room 511a, Nanaimo campus)

• Tuesday, October 27th at 3:00 pm (Building 305 Room 511a, Nanaimo campus)

• Wednesday, October 28th at 1:00 pm (Online)

These meetings will give you a guided tour of the course, the specific learning paths, and answer any questions you may have. Please email me at Stephanie.Boychuk@viu.ca to **register for an orientation** meeting. You are not required to attend a meeting if you do not wish to.

There is no minimum amount of time you need to spend browsing the course between now and Friday, November 13th. You are also not required to access or complete any of the learning activities, but if they are interesting to you please feel free to try them out!

**In the next week**, I will be sending out a follow-up email with a link to our short survey.

I would also like to let you know that your feedback is also being used to help me complete a major project I am doing for my final course in the VIU Masters of Educational Leadership program in the Faculty of Education. Since this isn’t a thesis-based course and I am not using your feedback for any publication/sharing of my work, I don’t require any ethical review form. However, I wanted you to know that your feedback not only helps the Centre and the enhancement of this learning resource, but I am learning from you and the feedback you give me in terms of my project too! Liesel let me use the building of this resource as a focus for my project and I am learning a lot. I really appreciate any feedback you can give both of us.
If you have any questions or concerns, want to actively engage with others, or want to register for one of the overview meetings please feel free to contact me at Stephanie.Boychuk@viu.ca.

Again, thank you so much for your input into this course!

Sincerely,

Stephanie Boychuk

Learning Technologies Support Specialist | Centre for Innovation and Excellence in Learning (CIEL)

Vancouver Island University | 900 Fifth Street, Nanaimo, BC V9R 5S5

250.753.3245 ext 2063 | stephanie.boychuk@viu.ca | B305 - R511

ciel.viu.ca | wordpress.viu.ca/ciel
Appendix I

Survey Questions for Teaching Faculty Reviewing the Learning Resource

Teaching Online Learning Resource Survey

Thank you for providing your input on the Teaching Online learning resource. The following survey has 6 pages. If you do not wish to answer any of the questions below please leave them blank. All input is collected anonymously and will be used to improve this offering before its official launch.

Definitions

- Fully-online course: A course where all content, activities and interactions with participants happen in an online environment
- Blended course: A course which is partially face-to-face and partially online
- MOOC – “Massive Open Online Course” – A course with 100’s or 1000’s of participants, which may or may not award a certificate of completion or badge, but which is considered non-credit

Bit about You – To Help Us Understand Your Feedback

The following questions will be used to contextualize your input. There are no mandatory questions. Simply skip any questions you do not feel comfortable answering.

Read the following statements and select all those that apply to your experience as a student.

- I have been a student in a fully-online course
- I have been a student in a fully-online MOOC / non-credit course
- I have completed at least one fully-online course as a student
- I have been a student in a blended course
I have completed at least one blended course as a student

Read the following statements and select all those that apply to your experience as an instructor/teacher.

- I have taught one or more face-to-face courses
- I have taught one or more blended courses
- I have taught one or more fully-online courses
- I have completed training or professional development related to teaching, designing and facilitating blended or fully-online teaching and learning
- I have used technology provided by VIU in my teaching (e.g., VIULearn, VIUTube, VIUOnline Rooms)
- I have used other technologies in my teaching (e.g., Open Educational Resources, YouTube, Twitter, Google Documents)

How many years have you been teaching face-to-face courses?

How many years have you been teaching blended courses?

How many years have you been teaching fully-online courses?

Please provide a brief summary of your training or professional development:

Please provide a brief list of some of the technologies you have used:

Your Faculty?
- Academic and Career Preparation
- Arts and Humanities
- Continuing Education
- Education
- English as a Second Language
- Health and Human Services
- Management
- Natural Resources Extension
- Science and Technology
- Social Sciences
- Trades and Applied Technology
- Other:

Your Department?

**Learning Path Choice**

Please select the learning path you chose during the learning resource review (you can select more than one option):

- Did not review a specific learning path
- Path A: Pedagogical Overview of Teaching Online
- Path B: Using VIULearn to Teach Online
- Path C: Online Community and Communication Strategies
- Path D: Assessment of Learners Online
Learning Resource Design and Component Feedback - Introduction

Please use the Likert Scale below to answer the following questions about the learning resource.

Read each statement and choose whether or not you agree with it. The scale ranges from Strongly Disagree to Strongly Agree.

If you do not feel the question applies to the level of engagement you had with the learning resource, or the learning path you reviewed, you can choose the N/A option. If you do not wish to answer a question for any reason, you can leave it blank.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>The &quot;Introduction&quot; module contained information I found useful as a participant.</td>
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<tr>
<td>The learning outcomes or goals of the learning resource were easy to understand.</td>
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<tr>
<td>I felt the icebreaker activity would be an engaging way to begin this learning resource.</td>
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Please use the space below to provide any additional comments about the Introduction:
Learning Resource Design and Component Feedback - Content and Activities

Please use the Likert Scale below to answer the following questions about the learning resource.

Read each statement and choose whether or not you agree with it. The scale ranges from Strongly Disagree to Strongly Agree.

If you do not feel the question applies to the level of engagement you had with the learning resource, or the learning path you reviewed, you can choose the N/A option. If you do not wish to answer a question for any reason, you can leave it blank.

**Content and Activities**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
<th>N/A</th>
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<tbody>
<tr>
<td>I understood how the content (e.g., text, videos) was related</td>
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<tr>
<td>to the learning outcomes.</td>
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<tr>
<td>I had no technical challenges while accessing / viewing the</td>
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<tr>
<td>content.</td>
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<tr>
<td>I felt the variety of content provided helped me engage with</td>
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<tr>
<td>the material.</td>
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<tr>
<td>I understood how the activities (e.g., discussions, dropboxes,</td>
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<td>quizzes) were related to the learning outcomes.</td>
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<td>I found the instructions provided about the activities were</td>
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<tr>
<td>useful.</td>
<td></td>
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<tr>
<td>I feel the activities would help me to achieve the learning</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>outcomes for the learning resource or learning path.</td>
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<td></td>
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<tr>
<td>The theory / readings helped me learn about the module or</td>
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<tr>
<td>learning path topic.</td>
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<tr>
<td>The VIULearn-specific content helped me learn about the module</td>
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<tr>
<td>or learning path topic.</td>
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</tbody>
</table>
Did you complete any of the individual activities in the learning resource?

- Yes
- No

Which activity/activities did you complete?

Please use the space below to provide any specific input on the activity/activities you listed above:

Did you complete any of the class or group activities in the learning resource?

- Yes
- No

Which activity/activities did you complete?

Please use the space below to provide any specific input on the activity/activities you listed above:

Please use the space below to provide any additional comments about the content and activities:
Learning Resource Design and Component Feedback - Interactions

Please use the Likert Scale below to answer the following questions about the learning resource. Read each statement and choose whether or not you agree with it. The scale ranges from Strongly Disagree to Strongly Agree.

If you do not feel the question applies to the level of engagement you had with the learning resource, or the learning path you reviewed, you can choose the N/A option. If you do not wish to answer a question for any reason, you can leave it blank.

Interactions

| I feel there would be value in having a real-time meeting with the other participants engaged in the learning resource (either face-to-face or via webinar). | Strongly Disagree 1 | Neutral 2 | Strongly Agree 3 | N/A 4 |
| I feel there would be value in having a facilitator engage with me during the learning resource. | | | | |

Please use the space below to provide any additional comments about the interactions:

Learning Resource Design and Component Feedback – Design

Please use the Likert Scale below to answer the following questions about the learning resource. Read each statement and choose whether or not you agree with it. The scale ranges from Strongly Disagree to Strongly Agree.
If you do not feel the question applies to the level of engagement you had with the learning resource, or the learning path you reviewed, you can choose the N/A option. If you do not wish to answer a question for any reason, you can leave it blank.

**Design**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
<th>N/A</th>
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<td>1</td>
<td>2</td>
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<td>4</td>
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</table>

- It was easy to find the things I was looking for in the learning resource.
- It was easy to find information on where to go for help with the learning resource.
- The tools used for this learning resource (e.g., VIULearn, discussions, dropboxes) were easy to use for my learning.

Please use the space below to provide any additional comments about the design:

**Thoughts on Future Offerings**

How best do you see this learning resource being offered to future participants?

- Self-directed learning paths
- Facilitated learning paths
- Self-directed whole learning resource
- Facilitated whole learning resource
- Other:

If you completed an offering of this kind, would you want to receive a certificate of completion?

- Yes
About how long do you think would be a reasonable amount of time (in hours) to spend to complete this learning resource?

If the learning path you reviewed was offered as a facilitated learning resource, would you be interested in taking part?

- Yes
- No
- Other:

When would you like to take part in a learning resource like this? Please suggest a few times during the year that would best suit you.

Please share with us why you would not be interested in taking part in a facilitated learning resource at this time:

Do you have any final thoughts on the learning resource not addressed by the other questions?

Please use the space below to type your thoughts:
Appendix J

Graphical Summaries of Survey Data from Teaching Faculty

Figure J1. Teaching faculty member agreement with statements about the learning resource content. Chart summarizing the responses of the teaching faculty to Likert questions regarding the learning resource content.

- I felt the variety of content provided helped me engage with the material.
- I had no technical challenges while accessing / viewing the content.
- I understood how the content (e.g., text, videos) was related to the learning outcomes.
Figure J2. Teaching faculty member agreement with statements about the learning resource activities Chart summarizing the responses of the teaching faculty to Likert questions regarding the learning resource activities.

- I feel the activities would help me to achieve the learning outcomes for the learning resource or learning path.
- I found the instructions provided about the activities were useful.
- I understood how the activities (e.g., discussions, dropboxes, quizzes) were related to the learning outcomes.
I feel there would be value in having a facilitator engage with me during the learning resource.

I feel there would be value in having a real-time meeting with the other participants engaged in the learning resource (either face-to-face or via webinar).

Figure J3. Teaching faculty member agreement with statements about the learning resource interactions. Chart summarizing the responses of the teaching faculty to Likert questions regarding the learning resource interactions.
Figure J4. Teaching faculty member agreement with statements about the learning resource design. Chart summarizing the responses of the teaching faculty to Likert questions regarding the learning resource design.
Figure J5. Teaching faculty member votes for how best to offer this learning resource to future participants. Chart showing teaching faculty preferred self-directed learning paths over facilitated learning paths.
Appendix K

List of Changes to the Learning Resource

**Organization and Web Design**

- Reviewed headings for consistency
- Overall increase in font size
- Reviewed all multimedia to ensure transcripts or closed captions were available
- Provided additional means of representation if needed
- Chunked some single pages into multiple pages to avoid excessive scrolling
- Added links to downloadable Adobe PDF files of the module content in the “Additional Resources” page
- Added some information to the Centre website

**Depth and Breadth of Materials**

- Organized introduction materials according to what teaching faculty need to know, and what is a good tool for their students
- Provided additional means of accessing content other than text-based resources
- Produced VIU-focused resources showcasing teaching faculty
- Reviewed activity instructions to ensure active learning is encouraged
- Moved written and video tool tutorials into the introductory materials

**e-Learning Design**

- Created course shell for first offering of a single learning path
- Added learning path materials to introductory materials
• Edited the module titles and descriptions to help asynchronous participants navigate in the learning resource

• Created additional or optional formative assessment activities that allow reflection without the need for additional peer or facilitator interactions

• Created a rubric for some required activities that allow more flexibility and choice in products produced by participants

Additional Comments

• Reviewed all content pages for tone and use of jargon

• Edited introductory materials for tone and clarity

• Provided multiple means of access to OERs that do not display correctly on all systems