EDUC 707 Educational Research/Action Research

Final Research Paper Submission

Submitted By: David Scheer
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MODULE 1

Part 1 - Defining the Problem/Need/Area of Interest

There are several intriguing questions related to online learning's acceleration adoption. Just some of these include:

1. Are the people who assert that "Self-Education" via online delivery can be a new substitute for more traditional methods of education/pedagogy correct?
2. In a Sustainability context, is the Self-Education industry sustainable as a new method of teaching and learning?
3. Are the platforms where self-education occurs (online) built on sound educational principles that already exist, or are they breaking new ground and creating a new paradigm of educational theory and best practice?
4. If "Self-Education" has been around for so long (autodidactic), what is different about it now?
5. Relationships and relational connections are clearly built into the DNA of both Education and Sustainability. What happens when those relational connections are constrained to occur only over online systems and virtual learning platforms?
6. Can "Self-Education" via online delivery create the important emotional connections that will meet learners' needs?

There is a commercialized assertion that online 'Self-Education' is the new future. The presupposition is that:

> *"The Self Education Industry is exploding. Building your own brand – of sharing your capabilities and knowledge is one of the fastest growing industries in the world. It (self-education) has been around 'forever', but it has never been so viable. The industry is exponentially growing ($350 billion/year) now. People are saying that they don't want to go back to school to gain a new skill. They don't want to learn from my own trial and error. They are saying, 'I want to learn from someone who has already been there'" (Graziosi, 2020).*

Currently, there are many platforms that exist in the category of self-education. DuoLingo, KahnAcademy, Teachable, LinkedIn Learning, and many others and traditional institutions leverage these platforms as an integrated delivery mechanism into their own LMS platforms, or other content methods. In addition, Learning Experience Portals (LXP) are gaining momentum as a delivery method for online content.

So, in an Educational context, how do we transform our approach to building online places of engagement to successfully and sustainably strengthen our real-world relational connections? To gain insight into this question, we examine a specific example:

"Does online delivery of a learning module, in this case a Tai Chi/Qigong class, deliver the same kind of social-emotional connection as an in-person, on-premise Tai Chi class? In other words, do participants experience or do they perceive they will experience, the same kind of connection as being in an on-premise, person-to-person class?"

Part 2 - Review of the Literature

For the literature review, the following sources were examined.

Source 1

Delahunty, Janine, Verenikina, Irina, & Jones, Pauline. (2014). Socio-emotional connections: identity, belonging and learning in online interactions. A literature review. Technology, Pedagogy and Education, 23(2), 243–265. https://doi.org/10.1080/1475939X.2013.813405

This review focuses on three interconnected socio-emotional aspects of online learning: interaction, sense of community and identity formation. In the intangible social space of the virtual classroom, students come together to learn through dialogic, often asynchronous, exchanges. This creates distinctive learning environments where learning goals, interpersonal relationships and emotions are no less important because of their 'virtualness', and for which traditional face-to-face pedagogies are not neatly transferrable. The literature reveals consistent connections between interaction and sense of community. Yet identity, which plausibly and naturally emerges from any social interaction, is much less explored in online learning. While it is widely acknowledged that interaction increases the potential for knowledge-building, the literature indicates that this will be enhanced when opportunities encouraging students' emergent identities are embedded into the curriculum. To encourage informed teaching strategies this review seeks to raise awareness and stimulate further exploration into a currently under-researched facet of online learning.

Source 2

Diep, Anh Nguyet, Zhu, Chang, Cocquyt, Celine, De Greef, Maurice, & Vanwing, Tom. (2019). Adult learners' social connectedness and online participation: the importance of online interaction quality. Studies in Continuing Education, 41(3), 326–346. https://doi.org/10.1080/0158037X.2018.1518899

Online interaction has been associated with positive outcomes, academically and psychologically. Regarding the latter, social connectedness has been recognised as an important outcome on the basis of its link to subjective well-being and course satisfaction. In adult educational settings, how online interaction can foster social connectedness has not been widely examined. The study investigates how (1) adult learners' online participation operationalized as discussion contribution, collaborative facilitation, and social interaction, and (2) their perceived online interaction quality are related to their feeling of social connectedness. The role of online interaction quality related to the three types of online participation and social connectedness is also examined. A questionnaire was developed to collect data from adult learner participants in Belgium (N = 170). Multiple regressions and mediation analysis were conducted. The result shows that collaborative facilitation and online interaction quality significantly contribute to adult learners' perceptions of social connectedness. Furthermore, the finding reveals that online interaction quality fully mediates the relationship between discussion contribution, social interaction, and social connectedness. Thus, the implications for research and instructional design are discussed. [ABSTRACT FROM AUTHOR]

Source 3

Fiock, H. (2020). Designing a Community of Inquiry in Online Courses. *The International Review of Research in Open and Distributed Learning*, *21*(1), 134–152. https://doi.org/10.19173/irrodl.v20i5.3985

This article describes a practical approach for implementing instructional strategies in order to build a Community of Inquiry (CoI) into an online course. Online community building has positive effects on the quality of student learning, increases student engagement, and encourages motivation of students in online courses. The CoI is a theoretical framework focusing on facilitating meaningful learning experiences through three presences: cognitive presence, social presence, and teaching presence. This article will introduce the CoI framework by way of literature review focusing on CoI instructional strategies. Using Sorensen and Baylen's (2009) seven principles of good practice, the author will structure CoI instructional activities into presence categories for practitioner use.

Source 4

Garrison, D. R., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, *13*(1-2), 5–9. https://doi.org/10.1016/j.iheduc.2009.10.003

This article provides a personal perspective about the development of the seminal papers associated with the Community of Inquiry Framework. The framework and its construction are described. The main part of the paper explores the evolution of the framework and its associated methodology. Finally, research associated with the validation of the framework and new research directions are reviewed. [Copyright &y& Elsevier]

Source 5

Gorman, E. F., & Staley, C. (2018). Mortal or Moodle? A Comparison of In-person vs. Online Information Literacy Instruction. *Journal of Library & Information Services in Distance Learning*, *12*(3-4), 219–236. https://doi.org/10.1080/1533290x.2018.1498635

The purpose of this study was to evaluate the efficacy of online and in-person instructional methods for teaching research skills, as well as to determine student preferences for each method. Undergraduate students received librarian-led research skills instruction either through an online course management system or in person at the library. Students were surveyed about their experience and format preference, and their grades on a subsequent literature review assignment were collected. The online group's scores were significantly ($p = 0.002$) higher, and a majority of eligible participants stated a preference for the online format. Many of the students in both groups reported increased skills and confidence in conducting speech-language-hearing science research following the library instruction. The results of this study support the possibility that online instruction may be more effective than in-person for improving performance on a literature review assignment and is preferred by on-campus students for learning information literacy skills. [ABSTRACT FROM AUTHOR]

Source 6

Matthews, D. (1999). The origins of distance education and its use in the United States. *T H E Journal*, *27*(2), 54.

Describes distance education in the United States. Origins and evolution; Media used; Type of student utilizing distance education; Advantages and disadvantages of using distance education.

Source 7

Peacock, S., & Cowan, J. (2019). Promoting a Sense of Belonging in Online Learning Communities of Inquiry. *Online Learning*, *23*(2). https://doi.org/10.24059/olj.v23i2.1488

A sense of belonging (SoB) is a valued concept in campus-based learning, being firmly linked with improved student attainment, increased learners' satisfaction and reduced attrition rates. Some researchers even assert that learners are unable to fulfil the goals of higher education without acquiring a SoB. This article recognises that SoB can help promote and consolidate learning and seeks to specify how tutors may nurture online learners' SoB. An adapted version of the Community Inquiry Framework (CoIF) is used to frame specific suggestions for action. This revision of the well-known Framework focuses upon the overlapping intersections of the three Presences, entitled Influences: 'Trusting', 'Meaning-making' and 'Deepening understanding'. For each Influence, guidance illustrated by examples is offered, leading to particular suggestions that concentrate upon the promotion of a sense of belonging as an important aspect of the online tutor's facilitative activities.

Source 8

Peacock, S., & Cowan, J. (2016). From Presences to Linked Influences Within Communities of Inquiry. *The International Review of Research in Open and Distributed Learning*, *17*(5). https://doi.org/10.19173/irrodl.v17i5.2602

Much research has identified and confirmed the core elements of the well-known Community of Inquiry Framework (CoIF): Social, Cognitive and Teaching Presence (Garrison, 2011). The overlap of these Presences, their definitions and roles, and their subsequent impact on the educational experience, has received less attention. This article is prompted by the acceptance of that omission (Garrison, Anderson, & Archer, 2010). It proposes enrichment to the Framework, by entitling the overlapping spaces uniting pairs of Presences as "Influences." These three spaces, linking pairings of Social, Teaching, and Cognitive Presences, can be labelled as "trusting," "meaning-making," and "deepening understanding." Their contribution to the educational experience is to address constructively some of the challenges of online learning, including learner isolation, limited learner experience of collaborative group work and underdeveloped higher-level abilities. For these purposes we also envisage "cognitive maps" as supporting learners to assess progress to date and identify pathways forward (Garrison & Akyol, 2013). Such maps, developed by a course team, describe the territory that learners may wish to explore, signpost possible activities, and encourage the development of cognitive and interpersonal abilities required for online learning. We hope that considering the Influences may also assist tutor conceptualizations of online community-based learning. Our proposals call on both learners and tutors to conceive of the Presences and Influences as working together, in unison, to enhance the educational experience whilst

fostering deep learning. Our suggestions are presented to stimulate scholarly debate about the potential of these interwoven sections, constructively extending the Framework.

Source 9

Williams, L. Susan. (2017). The Managed Heart: Adult Learners and Emotional Presence Online. The Journal of Continuing Higher Education, 65(2), 124–131. https://doi.org/10.1080/07377363.2017.1320204

Historically, distance education was designed to connect with people for whom educational experience was otherwise unavailable. While origins of distance education date back to the 19th century, it was around the mid- 1980s that it became well-established in the United States (Matthews, 1999). Reports note continually steady growth in distance learning, with 5.8 million students enrolled in at least one distance course as of fall 2014 (Friedman, 2016), expanding the reach especially to nontraditional populations (Matthews, 1999). However, many scholars characterize student engagement as a fundamental problem with distance learning (Hall, 1996), implying that online interactions are distant, detached, and emotionless (Russell, 2006). One of the most cited questions regarding distance learning pedagogy centers around engagement; a quick Internet search for "distance education and engagement" yielded more than three million hits. Studies find that motivational factors--long associated with emotion and drive are especially significant in engaging one subset of the distance education population, online adult learners (aged 25+), a group for whom several unique challenges arise. Both structure and content of an online learning environment may be especially unfamiliar; the many demands of ongoing career and family concerns can be highly distracting; and the impetus for further education is often accompanied by a life crisis, creating additional emotional challenges. This article utilizes a field exercise to demonstrate that purposeful instructional design involving emotion and real-life encounters is particularly constructive for adult learners in an online class.

Themes

Theme 1

Summary

The Community of Inquiry Framework (CoI), developed in the early 2000s by Garrison, Anderson and Archer, is an important body of work related to online learning. CoI has clearly influenced and initiated a significant amount of educational research about online learning environments. This research has spanned multiple domains, and even in my small literature survey here, the CoI Framework concept has clearly influenced studies related to online self-efficacy and self-regulation, linked influences, emotional presence online, social connectedness online and Sense of Belonging (SoB) online. In addition, the CoI Framework has triggered new approaches to practical, real-world course design having Communities of Inquiry as their central focus.

Elaboration

Throughout several of the sources, the Community of Inquiry (CoI) Framework originally developed by D. Randy Garrison, Terry Anderson and Walter Archer in 2000 was a clear theme and foundational to various discussions in those articles. The CoI framework outlines three categories of 'presence' in online learning including ". . . cognitive presence, teaching presence and social presence – [and the model] remains one of the most cited research areas on online learning environments." (Williams, 2017) After realizing this common thread, I discovered further source material that also referenced CoI to help illustrate how it has been expanded both theoretically, and in practical online course design. While I do not cite the original 2000 CoI source, its presence is implicit in the references in the other texts.

In their retrospective piece a decade after they published their seminal articles regarding CoI, the original CoI authors explained how, "this framework emerged in the specific context of computer conferencing in higher education – i.e., asynchronous, text-based group discussions – rather than from a traditional distance education theoretical perspective assumed that students worked independently from each other." (Garrison, Anderson and Archer, 2010). From this initial work, many researchers have leveraged and expanded their concepts including those cited in this paper. In 2010, Shea and Bidjerano added a ". . . fuller articulation of the roles of online learners . . ." and the concept of *learning presence* to the three original presences. Similarly, in both 2016 and 2019, Susi Peacock and John Cowan extend the original CoI Framework, adding pairing labels called "influences" at the three locations where each of the presences intersect as in a three circle Venn diagram. They also modify the original "teaching presence" into "tutoring presence" to reflect a more student-centered orientation. In their 2019 article, they apply the CoI to frame learners' Sense of Belonging (SoB).

L. Susan Williams ". . . proposes the concept of emotional presence as an independent component of online educational instruction" and does so by describing it within a CoI context. In her treatment, she presents an argument for the "managed heart strategy – a purposive integration of emotion work into the course design" (Williams, 2017) and the value of an arithmetic that could be written as a compelling addition to the CoI Framework:

Online Course + Physical Fieldwork = Emotional Presence

Additionally, another source discussing the importance of online interaction quality cites the CoI, ". . . developed to capture the online collaborative knowledge construction process, [the authors'

use will be] to derive the conceptualization of online interaction quality." (Diep, Zhu, Cocquyt, De Greef, Vanwing, 2019). And finally, Holly Fiock at Purdue takes the explicit step of outlining, in very practical terms, what the CoI is and ways in which teachers/tutors can execute sound course design for Communities of Inquiry. (Fiock, 2020).

While I did not set out to find Communities of Inquiry in my initial literature search, the articles that I gathered have a very clear theme – building and enhancing the CoI Framework.

Theme 2

Summary

It is clear that learner engagement, participation and self-regulation are critically important to the effectiveness of online education and the relational connection that happens there.

Elaboration

N. A. Diep, et. al. reference Hrastinski (2009) in their definition of online participation, describing it as "a complex process of taking part in and maintaining relations with others (p.81)." These same authors go so far as to expand the online participation concept, proposing, ". . . that online participation be captured by three dimensions: discussion contribution, collaborative facilitation, and social interaction. In doing so, we aim to capture the cognitive, facilitative and social nature of the online interactions taking place . . ." (N. A. Diep, et. al., 2018). Additionally, even as early as the mid-nineties, ". . . many scholars characterize student engagement as a fundamental problem with distance learning (Hall, 1996)" (Williams, 2017) In addition, Williams describes how "Distance education literature is replete with principles organized around engagement." This statement then leads into a connection with her description of the previously mentioned CoI Framework.

Regarding self-regulation, two points of relevance are discussed in the literature: the ability to self-regulate is extremely important and the presence of that self-regulation can be a primary reason for learners to choose online instruction over in-person instruction. Self-regulation "can be viewed as the degree to which students [learners] in collaborative online educational environments are metacognitively, motivationally, and behaviorally active participants in the learning process. (Winters & Azevel, 2005)" (Shea & Bidjerano, 2010). The authors continue to summarize that "Research on self-regulated learning indicates that 'it is viewed as especially important during personally directed forms of learning . . .' (Zimmerman, 2008)" Additionally in the literature, self-regulation rises to the level of being indispensable, as the authors conclude "The study provided additional support about the potency of such motivational constructs in explaining student perceptions of learning in the online environment. Both self-efficacy and effort-regulation can be seen as indispensable for success across a variety of learning contexts and work settings." (Shea & Bidjerano, 2010).

In a separate small study comparing in-person and online library instruction, an overwhelming majority of participants (92.9%) selected a preference for the online instruction method. When asked about the reasons for these answers, "The major reason given for preferring the online format was that the students could complete the instruction at their own pace and at their convenience, with the ability to stop and start . . ." (Gorman & Staley, 2018). In other words, they had the ability to self-regulate their learning.

While there have been substantial changes in technology since some of these articles were written, both as learning platforms and the communication networks that feed them, this theme

continues to be appropriately relevant to the ability of the learner to connect on their own terms with whatever content or technology is before them.

Theme 3

Summary

Socio-emotional connection aspects in online learning including interaction, sense of community/belonging and identity formation have an important link to quality learning.

Elaboration

In reviewing the literature, it seems clear from a variety of sources that it is not only highly desirable to foster social and emotional connections in online learning to arrive at quality (Peacock & Cowen, 2019), but that the reverse is also true – that "collaborative facilitation and online interaction quality significantly contribute to adult learners' perceptions of social connectedness. (A. N. Diep et.al., 2018). Indeed, Diep et. al. say that "In educational settings, social connectedness is recognized as a critical factor in online learning . . ." From a belonging perspective and related to Theme 2, "Self-confidence, self-efficacy, and self-esteem increase when learners have significant trusting relationships with tutors and their peers . . . students who feel accepted and valued, that they are important to the life and activity of the class, develop a strong Sense of Belonging . . ." (Peacock & Cowan, 2019) Further, when online learning is combined with physical fieldwork or a similar experience where frustration, anxiety, confusion and surprise occur, the result can be "a vulnerability that affords students a doorway to emotional presence and, in turn, higher-order analysis." (Williams, 2017)

The literature also suggests that, although not widely researched, developing an appropriate online identity can have a positive impact on online learning results. "The socio-emotional challenges associated with developing one's disembodied identities can be a significant determiner of participation levels, sense of community (or isolation), as well as of motivation and satisfaction, with potential ramifications on learning." (Delahunty, Verenikina & Jones, 2013). Similar to the social math we saw in Theme 1, the identity math presented here might be represented like this:

Identity Formation + Interaction = Community Building

The authors characterize this relationship as ". . . unequivocally important in understanding what contributes to appropriate online pedagogies." (J. Delahunty et. al., 2013).

Overall, the literature presents the Community of Inquiry (CoI), Learners' self-oriented actions, and Socio-Emotional connections as thematic threads that run through these and the authors' cited references. These threads help create a narrative, communicating some of the key elements that contribute to vital, successful online learning, laying a robust foundation for further theoretical and applied research.

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MODULE 2

Part 1 Action Plan

The Action Plan involves collecting data from 2 primary sources: 1) a Focus Group of raving fan Tai Chi/Qigong students that regularly attend a weekly free in-person Tai Chi course offered at a local wellness spa and 2) an online survey sent to customers of the spa. The main purpose of the inquiry is to determine if the raving fans of the in-person Tai Chi class find the same social/emotional connection with an online version of the class (and why or why not). A secondary purpose is to determine how likely it is for the current set of spa clients to attend online Tai Chi classes and what they perceive is possible related to social emotional connections in online Tai Chi classes. The high-level outline of the plan includes:

A. Initiation - Determine Participants and Agree on Overall Schedule
B. Plan - Create Research Questions
C. Plan - Inform Participants and Obtain Consent
D. Execute – Focus Group Participates in Online Instruction
E. Execute – Focus Group Provides Feedback & Survey Participants Take Survey
F. Analyze – Compile and Analyze Data
G. Close – Draw Conclusions and Close the Project

1. 3/29 - 4/2 = Week 1 – Meet with the Tai Chi instructor and email list owner to determine schedule for when the Focus Group will meet and when the online survey will be sent. Determine Focus Group participants and begin contacting members oif the focus group and start creating the information and documentation that will be shared with them. Also determine which of the online courses will be presented to the Tai Chi Focus Group.

2. 4/3 - 4/9 = Week 2 – Create a set of research questions for the Focus Group and the questions that will be included in the survey to the client participant group. Provide the Focus Group with information about the study and obtain consent. Share the schedule of participation and communicate what type of feedback we expect from them as participants.

3. 4/10 - 4/23 = Week 3 – 4 – Direct the Focus Group to participate in the example online Tai Chi instruction. Options may include 1-hour recordings of Tai Chi Tuesday free online classes, a 16-session full Tai Chi form course, and a 4-session mini course on Tai Chi Tips.

4. 4/10 - 4/23 = Week 3 – 4 – Deliver the online survey to larger group of clients and record the answers. Obtain consent as a condition to participate in the survey.

5. 4/24 – 4/30 = Week 5 – Analyze the Data and draw conclusions related to the social emotional opinions and experiences of the participants as they are related to online learning vs. person-to-person Tai Chi learning.

6. 5/1 - 5/7 - Week 6 - Integrate findings into the deliverables for this Educational Research class as well as its relatedness to Educational Sustainability.

7. 5/8 - 5/14 - Week 7 - Inform the project sponsor (Tai Chi Instructor) of the findings. Follow-up on any remaining tasks and reserve this week as contingent schedule time in case any of the weeks run behind.

MODULE 3

Part 1: Data Collection

I used two methods of data collection and 108 participants to effectively triangulate and compare the results. These two methods, described in detail below, focused on the participants' perspectives about social and emotional connectedness related to online learning. Participants' perspectives were recorded using a before learning and after learning survey with a Focus Group and an online survey distributed to clients of a local spa.

A. Focus Group

Evidence of changes from the online learning participants' perspective was recorded through a before and after survey in an 8-member Focus Group. The Focus Group was comprised of raving fan Tai Chi/Qigong students that regularly attend a weekly free in-person Tai Chi course offered at a local wellness spa.

Each participant in the Focus Group was asked to complete a pre-instruction survey regarding their perspectives and attitudes about online learning. Then, the participants were asked to take an online video-based Tai Chi/Qigong course. Once complete, the participants were then asked to take a post-online learning survey to determine any changes regarding their perspectives and attitudes of online learning. The study began on 4/11/2021 and ended on 4/23/2021. During this period, the participants completed the pre-survey, the online course and the post-survey. Each survey took less than two minutes each, and the online course, depending on engagement had a duration of approximately two hours.

The pre-instruction survey data was collected from a questionnaire that asked participants 9 different questions to rate their **perceived** preferences related to both in-person and online instruction "in general" and in-person and online "Tai Chi/Qigong" instruction. Two of these questions are on a scale of 0 to 10 rating preference for in-person (0) vs. online (10) instruction. Two other questions are also a rating of 0 to 10 asking about level of emotional connection when taking in person Qigong classes vs. online Qigong classes from 0 (no connection) to 10 (extremely connected). Four questions ask about aspects of in-person and online courses are most important to participants and the last question is an open-ended text response question asking participants to reply in their own words to describe how they feel overall about online learning.

The post-online instruction survey data had the same questions, except that the questions were worded in a way that communicated the concept "Now that you have taken the online Qigong class . . ." as the assumption and position from which to answer the questions. While the surveys were created such that they mostly generated qualitative data (the number of Focus Group participants that answered x), I felt it was important to add the last open-ended question as a qualitative measure to allow participants to express perspectives not covered in the previous 8 questions.

B. Client Surveys

A second survey was used with a separate population to include the perspectives of people who were not Tai Chi raving fans, but who are active clients of the business where the Tai Chi/Qigong classes are held. The initial survey question asked about a client's willingness to take an online class if it were offered by the organization. For those that said no, the respondents were directed through skip logic to a question that asked why they would not take an online course. This effectively became a negative test to determine one reason why respondents would not participate in online courses. This data will assist me in drawing conclusions about both 'Active Qigong Students' and those who are 'Not Students' to understand the role of social emotional connection in online learning perceptions in both populations.

If participants answered 'yes' to the 'willingness to take an online class' question, the survey asked four additional questions to gather more data about other aspects of online delivery participants favored. This included:

a. What Content would the participant take online?
b. What aspect was most important to the participant for online learning (Relevant Content, Great Instructor and Teaching Method, Feelings of Fellowship with other Online Attendees, Time to Connect with Self, Price or Other)?
c. What duration of an online class would they take?
d. If they took an online class, did they prefer it as a live-stream, pre-recorded, both available or no preference?

The survey was very useful in collecting both qualitative data about online course preferences, but also provided a key insight about the participants' perceptions related to feelings of connectedness (see results below). Not all of the results of the surveys are presented here, but those related to social emotional connectedness are highlighted.

Part 2: Analysis

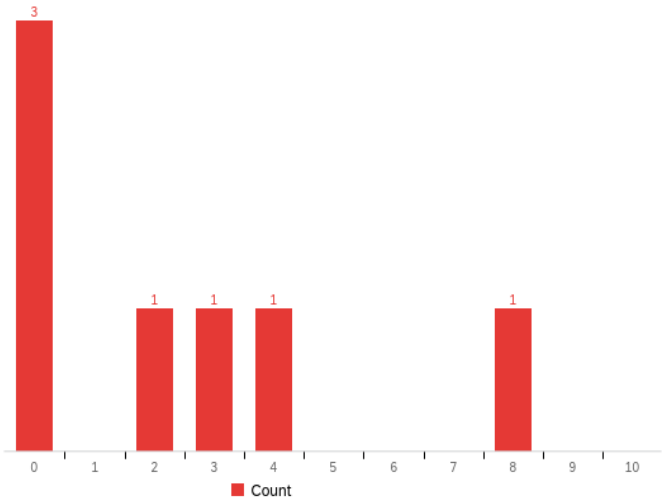
Part A: Focus Group

In the first survey, given to the 'Raving Fans Focus Group' prior to them taking the online Qigong course, Focus Group participants answered a survey on their personal perceptions of classes that are in-person vs. those that are online.

These survey results are helpful in gaining an understanding of participants' baseline perceptions, prior to their taking an actual online class, about whether online classes deliver the same kind of social-emotional connection as in-person classes. Listed below is a sampling of the survey results. For those questions that have a 0 to 10 rating asking about in-person vs. online, a 0 indicates preference for in-person, 10 indicates a preference for online.

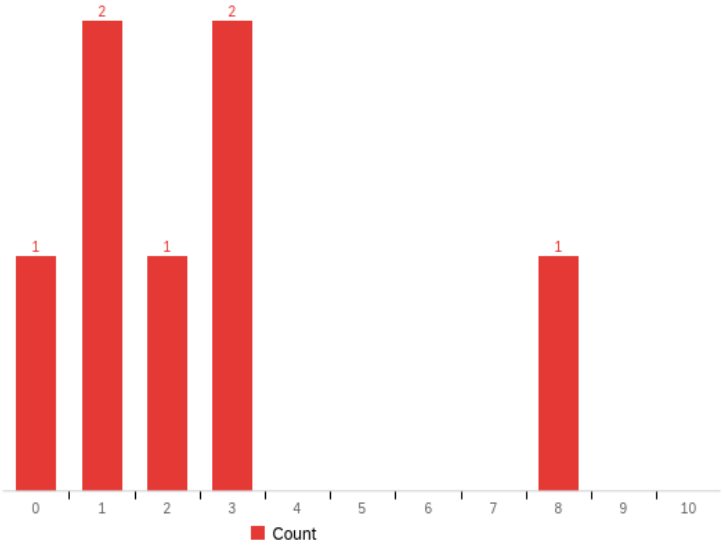
Q2. “Please rate your preference related to taking in-person vs. online classes in-general (non-Tai Chi classes).” 0= in-person preference, 10=online preference.

Figure 1



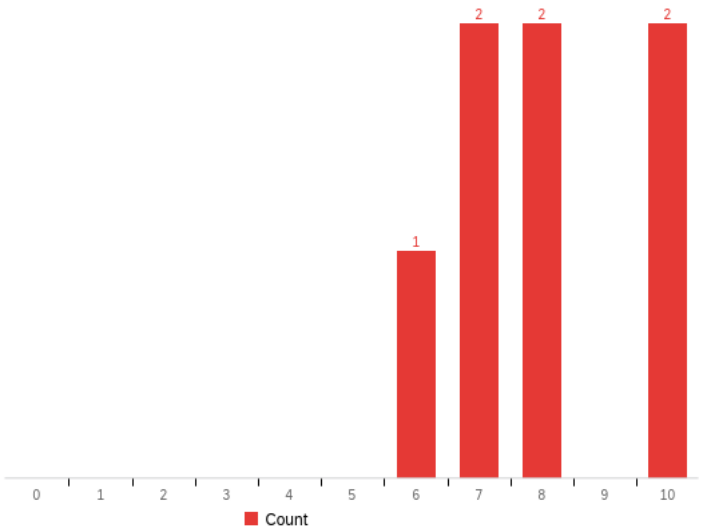
Q3. “Please rate your preference related to taking in-person vs. online classes in Tai Chi (Qigong).” 0= in-person preference, 10=online preference.

Figure 2



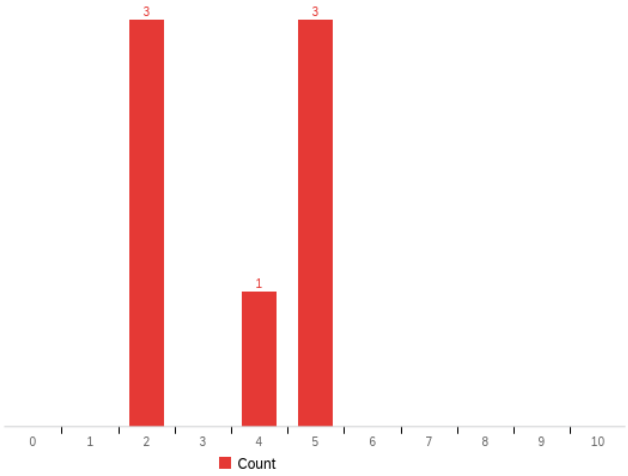
Q4. “Please rate your level of emotional connection when taking in-person Qigong classes.” 0=No Connection, 10=Extremely Connected

Figure 3



Q5. “Please rate your level of emotional connection you anticipate you will feel while taking a Qigong class online.” 0=No Connection, 10=Extremely Connected.

Figure 4



Given that the Focus Group members are raving fans of in-person Tai Chi/Qigong classes and the first survey was given before the online course was delivered, these answers are expected. It was anticipated that the members of the Focus Group would have both a high degree of emotional connection with an in-person Qigong class and a low preference for an online Qigong class. This is true, especially given participants’ long history and positive experience with the existing in-person class and the current instructor.

Similar responses were seen in the questions about the importance of the social aspect of class in in-person vs. online. Results showed a leaning toward extreme importance for in-person class and a shift toward neither important nor unimportant in online classes.

The 'Pre-Survey' free-text response questions where participants were asked, "Using your own words, please describe how you feel overall about online learning" responses tended toward a negative perception of online learning:

Positive Responses Toward Online Learning (Qty=1)

- "It helps me to learn the movements and to enjoy the benefits."

Both Positive and Negative Responses Toward Online Learning (Qty=2)

- "I feel that online is a time and money saver for the instructor and hosting entity (in general) no lights and hospitality costs. I feel that online can be a benefit for those who cannot get out and have tighter schedules during the day, however I feel that a portion of human interface is lost with online and a sense of community is lost also."
- "I appreciate its availability when in-person is unavailable but I feel somewhat removed from the experience and instructor."

Negative Responses Toward Online Learning (Qty=4)

- "It's ok but lacks the human interface."
- "It can work well for some folks, but not all. It seems someone needs to be pretty disciplined to stick with it."
- "I feel that there can be too many distractions from online learning and not as beneficial as a face-to-face contact. I believe there is less connection, also."
- "I do better in person. Better focus. Deadlines are better met (as you can see an example by my tardiness here). Able to ask questions. I often need assistance in figuring things out to do them just right."

Online Class

After the 'Pre-class Survey' was completed, participants completed a 2-hour online course consisting of sixteen 5-to-7-minute video "lectures" that demonstrated 16 movements in a Qigong form called Yin Yang Medical Qigong. The lectures were delivered to participants using the online learning platform Teachable. The instructor was the same as the participants' in-person instructor, and the videos for the online class were shot in the same room where participants normally take the in-person class. The video and audio for the lectures were shot and edited by this study's author during the months preceding the study. The online class also included 2 videos that were shot in prior periods where the Qigong instructor demonstrated all 16 movements all the way through uninterrupted. Participants varied in the degree to which they completed the full course and the time duration they spent in the course. Since the key topic of this study was not performance or time duration related, but rather the feelings and perspectives of the participants, no controls or monitoring were used to impose any performance or duration constraints on the participants.

Figures 5 and 6 show the Pre and Post Survey results when participants were asked about their preference of taking in-person vs. online classes. Figure 5 shows the results when asked about it in general, Figure 6 shows the results when asked about it specifically related to Tai Chi/Qigong.

Figure 5

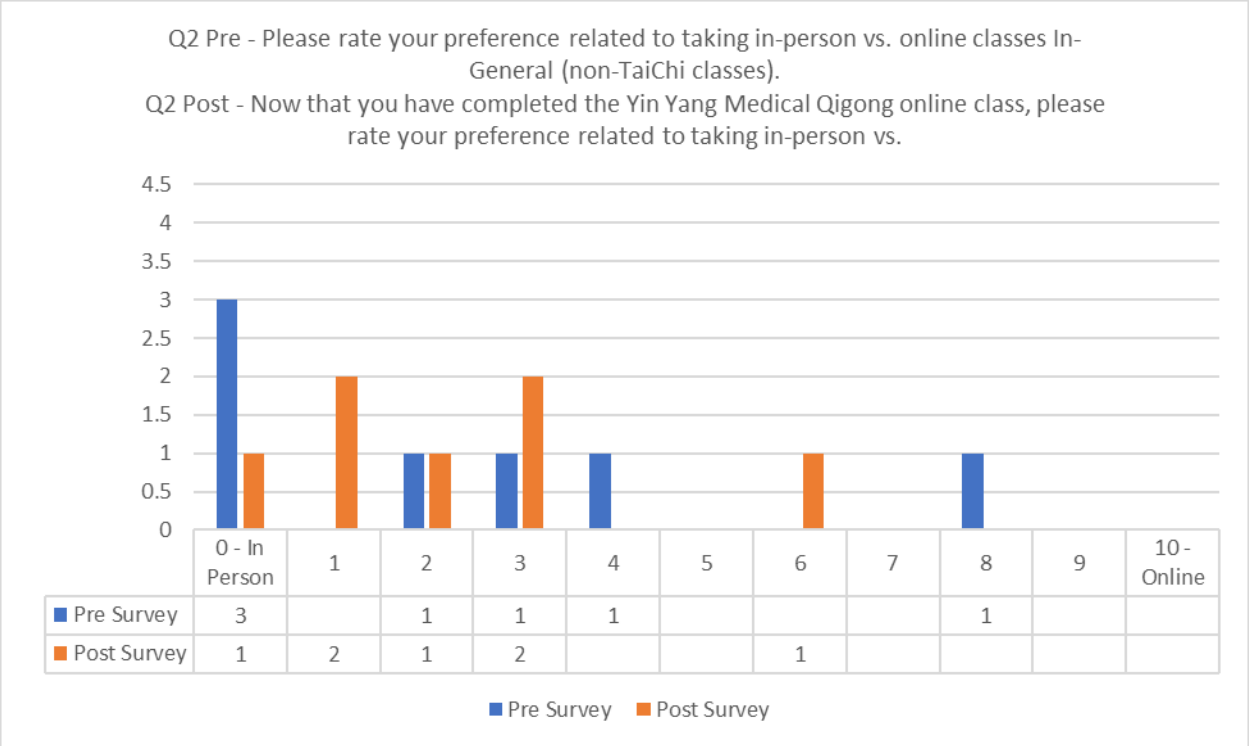
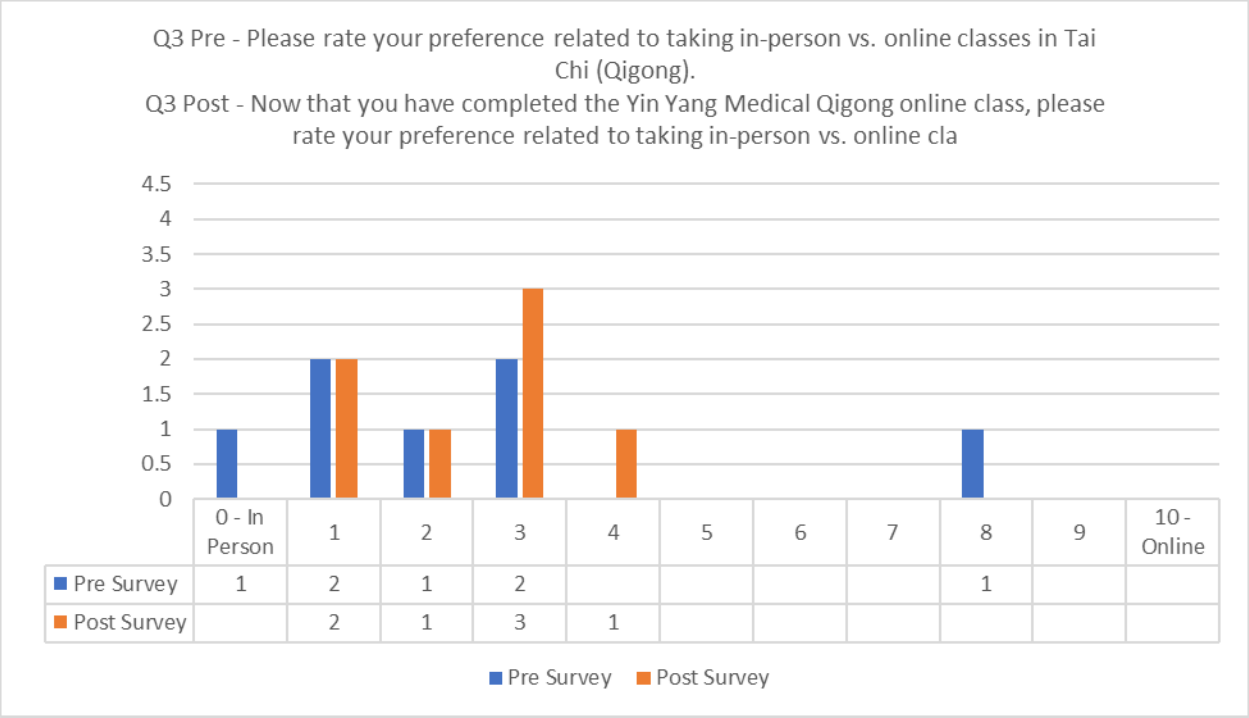


Figure 6



Figures 7 and 8 show the Pre and Post Survey results when participants were asked about their level of emotional connection in taking in-person vs. online classes. Figure 7 shows the results

when asked about in-person Qigong classes (question is identical in both pre- and post- surveys) and Figure 8 shows the results when asked about online Tai Chi/Qigong classes.

Figure 7

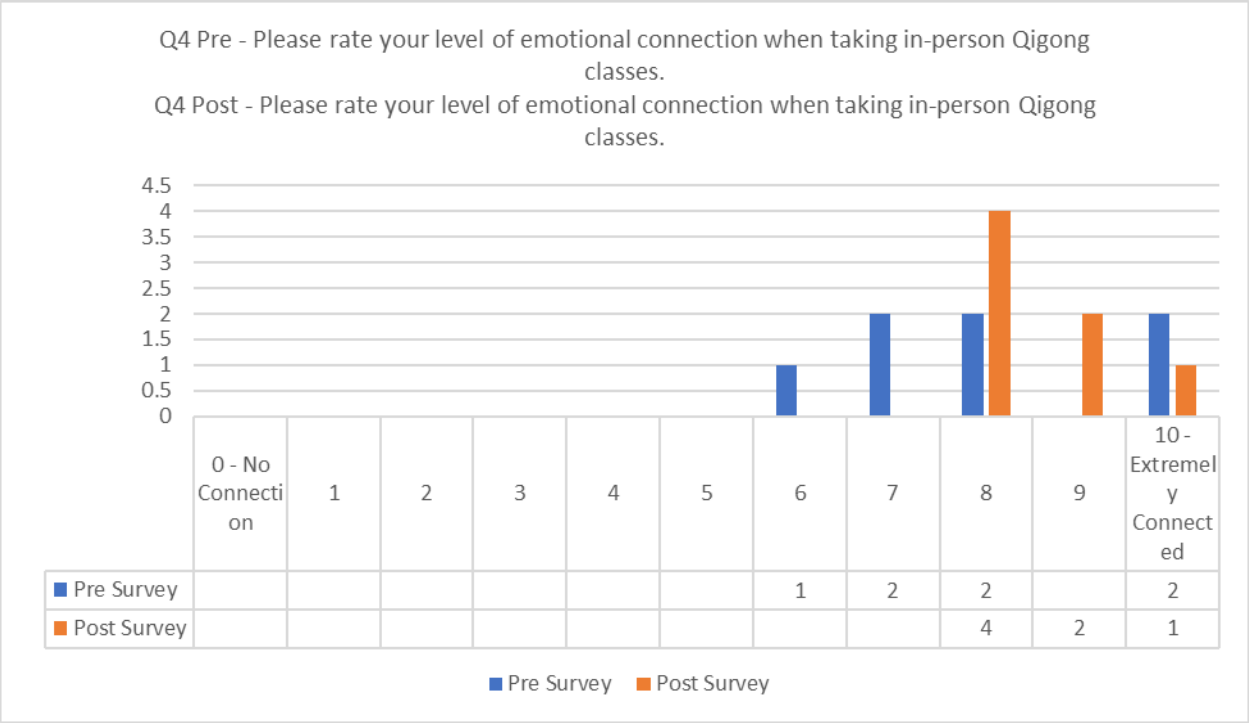
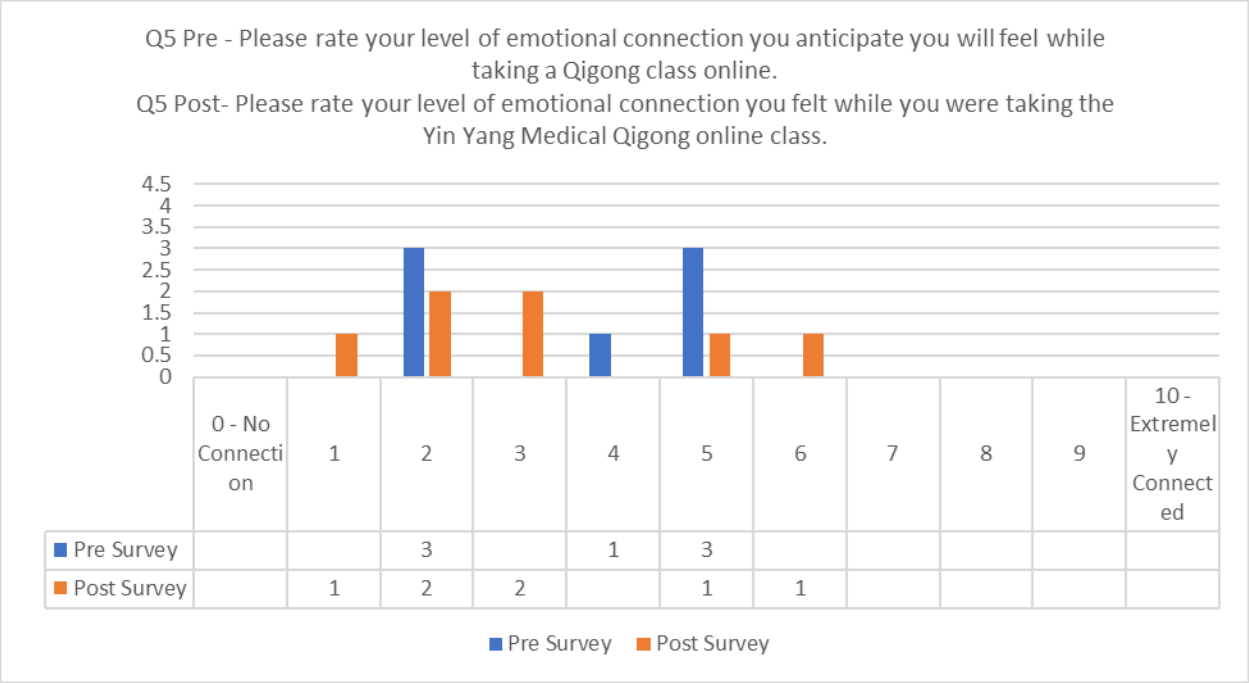


Figure 8



The Mean scores and the associated change for these 4 Questions in the Pre and Post Surveys is shown in the table below (Figure 9).

Figure 9

	Pre-Survey	Post-Survey	Change
Q2 Pre - Please rate your preference related to taking in-person vs. online classes In-General (non-TaiChi classes). Q2 Post - Now that you have completed the Yin Yang Medical Qigong online class, please rate your preference related to taking in-person vs. online classes In-General (non-TaiChi classes).	2.43	2.29	-0.14
Q3 Pre - Please rate your preference related to taking in-person vs. online classes in Tai Chi (Qigong). Q3 Post - Now that you have completed the Yin Yang Medical Qigong online class, please rate your preference related to taking in-person vs. online classes in Tai Chi (Qigong).	2.57	2.43	-0.14
Q4 Pre - Please rate your level of emotional connection when taking in-person Qigong classes. Q4 Post - Please rate your level of emotional connection when taking in-person Qigong classes.	8.00	8.57	+0.57
Q5 Pre - Please rate your level of emotional connection you anticipate you will feel while taking a Qigong class online. Q5 Post - Please rate your level of emotional connection you felt while you were taking the Yin Yang Medical Qigong online class.	3.57	3.14	-0.43

From these results, for Questions 2 and 3, participation in a quality online Qigong course slightly decreased participants' preference for online courses both across general online courses and Tai Chi/Qigong courses. Additionally, for Question 5, taking the online Qigong course actually decreased participants feelings of emotional connection when taking an online course from their baseline in the pre-survey condition. Perhaps most significantly for this portion of the data, is that by taking part in an online Qigong course, participants actually increased their rating of emotional connection for in-person Qigong classes. This data suggests that the presence of a social emotional connection is perceived as being important in online classes even when other significant variables stay the same.

For Post-Survey free-form responses, the comments moved slightly more toward a positive attitude toward online learning. In the Pre-Survey the Positive/Both Positive and Negative/Negative ratios were 1/2/4. In the Post Survey the ratio moved toward the positive only slightly at 2/2/3.

Positive Comments (Qty=2)

- "Online learning has it place. Specifically, if I can't get to class or when I wish to take notes to learn a form or in my case I did each step multiple time so I had some muscle memory. If I were in class the repetitive nature was as prevalent. I did each 4 step times, I watched and then did the motions. I also did them around midnight, something that accompanied my schedule."
- "It was very well done and was very easy to follow along. I really thought it helps with many aspects of learning Qigong."

Comments that were both Positive and Negative toward online instruction (Qty=2)

- "The class had a much greater appeal than I had anticipated. It felt more personal and connected than I thought it would. But I would still prefer in class learning to the online whenever possible. I felt somewhat isolated."
- "Overall, I prefer in person classes. I did like being able to pause if needed. I really like the instruction. The opening slide for each movement was nice information. Deb was able to spend longer with each movement than what is allowed ultimately in class. That was enjoyable."

Comments that were Negative toward online instruction (Qty=3)

- "Class was ok for learning the techniques but lacked the human touch."
- "I prefer hands on instructions and the ability to be critiqued in the moment. When I have online courses I tend to drift elsewhere. I honestly didn't do all the methods along with the videos. They were a bit slower paced than normal and also there was not a class full of people to know I was not participating so I found myself getting distracted easily. I did watch and listen to them all. I have little to no self-discipline so sometimes I rely on others or various situations to keep myself involved in the task at hand."
- "There was too much outside distraction and hard to stay focused on the class. The only plus is that sometimes there is too much chattering at the in-person class and it can be difficult to concentrate."

Based on these free-form text responses, this also indicates that the participants did not change their perceptions in a significant way from their initial feelings about online learning and the connectedness that is possible.

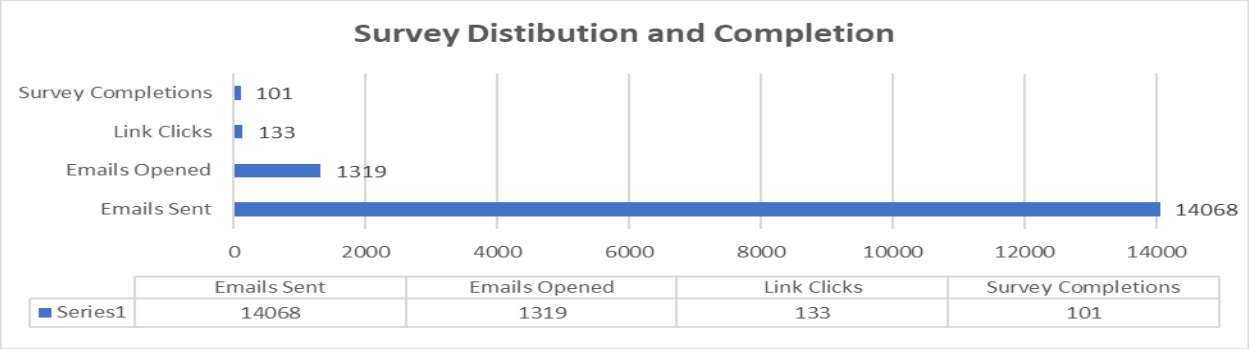
Part B – Client Survey
As an additional method to gain insight into whether . . .

. . . online learning participants experience, or perceive they will experience, the same kind of social connection as being in an on-premise, person-to-person class . . .

This study also surveyed *potential* online learning participants with a different set of questions. In addition to the Focus group questions, this additional survey sought to determine the likelihood that a group of current clients would take online courses and if so, asked a few questions about the characteristics of those courses that they would prefer. They key question, however, was provided only to those clients answering 'No' to the question if they would take online courses if offered. The No branch of the survey posed a single question: "What is the biggest reason you are not interested in online classes?

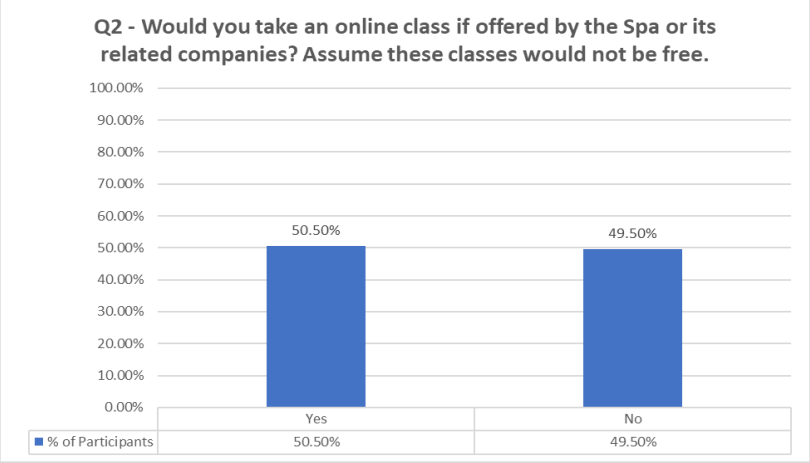
Population and Method
The survey was sent to 14,608 active email customers of the business where the Tai Chi/Qigong classes are held. The survey was sent in an email brochure as a hyperlink to an online survey. The E-mail was sent on April 20, 2021 and the survey closed on April 22, 2021. Of the emails that were sent, 1,319 Emails were opened, 133 links were clicked, and 101 surveys were completed.

Figure 10



For the questions asking if the survey participant would take an online class, if offered, the results showed almost a perfect 50/50 split.

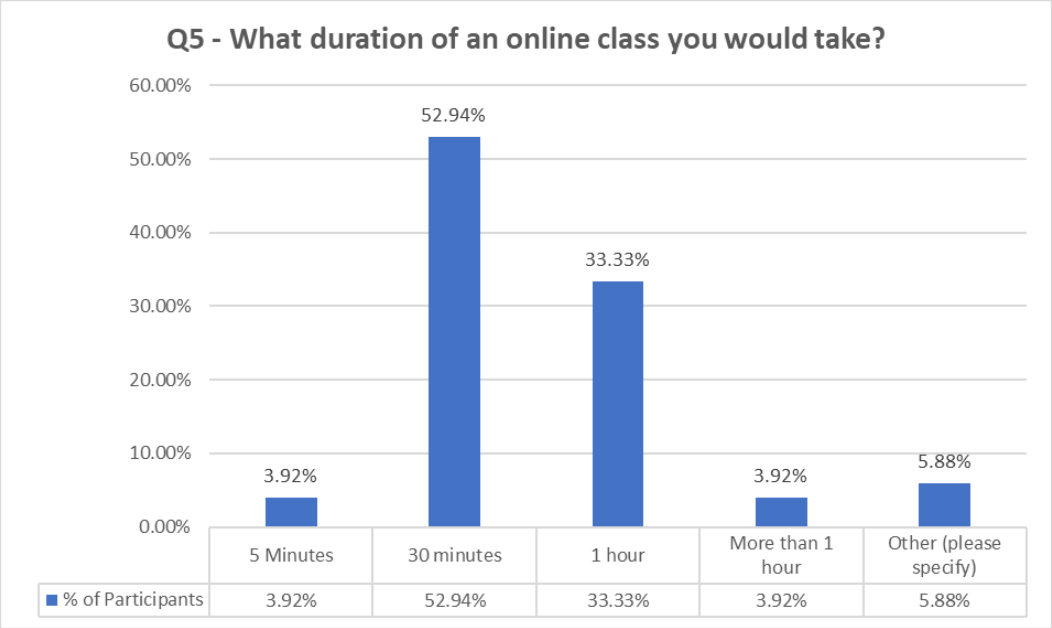
Figure 11



This is a revealing result because while this survey was sent to an overall random group, the nature of the population is familiar with the organization, generally has a favorable attitude toward the company and its services, and many have been clients for a long period of time. Given that the overall population is assumed to be favorable toward the sponsor of the online learning programs, the fact that only 50.5% of participants would take online classes provides the opportunity to extrapolate the data to determine how many people would really attend online programs. This can serve as valuable information given the time and effort it takes to develop new online programs.

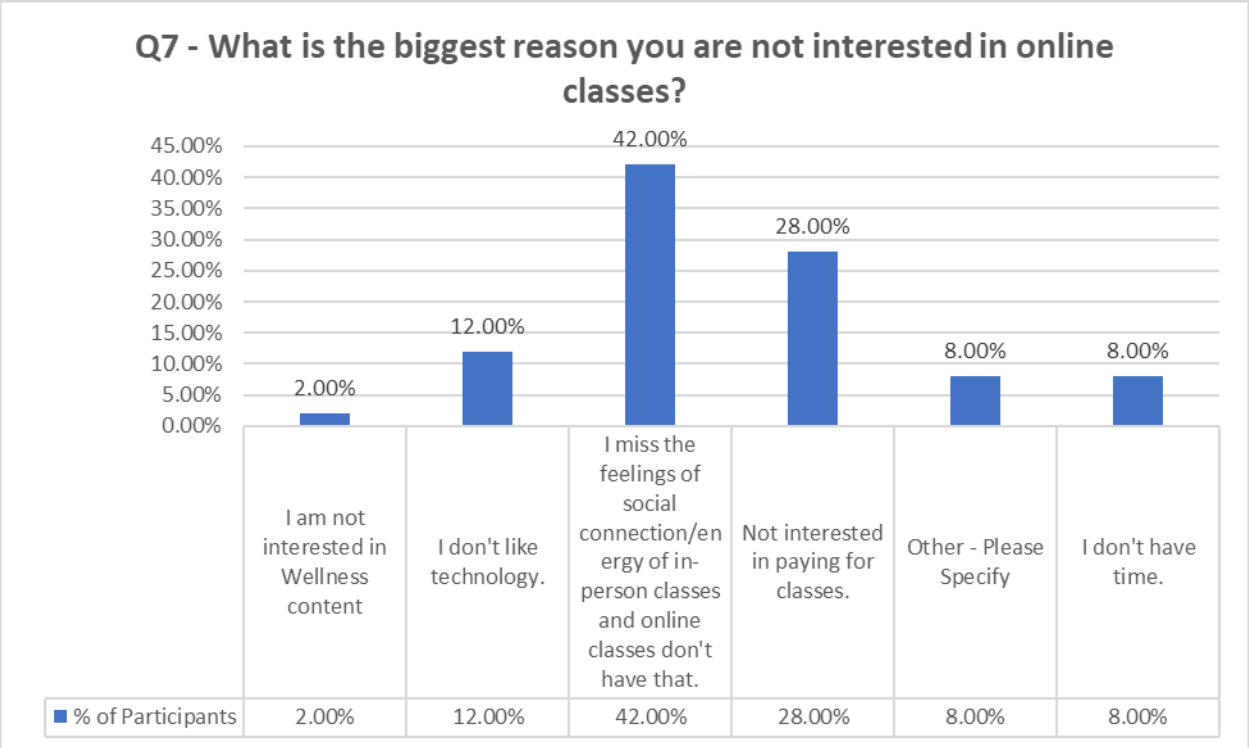
For those people who answered 'yes' and then further answered questions about the characteristics of the class they would take, one result stands out: the preferred duration of the online class. The assumption prior to the study was that for online classes, the shorter the better. The data from this survey do not bear that out. Rather, overwhelmingly (52.94%) participants answered that a class of 30-minute duration was their preference, followed by the duration of 1-hour (33.33%). Any other choice had a dramatically lower response rate.

Figure 12



As suggested in the opening paragraph of this section, the most significant finding of this survey occurred in the 'No' branch of the survey. For people who said they would not take an online course if offered, they moved through skip logic to a final question (skipping all other questions in the 'yes' branch) and asked, "What is the biggest reason you are not interested in online classes?" When presented with multiple answers, the majority of respondents (42%) chose the answer "I miss the feelings of social connection/energy of in-person classes and online classes don't have that."

Figure 13



While the risk here is that the wording of the answer may have introduced some bias error or 'leaning in' of the choice, given the 14% difference between this response and the next closest one, I believe this still has a statistical significance.

This survey serves as a kind of "negative test". In the Focus Group, we asked individuals that we knew would be raving fans of Qigong to comment before and after their experience with an online delivery of a subject they clearly enjoy. The results were somewhat predictable, that they overall preferred in-person Qigong instruction. While there were several reasons, the members of the Focus Group clearly indicated that the same level of social emotional connection is not present in online classes vs in-person and this has a negative affect on their perspective and perception of online learning.

In the client-based survey, we asked individuals that were neither Qigong advocates, nor online learning advocates, what their reason would be for not taking online classes. The data show that a significant number did not want to take online classes because they recognize the need for social emotional connection during learning and it was important enough to them that the lack of its presence warrants calling it the "biggest reason" they are not interested in online classes.

Module IV

Part 1: Conclusions and Recommendations

"Does online delivery of a learning module, in this case a Tai Chi/Qigong class, deliver the same kind of social-emotional connection as an in-person, on-premise Tai Chi class? In other words, do participants experience or do they perceive they will experience, the same kind of connection as being in an on-premise, person-to-person class?"

After an in-depth review of attitudes and perceptions of online learning, with both a Focus Group that are all advocates of Tai Chi/Qigong and with a random group of business client survey participants, I must conclude that online learning of Tai Chi/Qigong does not deliver the same kind of social-emotional connection as an in-person Tai Chi/Qigong class. While the skill of this researcher and the time constraints associated with the project may have impacted the quantity and quality of precisely aligned questions, number of overall participants and perfectly objective treatment of each of the research artifacts, in general the conclusions of the study appear consistent despite these limitations.

In my analysis of the participants, I am aware of no misunderstandings or confusion about the provided directions, and I received no questions relating to the logistics or completion of the surveys. While the client survey had many less people participate than the number to whom it was sent, the email open rate was 9.3% and the survey participation rate from those opens was 7.6%. From a an email marketing and online survey perspective, these participation rates are consistent with the ranges that have historically occurred for email marketing at this spa.

One of the most fascinating elements of the data collected was the sentiment from the client surveys that showed the reasons for non-online learners avoiding online instruction; that they miss the social connections and energy that are inherent with in-person classes. One major factor that is not considered in this study is that from a timing perspective, this research project is occurring during the COVID-19 Global Pandemic, and attitudes and behaviors related to in-person vs. remote activities currently have special attention focused on them. Presently there are anecdotal stories throughout many cultures describing how tired people are of being isolated and quarantined, and that many people are reacting against online based technology. This could also introduce unexpected and difficult to measure variability in the results.

The presence of a Community of Inquiry in online learning is key to developing social bonds (Williams, 2017). Exploring how a Community of Inquiry might impact attitudes was beyond the scope of this study. While the members of the Focus Group were familiar with each other and are part of a close-knit tribe who regularly attend the in-person Tai Chi classes, the group has not established an online Community of Inquiry as described in the literature.

Additionally, we know that the dimensions of Discussion Contribution, Collaborative Facilitation and Social Interaction are also important for online learning participation (N.A. Diep et. al., 2018) – all three of which were absent this online learning study.

Both the quantitative and qualitative data from our study suggest that something is indeed missing from the online learning that was delivered and presented to survey participants. Whether or not the missing ingredient is a Community of Inquiry (either formal or informal) or the engagement dimensions referred to above is a subject for future study.

Part 2: Plan for Future Action

I believe that my research reinforces my view that the presence of social-emotional connection is a critical, if not mandatory element for successful online learning. This study can serve as a stepping-stone for future research that examines what ingredients may be necessary to satisfy the human need for social emotional connection in online learning environments. Clearly, the absence of this connection, or ignoring its importance, leads to the retention of any negative attitudes learners have regarding the online environment. Going forward, as I develop my own online learning in different contexts, I will seek to create opportunities for learners to foster a social emotional connection with each other.

While my survey data here is imperfect, it is an important indicator of how many people feel toward online learning. As mentioned earlier, COVID-19 remains a significant variable, and the degree to which the collective weariness and psychological exhaustion impacted this study's results is difficult to tell. Further evaluation by executing similar experiments after the Pandemic has subsided may result in a valuable comparative study. Additionally, taking this study as a baseline and expanding its scope to include treatments for Community of Inquiry and the elements of Discussion Contribution, Collaborative Facilitation and Social Interaction would more fully examine the impact of those variables on similar populations. I would like to experiment with a broader and larger group, where I could also vary the length and nature of the online class taken by participants.

If I did repeat this as a class assignment, I would look at the potential for beginning the study near the start of the semester so the data collection period were longer thereby allowing more flexibility and variation in population and content. Concurrently, I would look to leverage the Client population at the spa more, as a 14,000+ member sample has huge potential for obtaining significant, high-quality data.

One lesson that I learned from this study is how important it is to think ahead about how I will connect the collected data to the methods I will use for analysis. In this research project, I created survey questions that would make 'common sense' to the participant and collected the data that I thought would be valuable. However, I did not plan ahead for how the question types would synchronize smoothly in the data analysis phase to ensure the data could be easily consolidated and summarized in a meaningful way. While the data in this study turned out to be very meaningful, in the next study I will pay closer attention to the specific type of questions and how they flow through to the data analysis activities.

Perhaps the most important lesson I learned from this research is the incredible value and power of asking. Very often, I make assumptions that people will not consider my research questions important enough to answer them. After all, isn't this just another survey, filling someone's email box? Why would they take the time to participate? However, what actually happened during this study was very different from that assumption. Participation did happen, and at a level that created some excellent data. So, as I continue to integrate these lessons into my future online program designs, I will not make quite so many assumptions about how people will act or behave and will keep an eye out for how the data will flow all the way through the study. This, I suspect, is also a huge part of learning what being a scientist <u>really</u> means.