**McLUHAN HAD IT RIGHT:**

**Constructivist Strategies to Optimize Millennial Learner Satisfaction**

**in the Post-secondary Online-course Setting**

By

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**Disclaimer**

The views expressed in this capstone project are those of the author and do not reflect the views of the Northern Alberta Institute of Technology, the University of Alberta, the Faculty of Extension, or the Communications and Technology Graduate Program.

**Table of Contents**

**List of Tables**

**Abstract**

**Background.** Online learning, a phenomenon prophesized by Canadian communications media guru Marshal McLuhan in the 1960s, is becoming popular among learners for both its schedule flexibility and learning autonomy. However, up to 50% of online learners drop out of their courses, apparently dissatisfied with their learning experience. Several studies have been conducted recently to determine both the cause and to identify strategies to mitigate this alarming statistic.

**Objectives.** The newest generation of Canadian online learners, Millennials aged 19-30 in 2016, will soon become the dominant generation of post-secondary learners. Millennials have become accustomed to Constructivist pedagogy through their primary and secondary schooling. This project endeavours to determine whether applying Constructivist strategy to the post-secondary online-course setting, specifically increased instructor presence and active participation, would optimize Millennials' online-learning experiences by increasing their levels of satisfaction.

**Method.** A review of current literature was conducted to identify successful Constructivist online-course delivery strategies. Instructor presence was ascertained as the strategy instructors had the most control over and therefore the easiest for instructors to refine. Semi-structured interviews were then conducted with six Millennials, all currently enrolled in accredited post-secondary programs with fewer than five post-secondary online courses completed. Data was gathered on their reflections of and their satisfaction with each of their online-course instructor's presence in the areas of communication, availability, presence in activities, and feedback.

**Results.** Learners valued the learning experience, knowledge construction, and skill development over quantitative achievement in their online courses. All six sought active instructor participation at the onset and throughout their online courses to overcome key learner challenges identified during the interviews. Based on their interview data, several key strategies were generated for instructors to implement a Constructivist approach to online-course delivery; recommendations were also provided for implementing these strategies in a meta-Constructivist fashion.

**Conclusions.** It was discovered that the Millennial learners interviewed had indeed become normalized to Constructivist pedagogy: they expected and would have benefited from a higher frequency and quality of instructor presence in their online learning. These findings complement those of the literature review, so it is recommended that online-course instructors adopt an enhanced approach to their online-course presence to optimize learner satisfaction and decrease learner attrition. Further development of a Constructivist online-course pedagogy is also desirable, as is formal instructor training in this regard.

**Keywords:** Constructivism, Constructivist pedagogy, instructor presence, learner satisfaction, learning experience, McLuhan, Millennials, online course, online learning, post-secondary.

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**Introduction**

Many know Marshal McLuhan for his prophetic work in mass communications and media analysis; however, few know that he started out as an English professor in the mid-1930s (Gordon, 2002). McLuhan left teaching in the 1950s as he found his role as a post-secondary instructor too generationally isolating, inhibiting his connection with students who were, at times, "his juniors by only five to eight years" (para. 2).

In the 1960s, McLuhan criticized traditional academics for being overly teacher-centred, failing to meet the needs of the learner "of the electric age" (Norden, 1969, para. 82). He asserted that new electronic media made possible a new type of learner, one that would employ all senses in learning, facilitating "wholeness, diversity and, above all, deep involvement" (McLuhan & Leonard, 1967, p. 24). McLuhan foresaw these media available to use both inside and outside the classroom, as detailed in *City as Classroom: Understanding Language and Media* (1977). These media would contribute to altering society's perceptions of education by blurring the boundaries and concept of the classroom itself, facilitating learning in multiple disciplines and giving birth to authentically lifelong learning.

McLuhan's assertion came at the same time as the emergence of Social Constructivism. Social Constructivism is a psychological theory modified as a pedagogy – a theory-based method of teaching – by Vygotsky. In his 1978 book *Mind in Society: The Development of Higher Learning Processes,* Vygotsky posited that knowledge is constructed by the student, rather than

imparted upon the learner by the student. The teacher would observe the students, the learning process, and the results, fostering a teacher-learning experience as well. Canadian primary and secondary educators have embraced Constructivist pedagogy for its flexibility and opportunities for modification in comparison to more traditionally rigid teaching methods.

Since the 1980s, face-to-face (F2F) classrooms in Canada have become more focused on learning through activity that is Constructivist in nature, both collaborative and interpersonal. Primary and secondary curricula are no longer results-based and grades-determined; they now prioritize learner-based objectives and outcomes in the forms of skills developed and knowledge constructed.

Post-secondary instructors are now being challenged to provide a Constructivist form of enriched learning experience. This can be challenging enough in the F2F setting; the online-course setting, however, presents myriad uncharted challenges in this regard. Most online-course instructors have subject-matter expertise but lack the pedagogical training needed to deliver knowledge in the Constructivist manner to which today's learners are accustomed. Currently, about one of every three learners completes his/her post-secondary education online (Hoskins, 2012, p. 51). However, 30% to 50% of those learners drop out of their program prior to graduation (Horzum, 2015, p. 505). These troubling statistics call for a proactive approach to instructor education in post-secondary online course delivery, one based on a Constructivist approach that produces enriched learning experiences for online learners that will provide them with the skills and knowledge to both complete their education and develop their careers successfully, similar to that which McLuhan envisioned.

**Literature Review**

**Methodology**

A literature review was conducted to identify Constructivist approaches and strategies that post-secondary online-course instructors can implement to optimize online learner engagement and satisfaction through:

1.  Enhancing instructor and learner presence,

2.  Minimizing technological barriers to participation, and

3.  Fostering active social learning in online settings.

**Search Strategy and Collection Criteria**

The search focused on academic studies that examined the relationship between instructor design and delivery of online course materials and levels of online learner satisfaction with the learning experience. Elements of over 50 sources have been synthesized to produce findings for this literature review, the majority of which are academic-journal studies, articles, or doctoral dissertations; several books on Constructivist pedagogy and educational strategies were also sourced and analyzed. Sources reviewed focus on one or more of the three strategies mentioned.

**Data Extraction and Management**

Sources were found via the University of Alberta Library's subscription to the EBSCO database in October and November, 2015. References were managed manually and were examined for key points and objectives, study design and methodology, limitations, findings, and suggestions for further research.

**Synthesis of Research Findings**

Source analysis followed a "narrative synthesis approach, which is a textual approach of a synthesis of findings from multiple" sources (Lamont, Sliwa, Stewart, Carrington, Pretorius, Libhaber, Wiysonge, Adebayo, & Klipstien-Grobusch, 2015, p. 4). Synthesis of the findings was conducted and completed manually throughout November and December, 2015.

**Currency and Relevance of Literature**

Taking into consideration the recent and exponential growth of digital and social media and their use in the online-course setting, the majority of studies collected is from the past five years only. Studies from post-secondary institutions from around the world were selected to establish the universal need for a solution to as well as to identify common themes of approach to addressing this problem. The theoretical basis for this approach was derived from late 20th-century literature related to McLuhan's views on education as well as Vygotsky's views on Constructivism in psychology and education.

**What is Constructivism?**

Constructivism is a late 19th-century psychological theory that evolved from the traditional stimulus approach of observing and recording of subjects' reactions to stimuli within an environment (Vygotsky, 1978). Constructivism involves the establishment of a "stimulus-response framework" for studying the entire learning process holistically in order to enrich both subjective and objective experience for subjects and observers (p. 59). Pedagogically, knowledge is constructed as a result of the participation and experience of subject and observer alike, rather than being imparted onto the subject by the observer. Constructivism has pervaded Canadian grade-school education for the past 40 to 50 years; therefore, it is reasonable to conclude that

current Canadian post-secondary students would have been immersed in Constructivist pedagogy during their grade-school education.

**Online learning is inherently Constructivist.**

Ideally, online learning facilitates the teaching of crowds: a "vast cluster of connected individuals can learn together, both, within the context of institutions and beyond" (Dron & Anderson, 2014, p. xi). However, it also facilitates "*teaching* crowds [italics added]" in the adjectival sense: "people learn *from and with one another* in an online context while playing the roles of both learner and instructor—not always intentionally, and not always even as individuals [italics added]" (p. xi).

In tandem, digital and social media satisfy individual curiosity quickly and easily. However, they also foster the shared experience that comes with a two-way "transmission of knowledge" among participants, learners and instructors alike, as McLuhan predicted (McLuhan & Leonard, 1967). However, Gregory and Salmon (2013) emphasize that "research and practice point to the need for university teachers, new and experienced, and at all levels of education, to acquire new skills in creating, managing, and promoting student participation in interactive conferencing online" (p. 259).

**Theme One: Enhancing Instructor and Learner Presence**

McLuhan and Leonard (1967) noted that instructors need to "have a high stake in generating interest and involvement for [learners]," meaning that instructors need to create a Constructivist environment which facilitates "free interaction with a responsive environment" (p. 24). In McLuhan's traditional classroom, the teacher's focus is the subject; in his new classroom, the focus is the learner and the learning atmosphere. In the online setting, this requires a new set

of techniques is needed to foster authentic dialogue through designing for, initiating, and modeling presence.

**Course design.**

The Constructivist approach to course design focuses on learning processes which yield academic outcomes focused on "promot[ing] social relationships of advice-seeking and trust…as they have a positive impact on…knowledge-building and learning" (Alonso, Manrique, & Martinez, 2015, p. 434). Accordingly, instructors need to design courses with abundant opportunity for participants to develop peer and student-instructor relationships, thereby increasing learning satisfaction (Horzum, 2015).

Frisby, Limperos, Record, Downs, and Kercsmar (2013) note that instructors believe that face-to-face (F2F) courses are socially superior to online courses as they naturally foster social presence, as do Barber, Taylor, and Buchanan (2014). Seaton and Schwier (2014), however, distinguish online courses as environments for critical reflection, productive debate, and co-creation of common understanding. To optimize these activities, online course design needs to focus primarily on interaction and utilize a proactive approach to anticipating learner inquiry rather than a reactive, response-to-learner-inquiry style: "teaching online requires a faculty member to think differently" (Fish & Wickersham, 2009, p. 279).

Alonso et al. (2015), Fish & Wickersham (2009), Pittaway (2012), and Salmon (2011) suggest that course design needs to start with focusing on social objectives, then adapting curriculum objectives to optimize social-learning activities. This would involve generating assignments and activities that obligate participants to contribute socially, become members of a larger entity, and become responsible to others at the onset – all of which requires consistent and active participation from instructors.

**Course structure.**

In order to realize social objectives, Pittaway (2012) suggests five types of learner engagement and presence upon which to focus: personal, academic, intellectual, social, and professional. She notes that learners may have varying levels of aptitude for each and that "foster[ing] a growth view" (p. 42) for each. In addition, encouraging the strong-skilled to aid the weak-skilled in their development will ensure participation and encourage active, autonomous learning via peer interaction and course-content exploration. Salmon (2011) suggests a five-stage course planning framework for optimizing instructor presence: access and motivation, online socialization, information exchange, knowledge construction, and development by applying learning to the real world.

**Careful selection and use of technology.**

Online courses are generally delivered via learning-management systems (LMS) such as Moodle, Desire2Learn, and WebCT/Blackboard. The quality of participant presence relies on the frequency and combination of technological tools or media that are employed to establish the course's media-rich or media-lean nature. Rubin, Fernandes, and Avgerinou (2013) note a direct correlation between learner satisfaction with LMS-based media and the course experience. Technological aptitude, media choice, and timeliness and quality of instructor feedback are the three variables affecting participant (instructor and learner) presence in this regard.

***Participants' technological aptitude will affect their presence.***

LMS-based course tools are the media by which learners will establish and maintain their online-course presence; however, their effective use is contingent on technological aptitude. Accordingly, learner presence will decrease if there is a lack of LMS-related skill or comfort; learners will avoid interacting with other participants online (Mathieson & Leafman, 2014).

*Media choice for dialogue and feedback.*

As suggested, a combination of media types employed throughout the course will engage learners, increase their presence, and heighten their perceptions of satisfaction. Multiple media are favoured by learners over single medium, especially a combined variety of standard and non-traditional educational media (Holzweiss, Joyner, Fuller, Henderson, & Young, 2014). Consequently, repeated use of solely text-based media is perceived by learners to be the least favorable; it is a media-lean choice that lacks non-verbal cues and presence (Frisby et al, 2013; Portoloese, Dias, & Trumpy, 2014).

When instructors provide feedback, they need to keep in mind that learners prefer audio-based media as it is perceived to be more accessible and practical (Frisby et al., 2013; Portolese Dias & Trumpy, 2014). Audio feedback gives learners the impression that a genuinely caring person is leading the course because a human voice generates said feedback. Learners also regard highly the perceived level of effort put forth to create such posts (Frisby et al., 2013; Portolese Dias & Trumpy, 2014).

**Type and quality of instructor feedback.**

All learners appreciate timely formal and informal feedback as it helps them to ensure they are interpreting course content correctly (Holzweiss et al., 2014). However, online instructors often overlook the importance of providing formative feedback via the aforementioned multiple media (Fish & Wickersham, 2009; Seaton & Schwier, 2014). This can reduce learners' perceptions of instructor presence, leading to increased distance via decreased engagement and satisfaction (Ladyshewsky, 2013; Mathieson & Leafman, 2014; Rubin et al., 2013).

To optimize presence, instructors need to increase the frequency of content-based formative feedback; they also need to personalize this feedback via use of humour, emotion, and self-disclosure. Addressing learners by name and using language that alludes to the instructor's physical presence and ongoing availability increases learner perception of instructor presence and helps to personalize the learning experience (Berger, 2013; Portolese Dias & Trumpy, 2014). Ensuring that feedback is specific to the content of each learner's submission helps strengthen the learner-instructor relationship, as does offering assignment-specific suggestions for modification and encouragement (Berger, 2013; Holzweiss et al., 2014).

**Modeling presence.**

O'Shea, Stone, and Delahunty (2015) note that good instructors transcend "the online environment …respond in a timely manner and …demonstrate an active and engaged attitude" (p. 49). Richardson, Koehler, Besser, Caskurlu, JiEun, and Mueller (2015) assert that modeling presence in an online course setting is a threefold strategy involving teaching, instructor, and social presence. Ensuring that each is apparent for the duration also leads to higher levels of learner engagement and course satisfaction.

*Teaching presence.*

Teaching presence is reflected in course design and planning. It involves guidance via LMS organization, automated reminders, direct or discussion-based lessons, and assessment mindful of Bloom's Taxonomy-based lower- and higher-level thinking skills (Fish & Wickersham, 2009; Richardson et al., 2015; Rubin et al., 2013).

*Instructor presence.*

Instructor presence involves the day-to-day management of learner progress. Learners want instructors to demonstrate their presence via high levels of immediacy, consistency,

responsiveness, by establishing community, and by establishing requirements with clear direction (Ladyshewsky, 2013; Richardson et al., 2015).

### *Social presence.*

Richardson et al. (2015) characterize social presence as affective expression through sharing of the personal self, fostering open communication among participants, and encouraging group cohesion via tasks. They and Berger (2013) emphasize that instructor social presence enhances that of learners, increasing learner satisfaction with the course and its instructor. Welcoming, showing emotion, modeling commitment, addressing learners by name, complementing, and self-disclosing via dialogue or activity all help to optimize instructor social presence (Berger, 2013; Ladyshewsky, 2013; Richardson et al., 2015; Salmon, 2011).

### *Caveats.*

Learner-perceived mid- to high levels of instructor presence are correlated with optimal course satisfaction (Burkle & Cleveland-Innes, 2013; Ladyshewsky, 2013). Overpresence, however, is negatively correlated with learner engagement if instructors steer discussion and learning in a direction the learners may not wish to go (Ladyshewsky, 2013).

## Theme Two: Minimizing Technology-related Barriers in Online Courses

McLuhan accurately forecasted that the use of a "worldwide network of computers… hooked into learning consoles," would help to produce a responsive environment to motivate learners to explore and dialogue frequently with other learners and instructors (McLuhan & Leonard, 1967, p. 24). As part of today's online learning medium, technology connects participants to "the new educational world of electric circuitry and heightened human interaction" to which McLuhan refers to as a "new means for apprehending and enjoying the stuff of sensory input, of interpersonal relations" with the potential for a connective, media-rich

learning experience (p. 25). This new media would not only need to be adopted into the classroom for everyday use – it would, in itself, become the new classroom.

However, the practical implementation of the technology has unfortunately yielded negative outcomes which are detailed in the following section. Several educational technology scholars claim that these results could have been anticipated and mitigated with a Constructivist approach to online learning.

**Applying old ways to a new environment leads to conflict and failure.**

According to Anderson and Elloumi (2004), the online course was the product of two drivers, one of which was the emergence of online education technology that facilitated communication between participants (p. xi). However, Abdelaziz (2013), Acland (2014), Dron and Anderson (2014), and Zhao (In Strauss, 2015) agree that the introduction of new media on society have "produced spatial and temporal upheaval" (Acland, 2014, p. 13), characterized by Zhao as "amazing euphoria" followed by "disappointing outcomes" (Strauss, 2015, para. 6).

Both Dron and Anderson (2014) and Zhao lament this common reaction to and reason for the failure of educational technology to "cyclic amnesia" (Boss, 2015, para. 6). Education systems have attempted time and time again to maintain traditional, teacher- and institution-centred strategies for modifying existing curriculum. Instead, educators need to acknowledge that "technology has created a new world, which demands new skills and knowledge" as McLuhan asserted (Strauss, 2015, para. 16).

As a result, conflict between traditional and new has arisen, placing the state of education in flux (Barber et al., 2014; Dron & Anderson, 2014). For example, post-secondary institutions award credit based on "the amount of *teaching* rather than the amount of *learning*…the bureaucratic machinery of higher education" which impedes progress (p. 305). An end to the

opposition between administration and learner and capability for "trans-medial" sharing is needed, resulting in knowledge-building through social learning via a combination of optimal media (Friesen, 2010, p. 7).

### *Uncertainty and avoidance.*

Educational technology, particularly in the post-secondary form of LMS' and their applications, has great potential; however, it is the gap between perceived and actual utility that cultivates uncertainty and avoidance. Instructors cannot assume that learners are already skilled and technologically/digitally literate simply because they choose to learn online. Comfort levels increase with skill development and experience, and uncertainty regarding educational technology decreases as learners gain course experience (Holzweiss et al., 2014).

Rubin et al., (2013), Dron and Anderson (2014), and Thota and Negreiros (2015) all emphasize that "attention should be paid to learner anxiety with technologies" (p. 9). Dron and Anderson (2014) believe that it is up to the instructor "to ensure that learners are able to use the relevant technologies" (p.107). This is in order to ensure media are utilized frequently: the higher the rate of frequency of use, the greater the experience will be for all participants. They also note that administration needs to provide participant (instructor and learner) training and support prior to and throughout the course, as do Rubin et al. (2013) and Cho and Heron (2015).

### **Applying Constructivism to online learning: A solution to the problem.**

As noted earlier, successful integration of technology in learning is contingent on developing and implementing new ways of approaching learning. Today's learners "are skilled in multitasking, parallel processing, graphic awareness and random access," and educational administration is becoming decentralized (Thota & Negreiros, 2015, p. 1). Therefore, educators need to approach technological implementation socially and informally to complement the nature

of digital media, with an eye on fostering collaboration, negotiation, and conflict-solving skills to optimize the group-learning process (Thota & Negreiros, 2015).

**An inductive approach to integrating online-course technology.**

As education moves into the online environment, course design considerations need to be inductive, rather than deductive, in approach in order to rebalance power among participants and foster authentic learning via genuine dialogue. Abdelaziz (2013), Barber et al., (2014), Black (2009), Morrison, Ross, Kalman, and Kemp (2011), Popescu, Buluc, and Crăcuin (2014), and Thota and Negreiros (2015) all advocate variations of a four-step, inductive course-design process that focuses first on learner goals in order to customize instructional strategies, then designing the course delivery with complementary technological tools to achieve those learning goals. This approach reflects learner-centred rather than instructor-centred education, satisfying that which McLuhan identified as a requirement for the "child of the electric age" (Norden, 1969, para. 82).

*First, look at learning objectives.*

Learning objectives need to replace course objectives: courses themselves need to be created with learner goals in mind, rather than teaching goals, to answer the question: "*what kind of…*[learners] *will ultimately be produced?*" Thota & Negreiros, 2015, p. 7). This prioritizes learner goals, ultimately transforming the learning role from one of consumer to active participant and creator who is responsible for developing real-world knowledge (Abdelaziz, 2013; Barber et al., 2014; Black, 2009; Holzweiss et al., 2014; Popescu et al., 2014; Thota & Negreiros, 2015).

***Second, develop instructional strategies.***

Once learning objectives are established, the majority of scholars cited advocate for variations on a dynamic model posited by Abdelaziz (2013) in which the learner's cognitive, psychological, social, and mental processes are challenged concurrently within a multisensory context. Both Zhao (in Strauss, 2015) and Thota and Negreiros (2015) mention the need for a shift in instructor role from transmitters of knowledge to that of "aggregators, assimilators, analysts and advisors" of learning (p. 2). Barber et al. (2014) and Dron and Anderson (2014) call for more formative, "competence-based assessment" that must be integrated as part of these new strategies (p. 305). Barber et al. (2014) also emphasize learner metacognition through techniques such as multimedia journaling, focusing specifically on emotions evoked during the learning process throughout the course. Shared with other learners, these reflections form the foundation for "'socialisation [sic] into the culture, values, and mores of a chosen profession'…through collaboration with others" (Holzweiss et al., 2014, pp. 312-3).

***Third, consider the design of instructional modules.***

Once learning strategies are defined, instructional-module design needs to foster the dominant, active role of the learner throughout the course. This is best achieved with a constructive, connective, and collaborative approach that optimizes learning in groups (6-10 people) and small groups (4-5 people) (Abdelaziz, 2013; Black, 2009).

Abdelaziz prioritizes the implementation of e-based activities in instructional-module design that focus on the "epistemological, pedagogical, technological, and social" domains. These are situated within "'practice fields'" (2013, p. 275) that foster cognitive, social, psychological, and mental skill development, an approach similar to those promoted by Black (2009) and Salmon (2011, 2013). Specifically, Black focuses on several Constructivist and

collaborative learning models to adapt them to online learning. Her findings connect theory, construct, and design principle, providing both media suggestions to foster learning and a complementary instructional-module design process flowchart. Thota and Negreiros (2015) encourage examination of the "constructive alignment" approach which places …[instructional-module] design in context with activities, assessments, and learning outcomes when considering tool selection (p. 4).

*Finally, select technology tools to complement design considerations.*

Thota and Negreiros (2015) suggest several tools to "blend content presentation with technologies …that engage the learner in the active performance of tasks" (p. 1). They chose to base their selection strategy on Bloom's Digital Taxonomy, which focuses on exemplar digital-tool genres to complement each of the six lower and higher-order learning outcomes (pp. 5-6). Furthermore, Black (2009) suggests the use of each tool's analytics macro to monitor passive and active participation in order to be able to evaluate their utility as the course progresses.

**Other considerations regarding technological integration.**

*Digital technology is participant-driven: digital education needs to be, too.*

Instructors need to consider the social nature of digital media in order to optimize learning via technology: inherently spontaneous, informal, optimal for groups, and participant driven. Therefore, course design needs to reflect this and be framed loosely enough to allow for modification as the course progresses. Instructors must avoid that which Morrison et al. (2011) characterize as "shovelware" or repackaging of existing materials (p. 262) and strategies used in F2F settings because it conflicts with the inductive approach: "When technical rationality is not balanced with [learner] autonomy…, [learners] stop using their own voices and the learning

environment becomes stunted. It reverts to a traditional one where power structures favour the [instructor]" (Barber et al., 2014, p. 134).

### *Multimedia and media richness.*

Instructors also need to consider media richness when selecting and combining tools for learning. Media richness is reflected both in the degree of multisensory stimulation and the ability for participants to give immediate verbal and non-verbal feedback that include voice inflection, gesturing, and facial expression, among others. Frisby et al. (2013), Rockinson-Szapkiw and Wendt (2015), and Rubin et al. (2013) found that learners' "rhetorical and relational goals were more likely to be met" via multimedia and media-rich technology (Frisby et al., 2013, p. 468).

Scaffolding is a pillar of Constructivist pedagogy that involves scheduling activities and assessments of increasing complexity to build learner skills and knowledge as the course progresses. In order to foster collaboration among learners, tools that sanction synchronous multimedia experiences, facilitated scaffolding, and knowledge construction by reducing misconception among participants are needed (Barber et al., 2014; Black, 2009; Rockinson-Szapkiw & Wendt, 2015). In addition, Moreillon (2015) encourages instructors to go beyond the LMS to use external, media-rich, digital tools used in real-world settings to further integrate digital technology throughout one's daily and professional lives.

## Theme Three: Fostering Active Social Learning

McLuhan and Leonard (1967) classified traditional, teacher- and text-centred education as conformist and controlling, incorporating hard, text-based media (p. 24). This yields a disengaged learner, as no input is required of them, and a teacher, accustomed the one-way communication of the F2F classroom, who expects to be the "'sage on stage'" (Kuskis, 2014,

para. 3). McLuhan emphasized the need for instructors to "start fresh with new techniques and values" (Norden, 1969, para. 13). He forecasted the shift of teacher role from knowledge transmitter to "guide on the side…allow[ing] learners to discover portions of the topic for themselves…[facilitating] knowledge construction" (Kuskis, 2013a, para. 3-4) in multiple disciplines, extending learning throughout one's life (McLuhan & Leonard, 1967; Kuskis, 2014). McLuhan predicted that learners would "probe…as a means or method of perceiving…[tackling] things from many angles at once" (Kuskis, 2013b, para. 2), rather than replicating "standard[ized] perceptions and approved solutions" (McLuhan & Leonard, 1967, p. 25).

**What is social learning?**

Social learning compels participants to actively work with and "challenge each other and construct new knowledge in the process…to construct meaning together" (Bryant & Bates, 2015, p. 22). Social learning reflects characteristics of a Constructivist education setting: actively involved learners, a democratic environment, learner-centred activities that optimize interaction, and a learning process that fosters autonomy and responsibility ("Constructivist Teaching Methods," 2015).

Hoskins (2012) characterizes the learner as an active participant, a knowledge generator. LMS' can provide the environment for this because they are Constructivist in nature; however, it is important to acknowledge that providing a platform for social learning does not guarantee that social learning will occur. More often, "many [online learning] participants…are engaged in monologues to present their own views" (Zhao, Sullivan & Mellenius, 2014, p. 807). This is antithetical to the essence of Constructivism and speaks to the integral role the instructor plays in designing opportunities for and guiding participants in authentic social learning environments.

**Instructor strategies to foster social learning.**

Instructors must engage with learners while they are learning, "wondering aloud and posing questions" synchronously and asynchronously to promote reasoning and higher-level thinking ("Constructivist Teaching Methods," 2015, para. 18). This fosters learner discovery: authentic dialogue that is transformative in nature because it requires learners to mentor each other though the knowledge-construction process, enriching the learning experience.

Morrison et al. (2011) recommend that instructors inform learners of what is expected prior to and throughout the course: start with pretests, share objectives, and provide an overview and a comparative (start-to-finish) or expository (step-by-step) organizer. Synchronous presentation of these will model interaction, encourage learners to contribute at the onset of and throughout the course, and "reinforce the idea that developing a community is important for the learning process" (Oyarzun & Morrison, 2013, p. 182). Instructors need to budget time for this because too little or no time may lead learners to focus only on content and assessments (Rogerson-Revell, 2015).

To facilitate this, McMurtry (2013) emphasizes the importance of proper "step size" when designing knowledge-construction activities (p. 23). This can be mitigated with ongoing monitoring of student interaction, providing formative feedback through each step, and consistent use of both terminology and transitional language within and between course topics to ensure learners know where they are in the process and where they are going. Conversely, compelling learners to make too-large a leap in understanding can be counterproductive and impair learning.

### *Encourage dialogue rather than discussion.*

It is important to distinguish discussion from dialogue in social learning. In online-course settings, discussion is often one-way and is usually instructor-initiated and -directed, so the social-learning benefits are diminished. O'Shea et al. (2015) found discussion forums to be "a waste of time…intimidating [or] actually isolating and empty" (p. 51) due to their asynchronous and instructor-oriented nature. Dialogue, on the other hand, requires multiple participants to be successful (Darabi, Arrastia, Nelson, Cornille, & Liang, 2011). The instructor can initiate dialogue, but the end of deeper understanding of a concept is contingent on participant interaction. Hoskins (2012) suggests varied strategies to complement Bloom's Taxonomic progression from lower- to higher-order levels of development complementary to course progression.

Dialogue is synchronous in nature but can continue over short or long periods within the course. Ongoing dialogue encourages scaffolding upon prior learning as it "allows the dynamic phases of cognitive presence to evolve…the learner…can flow from one phase [of development] to another and back to previous phases when necessary" (Darabi et al, 2011, p. 224). Dialogue can also occur within text-based sharing media such as Google Docs and can be coupled with content creation (Niess & Gillow-Wiles, 2013).

### *Establish group learning.*

Social learning requires interaction within a group of manageable size for the learner and is best done in groups no larger than 20 (Salmon, 2013, p. 53) to facilitate quick acquaintance and encourage frequent contribution. As noted earlier, groups of 6-10 or even fewer are optimal, fostering interpersonal-skill development (Holzweiss et al., 2014; Morrison et al., 2011); small

groups of 4-5 work well for collaborative or project-based activities (Abdelaziz, 2013; Niess & Gillow-Wiles, 2013; Zhao et al., 2014).

Niess and Gillow-Wiles (2013) encourage instructors to use an "activity inquiry framework," a five-step scaffolding strategy to expand learner understanding via engagement, exploration, explanation, elaboration, and evaluation (p. 5). Instructors need to vary group mix from activity to activity (Morrison et al., 2011), and Zhao et al. (2014) suggest that instructors take gender into consideration when mixing due to a higher degree of success among female-populated groups.

### Encourage interaction and collaboration over participation.

Zhao et al. (2014) distinguish participation as reflecting "low frequencies of social presence…where participants use the online space for information exchange" (p. 818). Instead, instructors should be fostering a higher level of presence "through establishing a warm and collegial learning community" (p. 807) that incites interactivity and leads to "camaraderie" (p. 817) through deep and meaningful collaboration (Bryant & Bates, 2015). Affective dialogue in particular elicits emotional commitment and collaboration. Oyarzun and Morrison (2013) assert that collaboration is an antidote to online-learner isolation, which results in long-term benefits for learners.

### Establish peer mentoring.

An important element of collaboration is peer mentoring – this is a basic element of Constructivist knowledge-building occurring consistently and informally in social-learning contexts. Formal peer mentoring can be integrated by the instructor in the forms of motivational video messages from course alumni (Cho & Heron, 2015) and alumni project exemplars. Instructors can also encourage the use of external group platforms to enrich collaboration and

peer mentoring; however, they need to be student-initiated to be fully learner-autonomous (Cho & Heron, 2015; Zhao et al., 2014).

   ***Allow opportunities for conscious metacognition via reflection.***

   Providing opportunities for learners to foster reflective thinking enriches the learning process, supporting learner application and retention: "include effective support and training as well as the opportunity…to own the changes through the experience…[to] 'express…in action what they have learned'" (Gregory & Salmon, 2013, p. 256). Cho & Heron (2015) and O'Shea et al. (2015) both emphasize that reflective learning increases affective dialogue, satisfaction toward the subject matter, and a perception of success regardless of marks achieved. Niess & Gillow Wiles (2013) suggest that instructors require learner reflection via consistent feedback "to [allow learners to] unpack their ideas and rebuild them given the new information" (p. 5)

## Discussion of the Literature Reviewed

   The findings presented reflect a strong correlation of high-level instructor presence and an enriched learning experience, which is further correlated with the level of satisfaction derived from the learning experience itself. With this in mind, it is important that online-course instructors optimize their presence throughout course delivery. Instructors can do this by initiating and modeling strong, active, high-level presence, motivating learners to do the same. This can be accomplished through careful course design and planning, careful selection and use of technology, and modeling online presence to complement each course's learning objectives.

   There are identifiable technology-related barriers that can lead to course-participant uncertainty, avoidance, and eventual attrition. In order to mitigate those, course designers and instructors need to pay particular attention to the context of course-based technological implementation. Chiefly, instructors need to be aware of the shortcomings related to technology-

based instructions for monitoring initial and ongoing responses from novice users. They also need to determine how best to apply technology to social-learning contexts and to approach technology-based course design inductively.

Once established, a framework is set for the instructor to then focus on Constructivist-based strategies that can be implemented to foster active social learning within the course's context. Theoretically, if the instructor can frame course learning as a scaffolded, knowledge-building, social experience, learners will experience richer, more in-depth learning applicable to real life. They will then be more satisfied with their learning and are more likely to not only retain their learning but also be open to trying more online-learning.

**Relevance to Today's Generation of Learners**

Post-secondary learners, specifically those aged 19-30 in 2016 and known as Millennials, have graduated from a grade-school education system modeled around Constructivist-based social learning supported with digital technology. These learners are accustomed to a lesson approach that engages on multiple levels for real-life application, empowering them to construct knowledge autonomously. However, the current majority of post-secondary instructors did not experience Constructivist learning in grade school. Consequently, they will likely revert to what they either experienced as learners themselves and/or have implemented in the F2F setting. This yields a significant gap between learner and instructor, potentially resulting in learner dissatisfaction.

**Next Steps**

There is a marked difference between an online instructor's LMS aptitude and the ability to use it to facilitate learning that optimizes learner engagement and satisfaction. Given the current 30% to 50% attrition rate of online learners noted earlier, it is clearly not enough for administrators to provide an LMS and expect post-secondary instructors, hired principally for their subject-matter expertise, to research teaching methods and practices individually. This would further reduce time needed for other job-related responsibilities such as F2F teaching and scholarly research and publication (Seaton & Schwier, 2014). Therefore, post-secondary administrators need to develop and provide training to ensure instructors are well equipped to provide media-rich social learning experiences for their online learners.

I chose this topic as I have not yet taken on teaching in the online setting. However, as both an online-course student and colleague of those who do teach online, I am fully aware of the challenges related to online learning. This literature review signals both the need and strategies for developing a Constructivist approach to online course design and delivery, but the existing literature does not provide specifics regarding what online learners are seeking in order to optimize their engagement or satisfaction. Further research to determine the needs and inclinations of potential or new online Millennial learners is a practical next step in this line of inquiry.

Interviewing Millennial learners to confirm that they are seeking a social-learning experience in the form that the literature posits would go far in justifying the need for formal instructor training in Constructivist online-course delivery strategies. I have informally interviewed several Millennial students who consciously avoid taking online courses as they believe it to be an isolating and unfulfilling experience. Formally surveying a purposeful sample

of Millennials would help me to further compile information and professional-development strategies for designing and delivering Constructivist-based online learning. In the long-term, this research could potentially form the basis for a post-secondary instructor training program to improve online-course learner engagement and satisfaction through Constructivist design and delivery. It also has the long-term potential to contribute to the growing body of existing research by addressing the knowledge gap regarding the lack of input from learners.

**Methodology**

**Conceptualization and Focus of Research Design**

      The literature provided clear evidence that certain Constructivist strategies can enrich both the learning experiences and satisfaction rates of post-secondary online learners, which may result in an increased online-learner retention rate. However, De Vaus (2001) emphasizes the importance of drawing observations, not inferences, from correlated phenomenon when conducting social research. Based on his line of thinking, the evidence provided in the literature leads the reader to observe a "correlation" between certain preferences online learners have for strategies that optimize social learning and engagement with their persistence within the online-course setting (p. 4).

      The literature highlighted successful strategies employed by instructors in the areas of optimizing instructor and learner presence, employing technology that will reduce barriers and facilitate collaboration, and utilizing planning strategies to foster social learning to the end of optimizing learner satisfaction and retention. However, there are three areas that the literature reviewed thus far does not explore.

      First, it does not include material from those post-secondary learners who have either have taken very few or no online courses. This means that the current sample population fails to incorporate the views on Constructivist approaches to online learning of learners who are **not** yet normalized to online courses and related delivery methods.

      Second, Constructivist pedagogy was introduced into Canadian classrooms in the late 20th century and pervades current grade-school teaching theory. Consequently, the majority of current post-secondary learners (currently aged approximately18-50) would represent the first and second generations of learners who have been exposed to Constructivist pedagogy in

Canadian public school systems. It is worth noting that these age boundaries not only fall under the first- and second-generation Constructivist-learner categories; they also complement the approximate age boundaries of Generation X and Millennium generational groups. First-generation learners (currently aged approximately 34-50) would have become familiar with the Constructivist approach. However, due to the ages and pedagogical influences of their teachers, learners may have also been exposed to the type of traditional, teacher-centred methods McLuhan decried. By comparison, second-generation, or Millennial, learners (currently aged approximately 19-30) would have been immersed in Constructivist pedagogy throughout their public grade schooling due to their teachers' own exposure as both grade-school and post-secondary students.

Third, "young people [otherwise known as Millennials] … have been brought up and educated in a rapidly moving world of computers, the internet, and electronic communication" (Oliver, 2012, p. 135). It is this Millennial generation that has been exposed to and fully immersed in digital and social media, the one that McLuhan noted would be distinctive for its new style of immersive, involved learning via Constructivism and technology.

Therefore, it is these second-generation Constructivist learners, the Millennials, who would be accustomed to both Constructivist pedagogy and technological media and expect to see them utilized throughout the post-secondary learning experience. It would be deterministic to expect that Millennials would automatically embrace online learning; however, based on my own, informal data-gathering and the high attrition rate of online learners, it is important that researchers and instructors consider elements within this context that they have not yet taken into account. My study aims to address this knowledge gap.

**Field of Study and Research Questions**

Of the three themes presented in the literature review – instructor presence, technological

barriers, and social learning – I chose to focus on instructor presence for my primary research for

three reasons:

1. The instructor is the face of the course regardless of setting; he/she personifies the

   course and has principal influence on the learning experience.

2. Instructor presence is the foundation for both technology use and course delivery – it

   is the initial and essential component of any course, online or F2F. Instructors will

   model the use, misuse, or lack of use of technology to learners.

3. Of the three themes, instructors have the most direct control over their presence in an

   online course: technological adaptation and operation is contingent on an institution's

   hardware, software, and connection limitations, and course programming is directly

   influenced by its curricular outcomes.

Consequently, instructors have the potential to most quickly and easily modify their presence in

an online course in order to optimize their learners' online-course learning experience.

My study explores the opinions of Millennial post-secondary learners on instructor

presence in online course settings. I delve into the perceptions of learners who are not yet

normalized to current online-course delivery methods. This is required in order to learn their

views regarding online learning – and specifically instructor presence – to determine that which

they seek from the online instructor in order to optimize their satisfaction with the learning

experience. Based on this proposed focus, this capstone project's research questions are: *What*

*expectations do post-secondary Millennial learners have of online course instructors? How can*

*their opinions help instructors optimize learner satisfaction with the online-course learning*

*experience?* Working toward answering these questions will help me to develop my own online-course presence strategies. Hopefully my research on this topic will also aid other instructors to do the same, thereby making a contribution to the existing body of knowledge in this area.

**Theoretical Framework**

Yin (2012) emphasizes the importance of developing a "theoretical framework" (p. 9) for those new to "case study research and related qualitative methods" (p. 10). Employing a theoretical framework at the onset of research design "establishes a [qualitative] logic that might be applicable to other situations," much like a hypothesis (p. 18) and will help to complete "essential methodological steps," define the design, refine the collected data, and "generalize findings" (p. 9). Consequently, the following theoretical framework was developed as a part of this research design: *If Millennial learners are accustomed to and thrive within the Constructivist pedagogical approaches in face-to-face educational settings, then it is reasonable to conclude that instructors working in post-secondary online-course settings need to implement similar strategies in order to optimize Millennial-learner satisfaction and retention.*

I found it necessary to develop a theoretical frame because, at the onset of this capstone project, I wanted to identify how to incorporate Constructivist instructional strategies I could apply to benefit my future post-secondary online learners at NAIT. My literature review determined that there was indeed worldwide interest in this area as a potential solution to the challenge of a high rate of attrition among post-secondary learners. Moreover, I suspected that the current dominant online learner, the Millennial aged 19-30, possesses a different set of needs and learning styles from that of past online learners, due to their immersion in Constructivist pedagogy during grade school.

**Research Strategy**

As noted earlier, this research question provides the basis for a correlative study; one "where two events or characteristics are correlated … [in order to be able to] predict one from the other" (de Vaus, 2001, p. 4). To this end, the qualitative survey of a specific type of participant is required so as "to derive a(n) (up-)close or otherwise in-depth understanding of a single or small number of 'cases' set in their real-world contexts ... – hopefully resulting in new learning about real-world behavior and its meaning" (Yin, 2012, p. 4).

Yin defines this as the case study method, one that focuses on "the study of a phenomenon within its real-world context" (p. 5). This method is similar to what Rudestam (2007) identifies as "grounded theory study [method, which] is inductive [in nature] and theory evolves as the data are collected and explored" (p. 107).

When discussing the progress of this topic from the literature review to the research stage, Dr. McMahon suggested that this capstone be conceptualized as a developmental or exploratory project, designed as the founding step to further pursuit of the topic in subsequent research and practice (personal communication, January 8, 2016). Thus the suitability of applying the case or grounded strategy is found in its "*exploratory*" nature: "to collect some data to determine whether a topic is indeed worthy of further investigation" (Yin, 2012, p. 5).

**Sampling design.**

Because this research design is qualitative, it was important to be able to gather in-depth data regarding post-secondary Millennial views on employing Constructivist pedagogical strategies in online courses. It was therefore necessary to select participants based on representative or criterion sampling: "selecting participants who closely match the [inclusive and exclusive] criteria of the study," (Rudestam, 2007, p. 107). The preliminary representative

criteria not only complies with but also complements Yin's (2012) concept of a "holistic …

multiple case" research design sample (p. 8).

Rudestam (2007) and Yin (2012) both note an inverse correlation between the quantity of

participants (size of participant sample) and the length of survey: "Generally speaking, the

longer, more detailed, and intensive the transcripts, the fewer the number of participants" needed

to reach saturation, "gathering data until no new relevant data are discovered" (Rudestam, 2007,

p. 108).

Yin (2012) outlines three varieties of sources of case study data: direct observations,

open-ended interviews, and archival records (pp. 11-12). For this capstone project, semi-

structured, open-ended interviews will be employed in order to surmise "participants'

construction of reality [to the end of gaining] … important insights into the case" (p. 12).

At the onset, Dr. McMahon suggested that 10 half-hour interviews would likely be

sufficient to reach saturation (personal communication, January 8, 2016). However, I was unsure

as to whether 30 minutes would provide enough opportunity to address all three of the relevant

issues as outlined in the research question. In addition, reading other Constructivist-grounded

qualitative MACT capstones from the 2015 graduate class (by Carrie Vos and J. Maureen

Crawford) led me to conclude that fewer interviews of greater depth would be more effective in

this context in order to achieve qualitative saturation. As a result, I chose to conduct six, one-

hour interviews with participants who meet the following criteria.

*Inclusive criteria.*

In order to collect relevant findings, each participant needed to fall within the current

Millennial age range, 19-30 years old and be a current post-secondary student enrolled in at least

one post-secondary F2F or online course in the Winter, 2016 term, via an accredited institution.

Focusing on the views of students who had not yet become normalized to online-course delivery was important because I wanted to ensure students were also able to recall their F2F experiences and compare them with online. As such, I focused only on current students who had taken less than five online courses. These criteria were met during the selection process.

*Exclusive criteria.*

I am currently an instructor at the Northern Alberta Institute of Technology (NAIT) in Edmonton, Alberta. Because the instructor-student relationship can bring with it implications of hierarchy, authority, and even intimidation, none of my current students were sampled.

*Other considerations.*

While I initially intended to have an equal number of male and female participants to sample, it occurred to me that this may exclude participants who identify themselves as transgendered or without gender. As such, I expanded my scope to include gathering data from a wider range of gender identities.

**Limitations and Delimitations**

As noted by de Rudestam (2007) it is important to identify the limitations and delimitations of the qualitative research design. Limitations are "restrictions in the study over which …[the researcher has] no control," while delimitations are those criteria that the researcher deliberately applies to suit the research question and theoretical frame to the end of achieving generalizations (p. 105).

Due to the time and content-limit criteria imposed upon capstone project completion, I needed to limit my sample size to six participants. Second, I acknowledge that my research question is big, so applying an exploratory or developmental filter was important as it will help

me to develop findings that are manageable and purposeful to my own teaching philosophy and practice.

The delimitations that I placed upon this include the type of participants I wished to survey. They exist in order to identify the preferences and aversions of the newest post-secondary generation student, one whom I see as my primary audience in my classes because Millennials currently account for at least 80% of my personal student population. Moreover, the subsequent generation, Generation Z, will also be coming to post-secondary with the same educational influences as Millennials, further enriched by the fact that their teachers will have also been exposed to said influences as both students and teachers.

The findings still have the potential to contribute to the larger body of academic knowledge in this regard for those who wish to also pursue this line of discovery. As such, these limitations and delimitations have the potential to realize significant generalizations.

**Procedure**

Virtually all of the literature reviewed employed qualitative online or in-person surveys of then-current or recently-completed online-course learners. Because of this, it made sense to employ the same form of data collection for this survey. The interviews were semi-structured via a list of open-ended questions (see Appendix B, p. 85), allowing each participant to share their thoughts and opinions regarding their expectations of online-course instructors. Each of these interviews was manually transcribed in accordance with guidelines as established by Humble to comply with APA $6^{th}$ style requirements via

http://www.msvu.ca/site/media/msvu/GuideTranscribing.pdf. These interviews comprise the raw data I analyzed and synthesized to derive my findings and discussion.

Because of my status as a post-secondary instructor, I was able to approach potential participants that met my selection criteria informally, in person, to provide them with a brief background and overview of my project and my research. I then asked them whether they would be willing to provide me with their views via in-person survey or interview. I was pleased to find that all six of the students I originally approached were eager to participate and appreciated the opportunity to share their views.

Once the students agreed to participate, I confirmed their email addresses to follow up with more detailed information regarding date, time, location of the interview, and to provide an electronic copy of the ethics release (see Appendix A, page 81) for them to review prior to the interview. The ethics release is lengthy and provides a range of options determining the degree to which each participant would be involved: all had the choice of being contacted by e-mail should follow-up be necessary, to be identified by their full name, and/or to review a copy of his/her interview transcript. Therefore, I thought it necessary that the students have the time to review the details at their leisure and address issues with me prior to signing at the interview.

**Procedural Considerations**

McMahon emphasized the importance of planning survey and interview procedures while taking into consideration "practical challenges" such as "simplicity, accessibility, unobtrusiveness, permission requirements, frequently recurring activity, opportunity for participation, …time, cost, [and] access" (personal communication, January 29, 2016). My status as a post-secondary instructor at one institution and a graduate student at another requires me to take these challenges into account. Principally, I am aware that these practical challenges are also ethical ones because I was required to obtain ethics clearance from both institutions. In order to do so, I needed to familiarize myself and comply with both institutions' ethical

requirements, develop ethics releases, and complete the ethics-compliance process at both institutions before I began my sampling. Accordingly, I contacted one of my colleagues, Carrie Vos, Chair of the Engineering Design and Drafting program at NAIT and a 2015 MACT graduate who conducted her Capstone research at NAIT. Our topics and research designs are similar, so it made sense to meet with her to get her advice.

**Ethics clearance.**

De Vaus (2001) notes that "most universities have stringent procedures for conducting ethical research" and that ethics release forms "should include a description of the study, the right of refusal, an explanation of risks and potential discomfort, and opportunity to withdraw without penalty, and the potential for feedback" (p. 103). From my meeting with Vos, I learned that I needed to first develop and have the University of Alberta approve my ethics release, then submit that to Dr. Melissa Dobson, who is currently responsible for vetting ethics clearance requests at NAIT, my employer institution (personal communication, February 29, 2016). To design and compose my ethics release, I relied on three sources:

1. Information available via the Research Ethics and Management Online site (https://remo.ualberta.ca),

2. Vos' ethics release document, which was approved by both institutions, and

3. Guidance from my capstone supervisor, Dr. Rob McMahon, and from NAIT's Ethics Board Chair, Dr. Melissa Dobson.

**Ethics-clearance protocols.**

Because I had to clear two ethics boards, clarification was needed regarding the requirements of NAIT's Research Ethics Board (REB). Email correspondence between Dr. Dobson, Dr. McMahon, and I resulted in the following:

1. The University of Alberta would need to approve the research plan first.

2. NAIT would then receive copies of the application, the student information letter, and the certificate/letter of confirmation to review.

Once the documentation was reviewed, NAIT's REB required me to amend the letter in order to protect instructors' privacy and potential for retribution. Dr. Dobson requested that I ensure that any intended or inadvertent references to instructors by name, course names, and term dates be redacted in order to avoid any "defamation issues should problems arise" (personal communication, April 8, 2016). Once this was completed, an ethics-approval certificate was issued so that data collection could commence.

Upon reflection, I believe that I should have scheduled more time for the ethics reviews to be completed. I had originally planned to conduct the interviews between April 1 and 17 in order to avoid conflict with the participants' final-exam schedules but did not receive approval from both until April 12. Both ethics boards were extremely accommodating; NAIT's was an "expedited review" (M. Dobson, personal communication, April 8, 2016); it was entirely my lack of experience in this area that led me to believe that little time would be needed to complete the approval process.

**Mitigating participant stress.**

During our February 29 meeting, Vos emphasized to me our employer institution's concern that having instructors utilize students as research participants might be stressful for them. She conveyed Dobson's recommendations regarding establishing and maintaining a low-stress environment. First, Dobson emphasized to Vos that the relationship between the participant and instructor should be arm's length: the instructor should have no influence over the student's current academic progress. In short, it is best not to interview one's own students.

Vos also noted that Dobson emphasized to her that it was important to repeatedly convey during the interview that the participant was neither compelled to answer questions that made them stressed nor to complete the interview in whole – they could stop the interview and leave at any time (personal communication, February 29, 2016).

Second, Dobson recommended that the interview environment be quiet, calm, and not intimidating, with consideration for location, interviewer-participant proximity, and environmental conditions in which the interview will be conducted. Vos suggested scheduling a meeting room or small classroom and noted Dobson's recommendation that interviewers provide a bottle of water for each participant (personal communication, February 29, 2016). I also avoided an across-the-table position from the participant as to avoid any physical reinforcement of the instructor-student hierarchy.

Third, Vos noted that remuneration for participation was sanctioned by both institutions (personal communication, February 29, 2016) as outlined on the University of Alberta's page regarding "The Use of Incentives in Research" (http://www.reo.ualberta.ca/en/Human-Research-Ethics/Incentives.aspx). Vos provided the option to each student to choose a place from which he/she would like a $25 gift card. She suggested that customized remuneration would personalize the experience for all involved, mitigate the exacerbating issues related to the instructor-student status, and emphasize the importance of the individual participant's contributions to the research. As such, I did follow Vos' lead and provided customized remuneration of the same amount for each participant.

**Identification and Characteristics of Relevant Data**

According to de Vaus (2001), a case-study design can employ several methods of data collection. As noted, I conducted semi-structured interviews with participants who met both inclusive and exclusive criteria with a list of questions that were categorized relevant to optimizing instructor presence.

In order to respect and employ the social Constructivist process in my data collection methods, I encouraged participants to provide related, unsolicited feedback throughout the interview to encourage that which de Vaus (2001) refers to "'plausible rival hypotheses'" to develop "alternate ways of interpreting findings" regarding online-course collaboration and retention via employing Constructivist pedagogical strategies (pp. 11-12).

Vos developed a 15-question interview script and noted that, depending on the participant, she was able to complete each interview in a 40- to 60-minute timeframe (personal communication, February 29, 2016). Based on this information, I developed a script of similar length (see Appendix B, page 85).

**Means of Relevant Data Collection**

De Vaus (2001) promotes data-collection methods that ensure the rigor and reliability of the data collected: "An open-ended interview, when properly recorded, has high fidelity" (p. 111). Consequently, I voice-recorded each interview separately to maintain high reliability. I also took field notes in order to maintain an active listening presence, to begin to identify similarities reflected in the interviewees' contributions, and to organize the findings to the end of developing my discussion.

This complements Oliver's (2012) view that:

> "it is very rare that the whole of the data is used" in quantitative research because "the [qualitative] researcher is … interested in the [data] … that involve discussion of substantive issues, …[that] some parts … may appear more significant than others" (p. 141).

However, because de Vaus (2001) believes field notes to be unreliable, this is the limit to which I employed them.

With regard to transcription, I originally planned to use Pop-Up Archive, a speech-to-text transcription application (https://www.popuparchive.com/). However, I found its accuracy in both word recognition and use of punctuation to be limited. Moreover, based on the requirements for noting nonverbals found in Humble's APA style-based transcription guide approved by Dr. McMahon (personal communication, April 19, 2016), I found it necessary to manually transcribe each interview. In the end, it took less time for me to manually transcribe each rather than correcting that which Pop-Up Archive produced.

Manual transcription of the audio recordings guaranteed accuracy far above that of a digital transcription service. Hearing and manually capturing the nonverbal elements in the recordings – participants' pauses, inflections, pace et al. as they spoke – added extra richness to the findings, a quality desired in qualitative research (Fusch & Ness, 2015). In addition, manual transcription allowed me to begin coding from interview to interview, highlighting notes within the transcript drafts to yield a preliminary yet comprehensive set of findings as well as a divergence from that of the literature review's findings.

**Data Analysis**

De Vaus (2001) quotes Lincoln and Guba (1985) as stating: "'not very much can be said about data analysis in advance of the study'" due to the iterative, "naturalistic" nature of qualitative research design and method (p. 11). Moreover, this capstone was established as developmental or exploratory in purpose. With this in mind, however, it is still possible that a preliminary framework be developed and utilized in the analysis phase in order to reflect validity and reliability (de Vaus, 2001).

     **Reliability**

When analyzing qualitative data in the past, I have employed the method of using a coding table in order to identify the frequency with which concepts appear in the form of word and phrase. By being able to identify dominant issues and areas of interest, I was also able to further refine my research focus to the end of easily developing keyword and key-phrase lists that I used very successfully to gather sources for my capstone literature review.

     **Validity**

     *Internal validity.*

In order to maintain internal validity of the data analysis, I used Yin's (2012) "*pattern-matching"* approach in order to confirm the types of instructor presence that Millennials require (p. 25). As noted earlier, I was aware that rival hypotheses could emerge from the surveys, so this approach was most suitable for garnering the desired results.

     *External validity.*

To optimize the trustworthiness of the thick description or generalization of the findings as well as deal with any "deviant case[s]" or rival hypotheses (de Vaus, 2001, p. 14), I first identified and complied with the inclusive and exclusive participant criteria. Second, by scanning

my field notes, transcribing the surveys, and storing the original recordings for the length of time required by the ethics boards of both institutions, I left an audit trail which will also allow me to return to and review my interpretations of said data, challenging my established preconceptions.

Finally, by employing the peer-reviewer services of my capstone supervisor and those whom I regularly rely on to review and critique my MACT assignments, I was able to further challenge my own biases by inviting others' insights and interpretations. This is a meta-Constructivist technique used for collective knowledge-building, a cornerstone of Social Constructivism.

**Mitigating Concerns Related to Reliability and Validity**

The plan to code-match was carried through by organizing each participant's contributions by category in order to detect previously unseen connections, identifying key words and phrases from each interview transcript, and recording them in a data table by grouping the responses of all six participants by question into a summary table. The summary was analyzed for coding patterns, and the synthesis was prepared by linking coding with references to quote locations to be used in the findings and ensuing discussion.

Fusch and Ness (2015) note that the researcher's bias affects the research's reliability and validity: "the better a researcher is able to recognize his/her personal view of the world and discern the presence of a *personal lens*, the better one is able to hear and interpret the behaviour and reflections of others…" (p. 1411). To minimize the influence of personal bias when completing this project research, the list of questions (see Appendix B, p. 85) was designed to repeatedly address the same themes (role, presence, participation, feedback) in present, past, and future tense (*What do you think of…? What happened? What do you wish for in the future?*). This was done purposefully to gauge the consistency – and therefore reliability and validity – of

each participant's opinions and conclusions. This reduced the risk of researcher bias when interpreting the data.

Fusch and Ness (2015) also note that data reliability and validity can be affected by the influence of data triangulation on data saturation. "Triangulation involves the employment of multiple external methods to collect data…the interviewing of people that one would not normally consider" and "avoid including a one-time phenomenon that elicits the dominant mood of one participant" (p. 1410). In order to ensure reliability, the participant sample represented a variety of post-secondary programs and institutions. None had any knowledge of the identities of any other participants, as noted in the Information Letter and Consent form they signed (See Appendix B, *Anonymity,* p. 82). In addition, findings were both identified and categorized by consensus; they were included if two or more participants provided concurrent responses to a question.

**Constructing an Account**

Once my data was analyzed and preliminary generalizations identified, I began process of constructing an account based on Tracy's (2013) steps:

1. Document data and process of data collection;

2. Organize/categorize the data into concepts;

3. Connect the data to show how one concept may influence another;

4. Corroborate/legitimize by evaluating alternative explanations, disconfirming evidence, and searching for [identifying] negative cases; and

5. Represent the account (reporting the findings).

Completing this process helped me to determine that generalizations could indeed be made.

According to Yin (2012), "a single or small set of cases cannot [yield generalizations] … nor is it intended to" (p. 18). However, this process can lead to "using a study's theoretical framework to establish a logic that might be applicable to other situations" (p. 18). This end represents my principal goal in conducting this research in the first place: if applying a social Constructivist pedagogy when developing and conducting online courses results in higher rates of experiential satisfaction among Millennial learners, then my future planning and teaching energies as an instructor can be more focused, establishing that which Lincoln and Guba characterize as "a 'working hypothesis'" (in Yin, 2012, p. 19). Developing effective, Constructivist-grounded online courses can also positively affect my colleagues and my institution: I can share my findings informally and potentially formally via instructor-development courses and further, institute-supported research.

**Findings**

**Participant Demographics**

To collect the most relevant data, I chose to interview Millennial students aged 19-30.

Each participant needed to be a current post-secondary student enrolled in at least one post-

secondary F2F or online course in the Winter, 2016 term, via an accredited institution. These

criteria were met by each participant, and the resulting sample included Millennials who had

completed their first or second year at NAIT, Red Deer College, and Bow Valley College. Four

of the six are NAIT students; three of these are former students of mine. As for online

experience, three of the six participants had registered for and completed four online courses, one

had registered for and completed three, and two had registered for and completed one online

course each. This makes for a combined total of 15 online courses for which students registered,

with a 100% completion rate.

Each of these six participated in a one-on-one interview between April 20 and 29, 2016,

at a time and location that was convenient for them: four interviews were conducted at NAIT's

main campus; one in my home in Sherwood Park, Alberta; and one at the Strathcona County

Library in Sherwood Park, Alberta. Each interview took between 40 and 55 minutes to complete,

exclusive of time to review and sign the ethics release (see Appendix A, pp 81-84). Each fell

within the Millennial age range at the time of his/her interview and had the option of remaining

anonymous or being identified by full name. Of the six participants surveyed:

1. Participant 1, interviewed April 20, is 20 years old and was working part-time while

   taking a full courseload; she had registered for and completed four online courses at

   the time of her interview.

2. Matteo Bruni, interviewed April 21, is 23 years old and was working full-time while taking a full courseload; at the time of the interview, Bruni had registered for four and was completing his fourth online course at interview time.

3. Shynelle Kissun, interviewed April 22 and was 19 years old at the time of the interview. She was working part-time while taking a full courseload and had registered for and completed two online courses.

4. Justin Nand, interviewed April 25, is 25 years old and was working full-time and taking a partial courseload; Nand registered for and completed one online course at the time of his interview.

5. Participant 5, interviewed the afternoon of April 29, is 19 years old and was taking a full courseload. She was also a member of one of her college's sports teams; she had registered for and completed one online course at the time of her interview.

6. Participant 6, interviewed the evening of April 29, is 29 years old and runs her own fulltime business. She has three children under 6 years old, one of whom has special needs. Participant 6 was taking a partial courseload and had registered for and completed three online courses prior to her interview.

Fortunately, there were no issues with scheduling, cancellations, or postponements. Participants were both enthusiastic about the topic and eager to share their views on it. Moreover, the three participants who wished to be identified in the study were former students of mine at NAIT (I have not taught the others). The fact that these three were willing to attach their names to their opinions indicated to me that they felt safe sharing them with me and that they had confidence that I would use their contributions wisely and respectfully. Therefore, I surmise that

concerns raised in the ethics-review stage regarding putting students in a stressful situation were mitigated successfully.

**Organization of Findings**

With respect to the research question, the interview findings have been organized into four categories to better determine what Millennials are looking for from online-course instructors regarding:

1. Online courses in general and the online instructor's role,

2. Presence in asynchronous/online and synchronous/live activities,

3. Timing and quality of feedback an instructor should provide, and

4. Key challenges online learners face.

These areas complement those explored in the literature review and highlight the instructor's role when designing and delivering online courses with a Constructivist approach to optimize learner satisfaction. The findings will then be connected with those of the literature review in the discussion section.

**Participants' Views**

**What do participants think of online courses?**

All participants surveyed viewed online learning as being a boon to post-secondary learners who **require flexibility** in their schedules. Participant 6 noted:

"I think it is revolutionary. Honestly, I think that it opens up so many doors for people who don't have time to do traditional learning. For me, I'm able to work full time [and do course work] on weekends, so it fits *my* schedule: instead of me fitting [the] school schedule,… I could be sitting in my *kitchen* (laughing) and *in class at the same time!*"

Nand also noted that the online mode potentially transcends any medical barriers that may inhibit a student's physical presence.

However, three participants also noted that their future experiences with online courses would be limited. In part, this was due to their **perceived lack of interaction with the instructor**; the participants felt they had to complete the course material in isolation. Kissun acknowledged that she was looking for courses where she didn't have to depend on being able to access the instructor, while Bruni and Nand both acknowledged that they would be willing to take online courses that do not require calculations or formulae, since they both learn that type of material from watching the instructor develop solutions to problems on the whiteboard. Participant 6 concurred, noting: "I learned, pretty much through those courses to just… how to … *figure it out on my own,* which was… *difficult, it was hard."*

**What do participants think an online instructor's role should be?**

All participants believe that the **online instructor's role is to provide a schedule, a guide for learning rather than direct the learning, in order to guide students and keep them on track**. Because of this shift in instructor role as compared to F2F learning, **all participants acknowledged that they were more obligated to learn autonomously** in completing the course material. Participant 5 indicated that "During high school I would have, like, wanted them to be more, like *teaching* it, but now since I'm like in post-secondary I feel like *I* will take the information, and *I* will do what *I* want to do with it."

Unfortunately, out of the 15 courses taken in total by the six participants, only two participants reported sufficient guidance in 1 course each. Of the remaining 13 course instances, **participants found that their instructors either failed to develop a schedule or left students to make their way through the courses alone after contact at the onset of the course.** Kissun noted that "online, it's more of, like, you're kind of given a textbook and you're told 'learn it.'"

Participant 6 found that the same with her online courses, leading to uncertainty and a lack of self-confidence in her own learning ability, as she was left to guess rather than know the right information to absorb.

**The Online Instructor's Presence**

**Communication.**

All students reported that the **main mode of communication with the instructor was via email**. In some cases, the instructor would email weekly, setting out specific tasks. If there were questions, students were required to email instructors. In the majority of cases, however, emails were not answered within 24 hours, a time all participants surveyed suggested as an acceptable limit. Bruni suggested that instructors need to think differently about communication when teaching online courses:

> I know instructors have lives, too, but it is nice to, say, you work a late shift,
> you're going from, like, two in the morning 'til five in the, I dunno, afternoon,
> something like that. And you come home and it's like nine o' clock by the time
> you're getting your work done, ten o'clock. And you need someone there to
> answer this question, and there's *nobody*.

Both Bruni and Kissun indicated that **they correlated the frequency of communication, especially a quick response to emailed questions, with an instructor's level of concern with their students' progress.** Bruni noted: "…it actually makes you think, 'k, this instructor cares about me," gives you a little bit more connection with them," while Kissun indicated that she felt friendlier toward her second online-course instructor because of the weekly emails sent to all students:

I really liked how the second instructor would, um, like check in: "this is what's

expected of you this week." Or maybe you missed a quiz, and she would send you

an email and say "hey, is there anything I can help you with?" She [the second

course instructor] was always *on* it. My teacher was constantly there for us, I

guess.

Participant 5 noted that she believed that her instructor accessed his students' emails via

his phone, and she was able to email and receive a reply very quickly regardless of time

of day. She appreciated this as "I'm on the volleyball team, so like we travel, like on

weekends, and we have practices, late at night. He would respond to this email, like, *right*

away."

**Structured 'on-call' availability.**

Participant 1 thought it **important for an online instructor to model the frequency of**

**availability in an F2F course**. She indicated that the ability to ask informally and receive

immediate feedback was important, so scheduled weekly office hours online or via phone are

integral. Both Kissun and Nand would like to see physical office hours offered to online students

who were within proximity of the instructor's institution.

Participant 1 also noted that time following an Adobe Connect session was integral for

students to ensure they were absorbing information properly. All subsequent participants echoed

this, suggesting phone or text/instant messaging would also help; two participants indicated that

Skype or another face-to-face medium would help heighten instructor presence and sense of

availability, as the audio and video media would make it easier to develop a personal connection

with him/her. Bruni suggested that several instructors teaching the same course could share the

burden of on-call availability by taking turns periodically.

**Instructor presence in learning activities.**

*Asynchronous/online activities.*

All participants reported that asynchronous/online learning activities were limited to discussion-group posting and commenting. In the majority of cases, instructors would initiate the conversation with a discussion topic and/ or questions. However, they did not enter into the discussion at all, electing to only provide closing comments or correct answers, or do nothing at all, as was the case for Bruni in one of his courses.

The lack of participation in this context put Participant 1 disadvantage because she was unsure as to whether their contributions were correct. Kissun found the same, indicating:

> It would have been *nice* to receive individual feedback, just so you know exactly,
> like, maybe where you're going wrong. If there was really something that you
> didn't understand, that she would be able to pick up on it. [The answers] were
> helpful as well, 'cause then you could *kind of* see where you're going wrong, but
> at the same time it wasn't, it was never fully *answered*.

Kissun added that **the lack of instructor presence in the discussion-posting activities led her to feel uncertain about her learning**. She felt stalled because she had to wait for the instructor's permission to continue. Participant 5 noted the she would appreciate "comments saying like 'great you're on the right track,' kind of thing, providing more for you to look at, point you in the right direction."

Moreover, most participants indicated that **it would be helpful to see instructors provide comments on others' postings**. Participant 5 noted that "different perspectives, instead of just being narrowed down into *my* own… I'm looking at, others' viewpoints and I'm maybe like 'oh, I never really *noticed that* until [my instructor] pointed [it] out." Nand noted the long-

term value of student dialogue: "…if somebody else asks a question, or even if I ask a question, you usually get a different way of seeing it. Hopefully one that you remember during an exam (laughing)…."

Several participants indicated that they believed that **there is no such thing as too much instructor participation** in an online setting. Participant 1 emphasized that "it's always beneficial to have feedback from your instructor and their opinions like, what they're teaching. I think anything they have to say would be beneficial."

### *Scheduled synchronous or "live" activities.*

Only two of the six participants had the opportunity to participate synchronously, in live lectures via Adobe Connect or similar medium. Participant 6 found that, while there were transmission and teaching issues, she benefited greatly from hearing the instructor's live voice as well as being able to construct knowledge with the other online students:

> We- the online, um, students, would, text back and forth with each other, so we
> could be able to talk about what's happening in class. *We're having our own*
> *conversation*; we were able to contribute that way, get other people's input. And
> share: 'this is what's happening in my practicum.' And then, they can say 'oh!
> You should try *this*' as if we were just networking, but, um, online.

All participants, however, would have **liked the opportunity to participate in live sessions**: Participant 1 noted that "I just like, just being able to listen" and get others' points of view, be able to form opinions and conclusions."

Bruni found that live sessions would be integral to his learning due to the nonverbal enrichment:

> There was a connection, with your teacher out in front of you. You can see their
>
> mannerisms and their gestures, their body language, and you can learn from that,
>
> and it's the musculature learning, right? If you see them [instructors] do certain
>
> things, you're just like 'Ok. They do this whenever they say this topic'; you can
>
> pick up on it; and when you come to your exam, you have a visual reference to
>
> that information that was stated.

Participant 5, an elementary education student, indicated that she had never considered how important it was for her to learn socially until after she took her online course. Her own education professors had emphasized the importance of dialogue, discussion, questioning to constructing knowledge as part of lesson planning, and that she really missed having the opportunity to share, question, and reflect with others online in order to both understand the information and feel less isolated. To compensate, she resorted to discussing course content with her parents. Bruni concurred, noting:

> If you're doing an, an assignment by yourself, it's kind of intimidating if you
>
> don't know what's going on… [It's essential] to connect [with] one another
>
> because some seem to know what's going on more than some others on certain
>
> assignments. In this way, it's just a self-help thing because you're getting the
>
> information or, you're [instructors are] connecting the students, they're hopefully
>
> gonna help each other, and they're going to do better in the class.

> Both Bruni's and Nand's instructors recorded and uploaded live F2F sessions via Echo

360, but the fact that neither was able to actively participate or ask questions hindered their learning and decreased their commitment to the course. Nand lamented the lack of connection in

a recorded session: "When your [instructors are posting lectures] online, you don't see your students. You don't get that gauge of what people are learning or anything, you just, kinda explain it once, and you hope they've got it." He found that this decreased his level of weekly commitment to the course, something that almost cost him a high final mark. Bruni also felt this way: "you don't feel the same need to [participate]. 'Oh, they're behind a screen or not seeing what I'm doing, so I don't write anything down, I can just reference this later on if I want to [but I seldom do]."

**Timing and Quality of Instructor Feedback**

    **Timing.**

    It is worth noting that, above all other findings categories, **participants had the most concerns about the timing and quality of instructor feedback**. All participants noted that their course assessments were scaffolded, meaning that the content of earlier assessments was used as building blocks for skills and knowledge and incorporated in later assessments. **Timely feedback is a crucial component of the scaffolding strategy** as it is contingent on learning and developing skills from, not simply passing, a course: improper application of the scaffolding strategy via late or lean feedback severely impairs student learning.

    Unfortunately, five of six participants, including all four NAIT participants, noted that their **instructors made a habit of giving new assignments without providing feedback for previous assignments**. Participant 1 asserted that she did not receive feedback in time to improve or make progress on skill development during or following assignments, and she ended up having to appeal her marks in person:

He didn't give us feedback [on the earlier assignments] until the last week. We

had done those all wrong. My point to him was that we didn't have the feedback

as we were going, and that if we had we wouldn't have had done two or three that

way. We could have corrected ourselves the first time.

Bruni recalled an alarming email from one of his instructors:

We got this first assignment, and he [the instructor] was like 'oh yeah, by the way

I'm not going to have it marked by finals.' And it's like 'oh, that's fantastic

(sarcasm).' I really want to know what I'm doing before I go into the final… get

an idea of how they mark, and understand what their [the instructor's]

requirements are.

Having the instructor provide feedback as major projects or assignments were being constructed

is something participants find common in F2F course settings and would have appreciated

online. Kissun found a significant gap between instructions and assessment, which formative

feedback could have filled: "She [the instructor] put up a thing on Moodle on how *she* went

about doing it… But, it was *after* the assignment was submitted. I wish it was more like walking

us *through* it."

Interestingly, all six participants emphasized that **constructive feedback was more**

**important than achievement** in order to realize the purpose of their efforts; each wanted to feel

as if they had put in the time to really learn something that would benefit them in the short- and

long-term rather than just achieving a good mark. Nand put it most eloquently:

I'm not going to get an A in every course, but understanding *what I don't get* or

understanding the course [is integral to me]. Either I can learn it some other day or

know what to expect when I *have* something to build off of? [I say to myself] "I

have to work on this, in the next course."

**Quality.**

**The quality of feedback was also a concern** for most participants with regard to their

skill development and knowledge construction. Participant 5's instructor gave grades only, no

qualitative feedback, so Participant 5 had no direction regarding how to progress in the course

from assignment to assignment:

"He didn't tell you where you went *wrong*, or didn't go over the exam with you. I

asked [to meet with him in person or over Skype] to review the exams, he's like

'oh well, I'll show you them *one day closer to the* [final] *exam*' and he never did.

Participant 6 noted that the majority of her instructors gave feedback she couldn't use to

improve:

You just got your grade and a little bit of an *excerpt* of what you did. Like, a little

bit of feedback, but no indication of where you needed to *improve,* or where you

got deductions. It was kinda like, a big question. Like, ok, I did great, that's

awesome, but what- what *didn't I do – that's* what I need to know.

**Outdated feedback is not of great value; therefore, feedback timing and quality are**

**interdependent** to knowledge construction. Participants suggested that instructors schedule

formative feedback into the assignments in addition to providing exemplars and rubrics/marking

guidelines. Participants also emphasized that instructors could provide timely and quality

feedback by having students use platforms such as Wikis and Google Docs to construct their

assignments and projects. Instructors could be added to the participant list in order to monitor progress and review drafts and need to program reviews into the course schedule.

**Learners' Key Challenges**

  **Not knowing how to succeed in online courses.**

  All six participants were surprised to find how different and thus how much more difficult it was to learn online, and all six indicated that they would have **appreciated a how-to-learn-online course or tips from past course-takers on how to succeed**. However, none had any offered or had thought to learn on their own, prior to starting their courses.

  In addition, the lack of instructor guidance regarding technology use: participants reported a lack of direction in using some platforms, outdated instructions provided for learning how to use applications, and a sense that instructors assumed that students could resolve tech-related issues themselves. Furthermore, unannounced outages resulting in no access to the LMS hindered assignment completion: "with online, you're… *juggling a family* and *work* and *everything else*… it's like '*this is the time I have* to work on it!' I don't *have tomorrow* or the next or an *hour from now*'" (Participant 6).

  **Financial entrapment.**

  None of the six participants surveyed considered dropping their online courses, in spite of the challenges they faced. This was mainly due to the course cost: participants saw their education as a financial investment as well as an investment of time and effort, and the majority of participants were paying their own tuition: "I went in, like, *scared* 'cause I didn't want to waste my money on putting all this effort, time, this, money, obviously. And I was just hoping that – *I pray that I pass!* (laughing) I don't want to waste it!" (Participant 6). Bruni mentioned another common motivator for participants' tenacity:

I've learned over my past education is that, like, if you're going to go through

something you've got to stick right to the end…nowadays especially with the way

the job market is…for other people, they just, 'oh, I'll withdraw and take it later.'

You're really setting yourself back. So for me, it's just 'you better complete the

course.' Get it done in the quickest time possible.

However, when asked whether they would consider taking more online courses, two-thirds

affirmed they would, complementing the 30-50% attrition rate. **Most see the flexibility and**

**autonomy of online courses as a primary attractor and will sacrifice quality learning for**

**being able to complete programming as quickly as possible**. This could eventually result in a

reduction in the online-course attrition rate, but for all the wrong reasons – **this could lead**

**online-course instructors to assume that their level of presence is sufficient.**

**Feeling forgotten or neglected by the instructor.**

All participants voluntarily acknowledged their respect for the fact that instructors are

very busy people and have lives outside of teaching. However, all **participants also found that**

**a lack of timely communication and feedback led them to feeling forgotten**. Participant 6

noted that in two of her three classes, she had started to think that her courses had been

abandoned or that her instructors had quit. Three other participants noted that they felt their

instructors placed teaching online courses at a lower priority than F2F; Bruni noted that his

courses seemed to be structured as correspondence courses, that the instructor was not doing his

job. Nand noted that his instructor used materials with another instructor's name on them, which

he felt was hypocritical:

"it makes sense [to ensure materials are similar, but] *at least take the name off of, give credit or something! Don't just copy and paste!* …[If you] ask us to [not] do it, you shouldn't do it yourself."

**Lack of knowledge-building opportunities.**

Bruni and Nand indicated that watching the instructor and other students construct solutions to problems on the whiteboard is essential to constructing their own understanding of a topic or concept as well as maintaining their own active participation in a course. Bruni noted:

When they're actually writing stuff on the board, you can see it written, so you

picture it in your mind you're writing it down on a piece of paper. So you're

taking more notes, pay attention more, study more, you have a little more drive to

do the course and do it well.

However, most found little to no opportunity of this nature, so future online-course participation will be limited to subjects each feels he/she can learn independently.

**Feeling isolated due to a lack of peer relationships.**

All six participants noted that they were surprised at how isolated they felt when taking online courses. Participant 5 missed the opportunity to collaborate:

"[Collaborative learning] really helps me… because it's so many different ideas,

and perspectives…'cause it's like you have your own ideas but, to listen to

someone else and be open to others, it's like, allows anything to happen,

really…'collaboration is key' is what my [Education] prof always said. So we…

just learned how it's, like, important to be, like, part of the community and stuff,

and so to listen to different perspectives.

Both of Kissun's courses involved a great deal of computer-lab work, but her instructors did not facilitate peer relationships or collaboration. She met several of her online classmates in the lab, and they consequently developed peer relationships on their own. They became dependent on each other, rather than on the instruction, to get through course assignments: "So a lot of the times it would be just, like, us sitting in the computer lab in the basement… beside each other, trying to figure it out."

On the other hand, having the opportunity to develop peer relationships fostered by the instructor made it easier for Participant 6 to learn the course content:

> In one of the courses… all of the students online had to introduce themselves [via text], tell them a couple – 3 or 4 things about yourself, and… things like that *which was really helpful…* Because, with the way that, that class was designed, there were gonna be lots of, communicating, through threads and, um, online [via weekly webinars]…you had an idea *who* you were talking to or *who* you were posting to, who was replying... We didn't build, like, strong *relationships,* but you kind of had an idea who is, who you could expect that would *respond to you,* and who you'd like… to respond back to.

As a result, Participant 6 found that this course was the most satisfying, the one of which she has the most positive memories.

Both Kissun and Nand came to the realization during their interviews that asking questions and hearing their classmates' opinions were essential to developing their knowledge. Therefore, their interviews can be viewed as meta-Constructivist exercises, allowing them to reflect on their online experiences in which they were surprised to discover how much they depended on learning collectively. Furthermore, in order to learn collectively, both realized that

they need not only to be able to learn socially but personalize their relationships with their classmates and instructor. In particular, Nand had not realized why he did not feel satisfied with his online-learning experience, in spite of an A in the course, until his interview:

> I would feel more comfortable asking questions of people I *know*… that's a *comfort level* thing there… But, with online courses, you really don't get an opportunity to know them…. I've never *been* in a class… [where] I didn't make a friend. I can meet brand-new people, I can make a friend all the time. I can't do that online, I have no idea how to.

## Analysis of the Findings

The objective of this research was not solely to find harmonies between existing literature and my own findings; it was also to also detect new findings that can help to redirect the exploration of this topic to find new ways to address the satisfaction- and retention-related issues Millennial learners have with online courses. As noted in my methodology chapter, these findings are exploratory in nature to the end of gauging authentic reliability and generalizability.

Fusch and Ness (2015), however, note that "novice [qualitative] student researchers" such as me need to reach generalizability via data saturation, "reached when there is enough information to replicate the study" (p. 1408). They emphasize that "During the study, a novice researcher can conduct the research in a manner to attain data saturation… by collecting rich (quality) *and* thick (quantity) data" (2015, p. 1409, italics added). While "thick data is a lot of data; rich data is many-layered, intricate, detailed, [and] nuanced…" (p. 1409). Fusch and Ness also emphasize that "qualitative researchers [must] account for multiple sources of data and perspectives to insure (sic) that their study results demonstrate validity" (2015, p. 1413).

Therefore, the number of interviews conducted matters less than the ability of the researcher to come to a point when no new information is found or when "further coding is no longer feasible" (Fusch & Ness, 2015, p. 1408). As such, "the number of interviews needed for a qualitative study to reach data saturation" cannot be quantified (p. 1409), although they do acknowledge Guest et al.'s conclusion that "data saturation may be attained by as little as six interviews depending on the size of the population" (p. 1409). Rather, "it is up to the researcher to…demonstrate the richness of the information gleaned from the data" through comprehensive analysis (p. 1411).

In the context of this research, these six in-depth interviews, conducted with participants from varying backgrounds, resulted in a rich field of findings from which generalizations were drawn.

**Discussion**

**Constructivism Within an Online-course Learning Management System**

Moodle is currently the world's preeminent post-secondary, open-source learning management system (LMS). Dr. Martin Dougiamas, its creator, was once a distance-learning student himself, having completed his primary education as a child living in the Australian outback (Moodle.org, n.d.). His lessons were delivered via air-dropped correspondence and shortwave radio (Feldstein, 2010). The isolation that Dougiamas experienced as a distance learner compelled him to develop a better distance-learning medium. He wanted to bring distance students online, both metaphorically and literally: "to widen the bandwidth [medium] that's available…to [better] communicate through a narrow channel…to communicate properly" (Feldstein, 2010).

Moodle was conceived as a technological manifestation of Constructivism, which fosters learner construction of new ideas or concepts based upon their current/past knowledge as well as social development via collaboration with others who are more experienced (Kail & Zolner, 2015). Constructivism also promotes active Socratic or inquiry-based learning, so that the learner can translate information contextually; therefore, activities within educational programming should be scaffolded so that the student can build upon that which has been learned.

The need for a Constructivist online-learning environment to overcome learner isolation suggests that interaction and collaboration are major factors in enriching learning outcomes (Bonk & Zhang, 2006). Furthermore, Costello (2013) concludes that Moodle complements the ideals of post-secondary institutions: "Looking into… and seeing two things in open source and Social Constructivism [sic] that appeared to embody some of the ideals of what a university should fundamentally be" (p. 191).

Dougiamas has hinted at the future of Moodle: a Moodle "X", a complete redesign, with students as its primary audience and with technology, not institution or instructor, as the facilitator (Feldstein, 2010). Theoretically, then, Moodle and the like should be the answer to any Constructivist online-pedagogue's dreams. Based on these findings, however, it is clear that LMS' on their own are not the answer.

**Millennials' Learning Needs Are Divergent From LMS' Ideals**

Online learning brings with it the advantages of increased autonomy and flexibility when it comes to the context of learning, mainly through the time and location in which the learner chooses to learn. Despite this, a trade-off between flexibility/convenience and enriched social learning is apparent: in order to learn online, Millennial students feel that they must concede the enriched social learning experience they are accustomed to in the F2F setting, as well as the community and collaboration that have fostered their past learning experiences.

The information provided during the interviews echoes those of the literature review. It seems apparent that Millennials are normalized to social learning:

- They naturally question and check-in with instructors and peers, whom they see as guides in the collective learning process they have thrived within.

- They take advantage of real-time consultation with instructors and peers; witnessing the construction of those people's knowledge via social-learning activities is integral to their own knowledge-building.

- They model their own online behaviour on that of the instructor and will actively participate as much as their instructor allows.

- Interdependent learning via the Social Constructivist pedagogy is not an option; it is essential to them.

- A lack of multisensory learning opportunities that incite active learning is a deficit to them.

The social, collective, and collaborative deficits in these Millennials' online learning experiences have decreased their satisfaction with their respective online-learning experiences. These deficits have also hindered these Millennials' ability to apply that which they have learned to future situations, courses, programs, or real-life scenarios: many noted that the lack of instructor presence led them to be confused about what content to retain and how to retain it.

The Millennials interviewed indicated that online course-taking was reduced to something that they had to endure, to get through – it was nothing like that which reflects the ideals of the post-secondary online-learning concept Costello emphasized and Dougiamas envisioned. The Millennials surveyed seem to benefit not from the online medium, but rather from the instructor's active presence at the onset and throughout the online course. Based on these findings, more online-course instructor presence, not less, seems to be the key to ensuring satisfaction with Millennials' online-learning experiences.

To conclude, the LMS may become a barrier in itself to Constructivist learning for Millennials unless the online-course instructor's presence supersedes that barrier - the higher the level and quality of instructor presence in an online course, the higher the Millennials' satisfaction level with the online-course learning experience.

**The Long-term Outlook for Online-learning Pedagogies**

Participant 5, who has now completed the first year of her Bachelor of Elementary Education degree program, acknowledged during the interview that what we discussed regarding instructor presence and influence on active social learning was reminiscent of that discussed in her teaching courses. Consequently, it is apparent that Constructivism remains the dominant

pedagogical theory in current teaching programs and is being generationally disseminated. The next generation, Generation Z, will also to be normalized to the Constructivist pedagogy. Moreover, Generation Z is the first fully immersed social-media generation, so it is reasonable to assume that they will be normalized to Constructivism via digital learning platforms from the primary-school level.

Taking this into consideration, it is evident that post-secondary online-course instructors who have not been immersed in Constructivism during their own scholarship need to embrace a Constructivist teaching methodology in order to meet the needs of the next two generations of students, around the next 40-50 years – easily the span of one's professional teaching career. Post-secondary online instructors to recognize the need for Millennials to learn collectively, socially, and to model this with increased presence throughout the course they are teaching.

**Summary of Findings and Discussion**

Replication of the findings was apparent early on, and it was surprising to see how similar participants' experiences were, regardless of program enrolment, age, or background. The findings echo those found in the literature reviewed – online-course learners rely heavily on instructor presence and input to gauge their satisfaction, and instructor presence and learner satisfaction could be positively correlated in both.

The major deviation in findings was that all interview participants also noted the need not only for increased instructor presence but a need for the instructor to be actively present, participating in as well as facilitating social learning. This would correlate with the theoretical frame presented earlier, that indeed Millennials are looking for social-learning opportunities in all learning modes in order to optimize their feelings of satisfaction with their online learning experience and be motivated to complete more online courses.

The data gathered and analyzed during the six interviews point to a positive correlation between instructor presence and learner satisfaction in the post-secondary online-course setting. The findings identify the need for instructors to increase their presence and participation throughout online-course delivery as well as to provide more and better-quality formative feedback. The findings also reveal that Millennial learners want instructors to adopt and implement strategies that would allow for more synchronous/live learning opportunities as well as opportunities for learners to become acquainted with and learn with and from one another. Increased instructor presence and opportunities for social learning would help to overcome the key challenges learners have identified related to their online-course experiences.

The following table provides a summary tool for online instructors. It outlines strategies instructors can implement to mitigate these issues by category as well as the key challenges of learners that will be overcome as a result of their implementation. It is worth noting that implementing one or more strategies from any one of the three categories would be a first step to mitigate learners' key challenges; implementing them all would likely overcome all key challenges identified by the learners in the study.

Table 1

*Summary of Strategies to Optimize Instructor Presence
and Their Effect on the Perceived Key Challenges of Millennial Online Learners*

**KEY CHALLENGES TO LEARNER SATISFACTION AMONG INTERVIEW PARTICIPANTS:**
1. Not knowing how to learn in an online-course setting
2. Financial entrapment – not learning, just enduring the course
3. Feeling forgotten or neglected by the instructor
4. Lack of knowledge-building opportunities
5. Lack of personal relationships as a basis for social learning

| STRATEGIES FOR OPTIMIZING INSTRUCTOR PRESENCE (BY CATEGORY) | ADDRESS KEY CHALLENGE(S) | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| **Online Courses and Instructor Role** | | | | | |
| • Ensure all courses, include live/synchronous multimedia learning opportunities<br>• Provide students with opportunities to become acquainted with and work with each other via group activities, projects – remixing groups for each successive activity | ✔ | ✔ | ✔ | ✔ | ✔ |
| • Provide schedule/timeline for learning to keep students on track | ✔ | ✔ | ✔ | | |
| **Instructor Presence** | | | | | |
| Communication<br>• Introduce self, provide visual and textual reference, a face to the course, personal and professional background information<br>• Answer email within 24 hours, tie email to phone for quicker response, provide an office phone number and times to call<br>• Establish pattern, increase frequency of instructor-initiated communication – email, LMS-based messages | | ✔ | ✔ | | ✔ |
| Structured Availability<br>• Provide online office hours<br>• Provide opportunity for face-to-face availability for those living in close proximity<br>• Allow for free question time following a live/synchronous session | ✔ | ✔ | ✔ | ✔ | ✔ |
| On-call Availability<br>• Creating an external group text (via Telegraph, for example), creating a FAQ string<br>• Conversely, instructors could share burden of on-call availability by dividing shifts | ✔ | ✔ | ✔ | | ✔ |
| Online Activities<br>• Providing individualized commentary, asking questions, eliciting dialogue among learners<br>• Ensuring all learners can see posts and comments | ✔ | ✔ | ✔ | ✔ | ✔ |
| Scheduled Synchronous/"Live" Activities<br>• Implement required, routine online lecture, discussion, group activities, review classes<br>• Demonstrate/facilitate/foster peer-group activities and projects<br>• Ensure multimedia platform – utilize audio, visual, written, verbal media<br>• Avoid dependence on recorded sessions; use them as supplements to live sessions | ✔ | ✔ | ✔ | ✔ | ✔ |
| **Feedback** | | | | | |
| Timing<br>• Ensure assignments are marked and returned before distributing subsequent assignment<br>• Provide both informal and formal formative feedback opportunities as learners are constructing their assignments/projects | ✔ | ✔ | ✔ | ✔ | ✔ |
| Quality<br>• Provide qualitative commentary in addition to quantitative (assignment mark)<br>• Ensure commentary focuses on what learner did well, what could be done to improve<br>• Provide opportunities for learners to follow up individually for further clarification<br>• Provide and review marking rubrics as part of assignment lecture, distribution | ✔ | ✔ | ✔ | ✔ | ✔ |

**Recommendations for Instructors**

To further address and mitigate Millennial learner concerns, online-course instructors can implement the following recommendations as complements to the specific strategies outlined in the previous summary table.

**Start the course before you start the course.**

Learners cannot usually peruse the content of an online course via its LMS until the first day of a given term, so consider contacting learners prior to the LMS reveal via a group email. A self-introduction and some background information about the online course would go a long way to mitigating online-course learner uncertainty, especially among those who are first-time online-course learners. Consider text, text-image, or video-based self-introductions; the latter would provide the most media-rich experience for learners.

**Consider the course as belonging to the learners, not the instructor.**

Instructors can approach learners early in the course to survey their preferences regarding communication, availability, and activities using an online survey tool such as Survey Monkey (https://www.surveymonkey.com/) or an embedded LMS survey tool. The survey link can be embedded in the emailed introduction, and its results can help to develop a customized course-delivery strategy.

Surveying and acting on the results would convey that the instructor is paying attention to learner needs, encouraging further input and feedback and increasing learner commitment. Making the survey optional would alleviate pressure on learners already overloaded with work and course commitments. Moreover, inviting learners to provide their views on instructor communication, availability, and activities throughout the course on an informal, ongoing basis will reinforce to learners their instructor's concern for their learning.

**Set up communication-medium options.**

Learners seem normalized to email as the primary instructor-contact medium, so tying the class email platform to the instructor's phone would make it easier for instructors to check often and reply quickly. If the instructor anticipates repeating the same reply to several student inquiries, he/she could develop a quasi-FAQ platform unique to that learning group's needs on an open-source text application such as Telegram (https://telegram.org/). Instructors need to ensure, however, that this strategy complies with institutional policies and Freedom of Information and Protection of Privacy Act (FOIP) guidelines.

**Establish weekly, biweekly, or module-based 'live' sessions.**

In addition to weekly preview emails, meet with learners periodically via the LMS' live-meeting platform to initiate a module, to lecture content, to moderate a discussion, or to review content (among others). Survey for best times initially or via a scheduling platform such as Doodle (http://doodle.com/), and work the meetings in at set times. A required 'live' meeting time will help learners maintain their commitment to the course via normalized live time. It can also form the basis for reliable group-work scheduling where instructors can 'drop in' on Wiki- or Google Docs-based learner work.

Keep the focus on the learners, not the content – ensure the instructor and the learners can see and hear, or at least hear, each other. Include options for meeting times in the self-introduction and initial survey to students. When planning the live sessions, consider a Khan Academy approach of constructing learning before the learners' eyes, like in an F2F setting (https://www.khanacademy.org/). Finally, make attendance worth their while: consider allotting a considerable portion (20-25%) of the final course grade to a professionalism mark for session

attendance and active participation to motivate learners to contribute to the construction of their knowledge.

**Provide timely and enriched feedback.**

Develop and commit to a feedback schedule focused on benefiting learners. Consider providing generalized feedback on exams and assignments during the live sessions. For individualized feedback, using a platform such Screencast-O-Matic ([https://screencast-o-matic.com/home](https://screencast-o-matic.com/home)) to create a media-rich overview of a learner's assignment goes a long way to provide learners with an enriched set of feedback that reinforces an instructor's learning presence.

**Log instructional time to the end of maintaining a work-life balance.**

Online courses require a different time commitment from that of F2F; this is often daunting for instructors as it can overtax their time and resources. Make a record of what worked and what didn't for analysis and reflection to further refine future course iterations. Document the time taken to deliver the course, especially time outside of normal work hours, i.e. 8:00 a.m. to 4:00 p.m. weekdays, if they are a part of the instructional contract. This will provide evidence to take to administration to obtain a more flexible teaching schedule in the future. For example, if an instructor finds he/she is spending the equivalent of one weekend day teaching online courses, receiving a less strenuous weekday-instruction schedule may be in order for the future.

**Recommendations for Further Research**

The literature review and primary research have yielded complementary findings on the topic: Millennials do indeed rely on online-course instructors' facilitating opportunities for knowledge-building and social-learning. It would be exciting to develop online course design and teaching strategies that are social in nature, with the potential to satisfy the social needs of

learners, instructors, and other stakeholders in the online-learning medium. Institutional developers of online-course masters would need to incorporate social learning strategies to serve as a model for those instructors who will eventually design their own courses, an approach reflective of the still-fresh techniques and values McLuhan called for 50 years ago.

This research could also form the foundation for developing formal training in the undergraduate and institutional training areas to maximize social learning in the online setting, an optimal destination for this path of research. To bring this to fruition, however, further research is needed on each of the identified areas of instructor presence. This will help in developing specific instructor strategies that are both practical and easily implemented. These research areas include:

1. Instructor Role – identifying learner and institutional expectations of online instructors in order to refine and enhance their role.

2. Communication - finding and devising specific media, identifying optimal times, and developing efficiencies for online instructors to increase presence.

3. Availability – prioritizing structured and on-call availability and developing strategies for online instructors to increase their availability without compromising their other instructional and/or research commitments.

4. Activities – identifying the types of activities to enhance instructor presence most suitable for a course curriculum with respect to its learning outcomes.

5. Feedback – focusing on the development of rubrics that will provide students with both qualitative and quantitative guidelines for each course assessment as well as focus  on timing and enhancing the quality of feedback given to the end of aiding students in their scaffolded learning.

6. Sample size – a larger sample size of Millennial participants or a different research approach on this topic may yield unexpected findings and more refined resolutions toward optimizing online-course learner satisfaction.

For the long-term, these data and findings could potentially influence the design of an LMS platform that removes the barrier between online-course instructor and learner, potentially contributing to reducing the current 30-50% online-learner attrition rate.

**Conclusion**

It is apparent that optimal learner satisfaction correlates with a Constructivist approach similar to what Marshal McLuhan predicted half a century ago. McLuhan anticipated the emergence of online education; his related pedagogical theories were characterized by a high level of instructor presence and participation initiated and maintained throughout an online course: "a high stake in generating interest and involvement for …[learners]" involving "free interaction with[in] a responsive environment" (McLuhan & Leonard, 1967, p. 24).

This increase in instructor participation requires a role shift from what McLuhan characterized as the "sage on stage" to that of  the "guide on the side" (Kuskis, 2014a, para. 3), identical to that of the instructor role in Constructivist pedagogy. McLuhan proposed in his 1977 book *City & Classroom* a role wherein the instructor would "go from team to team giving direct help…as needed, focusing his or her attention on the aptitudes & difficulties of individuals, & performing the …essential function of charting the course of …[learners'] explorations" (Kuskis, 2014a, para. 3).

McLuhan also predicted that "the little red schoolhouse …[would] become the little round schoolhouse" (McLuhan & Leonard, 1967, p.25), a metaphor wherein learners would learn from real-life case and field interactions grounded in curriculum and facilitated by their instructors, which is another principle of Constructivist pedagogy. This metaphor may have emerged from McLuhan's time as a Shakespearean scholar as he "studied …Shakespeare …in immense detail" (Roobin, 2013, para. 6), and its relevance to Constructivist pedagogy is worth noting. Within Shakespeare's Globe theatre, the stage is set far into the audience floor, in the round. The floor comprised the groundlings' section of the audience; higher-status audience members sat up in the balconies, separated from the groundlings and the action. Ironically, the

groundlings, who were supposedly confined to the worst audience area in the Globe, had the best experience: they were not only in close proximity to the stage, but their ground-level perspective also allowed them to view all that was taking place in the Globe. Moreover, the groundlings were able to participate actively throughout the performance via catcalls, commentary, and participation, inciting improvisation and contributing to a heightened experience for everyone present.

The online-course medium, with its participant-driven properties, has the potential to emulate the groundlings' Globe experience. This is Constructivism in its essence: both observers and subjects respond to stimuli in the learning environment and each other, rather than the observer (instructor) directing the learner response, separate from the subject (learner). However, it is contingent on the instructor's choosing to get out of the balconies and take part in the performance, experiencing the online course from the learners' perspective. Within the online-course context, this increased instructor presence, characterized by becoming and remaining a member of the learning group rather than remaining an outlier, would incite online-course learners to feel that their instructor has fully engaged in their learning. Increased instructor presence has the potential to mitigate learner isolation, leading to an optimized level of learner satisfaction with the online-course experience.

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**Appendix A: Student Information Letter and Consent Form**

**Working Title of Study:**
McLuhan Had It Right: Strategies for Instructors to Implement a Constructivist Approach to Optimizing Learner Engagement and Satisfaction in the Post-secondary Online Course Setting

| **Research Investigator:** | **Supervisor:** |
|---|---|
| Lisa Slywka | Dr. Rob McMahon |
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| 780.378.2835 | 780.248.1110 |

*Background*

- NAIT was chosen for this study because the research investigator is an instructor at NAIT.
- You are being asked to be in this study because you are a current post-secondary student between the ages of 19 and 30:
    - Not currently enrolled in a course taught by the research investigator
    - Who has attempted and/or completed zero, one, or two post-secondary online courses.
- The results of this study will be used in a research project in support of the research investigator's Master of Arts in Communications and Technology degree from the University of Alberta.

*Purpose*

- The research investigator is looking to learn what new or non-online course learners are looking for from online-course instructors in order to:
    - Help learners complete the course successfully.
    - Improve learner satisfaction with the online-course experience.
- Instructors can use this information to better plan and teach online courses.

*Study Procedures*

- This study involves face-to-face interviews with students aged 19-33 who have little or no experience with online-course learning.
- The interview will consist of open-ended questions asking for your thoughts and opinions regarding the role and influence of the online-course instructor on an online learner's feelings of success and satisfaction.

- Your participation in the project would involve meeting with the research investigator for a face-to-face interview for no longer than 60 minutes.

- The interview will be recorded via:
  - Digital audio-recording device
  - Google Docs' speech-to-text application
  - Notes taken occasionally by the research investigator during the interview.
- The interview will be held at a time and location which is convenient for you.
- You will have the chance to ask any questions to clarify understanding.
- You can decline to answer any question you wish.
- If needed, the research investigator may email you to follow up with questions arising from the interview and data collection.

## *Benefits*

- There is no direct benefit to you for participating in the study. However, your participation will support other learners and instructors in the online-course setting. The information gathered will hopefully help instructors better understand learners' expectations of online-course instructors.
- There is no cost to you for your participation in the study, and you will receive a $25 gift card as a token of appreciation.

## *Risks and Confidentiality*

- There are no foreseeable risks to being involved in this study.
- All data gathered for this study will be anonymized and analyzed. It will be kept confidential.
- References to identifying instructors, including but not limited to names, section numbers, or term dates, will be removed from interview transcripts.
- Only the research investigator and the supervisor will be able to access your personal data. Your name will not be associated with any quotation unless you give consent to have your full name used in the study.

## *Anonymity*

- The research investigator will protect your anonymity:
  - All personal-identification information will be removed from quotations unless you give consent to have your full name used in the study.
  - Study participants will not be told who the other participants are.
  - Any intended or inadvertent identification of an instructor through name, course section, or course term date will be removed

- The results of this research will be used primarily for meeting the research investigator's project requirements. A summary of the results may also be shared with NAIT and may also be used in presentations and research articles. You will not be identified in any of these unless you give consent for your full name to be used in the study.

### *Data Storage*

- Research data will be kept electronically by the research investigator in compliance with policies established by the University of Alberta and NAIT.
- All electronic data will be password-protected and encrypted and stored on the research investigator's computer on a password-protected account.
  Your name and identifying information will not be included in the transcripts unless you give consent for these to be used.
- The data from this study may be used in future research, but to do this, it will have to be approved by a future Research Ethics Board.
- After five years, transcribed and archived versions of data will be destroyed.

### *Voluntary Participation*

- You are under no obligation to participate in this study. Participation is completely voluntary.
- Even if you agree to be in the study, you can change your mind and withdraw at any time.
- During the interview, you can request to stop the interview at any time.
- At your request, your data may be withdrawn from the project any time up to May 31, 2016.
- There are no penalties or consequences for withdrawing from this project. You will still receive a $25 gift card for meeting with the research investigator.
- If you decide to withdraw from the study, any data collected from you will be destroyed (hardcopy interview transcripts) and deleted (digital audio and speech-to-text files).

### *Further Information*

If you have any further questions regarding this study, please do not hesitate to contact Lisa Slywka via lslywka@nait.ca or 780.378.2835.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at 780.492.2615

This research has been reviewed and approved by the NAIT Research Ethics Board. If you have any questions or concerns about ethical matters, you may contact Dr. Melissa Dobson, Chair of the NAIT Research Ethics Board at REB@nait.ca or 780.378.5185.

*Signatures - Written Consent*

Your signature on this form indicates that:

1. You understand to your satisfaction the information provided to you about your participation in this research project.
2. You agree to participate in the study.

Please check each box that applies to you:

☐ I agree to be contacted via email with any follow-up questions the research investigator may have. My email address is:

_____

☐ I would like to be identified by my full name in the study.

☐ I wish to view the transcript of my interview to verify its contents.

In no way does this consent waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You may ask for clarification or new information throughout your participation.

Participant's Full Name:  (please print)

_____

Participant's Signature:

_____Date: _____

Research Investigator's Name:   Lisa Slywka

Research investigator's Signature:

_____Date: _____

**Appendix B: Interview Questions**

1. What do you think of online learning?
2. How many online courses have you registered for?
3. Have you completed all the courses you registered for? If not, why not?
    a. If you have not registered for online courses, please explain why.
4. What do you think the instructor's role is in an online course?
5. How is that similar to or different from the role of a face-to-face course instructor?
6. What were/are you looking for from your online instructor(s) with regard to:
    a. Availability
        i. Scheduled availability
        ii. Random or on-call availability
    b. The instructor's participation in course activities – i.e. forums, chats, blog "conversations"
    c. Guidance regarding
        i. Course content
        ii. Media or technology you were/will be required to use
    d. Feedback during the course
        i. When you were/will be working on assignments
        ii. When you were/will be participating in group or individual online activities
7. What key challenges do you see with regard to yours or others' online learning?
8. If you were to take a/another online course, what would you be looking for regarding an online-course instructor's:
    a. Availability?
    b. Active participation?
    c. Feedback during and following tasks, assignments, and the course itself