Eastern Kentucky University

Encompass

Occupational Therapy Doctorate Capstone Projects

Occupational Science and Occupational Therapy

2021

Examining Cognitive, Social and Teaching Presence in a Virtual Professional Continuing Education Workshop

Christina Bretz Eastern Kentucky University, christina.bretz@eku.edu

Follow this and additional works at: https://encompass.eku.edu/otdcapstones

Part of the Adult and Continuing Education Commons, Higher Education Commons, and the Occupational Therapy Commons

Recommended Citation

Bretz, Christina, "Examining Cognitive, Social and Teaching Presence in a Virtual Professional Continuing Education Workshop" (2021). *Occupational Therapy Doctorate Capstone Projects*. 83. https://encompass.eku.edu/otdcapstones/83

This Open Access Capstone is brought to you for free and open access by the Occupational Science and Occupational Therapy at Encompass. It has been accepted for inclusion in Occupational Therapy Doctorate Capstone Projects by an authorized administrator of Encompass. For more information, please contact Linda.Sizemore@eku.edu.

EXAMINING COGNITIVE, SOCIAL, AND TEACHING PRESENCE IN A VIRTUAL PROFESSIONAL CONTINUING EDUCATION WORKSHOP

Presented in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Occupational Therapy

Eastern Kentucky University

College of Health Sciences

Department of Occupational Science and Occupational Therapy

Christina Bretz, MS, OTR/L

2021

EASTERN KENTUCKY UNIVERSITY COLLEGE OF HEALTH SCIENCES DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

This project, written by Christina Bretz, under direction of Dr. Cindy Hayden Faculty Mentor, and approved by members of the project committee, has been presented and accepted in partial fulfillment of requirements for the degree of

DOCTOR OF OCCUPATIONAL THERAPY

CAPSTONE COMMITTEE

Cindy Hayden Faculty Mentor

Shirley O'Brien Committee Member

12/10/2021

Date

<u>12/10/2021</u> Date

___Laura Bray

Laura Bray Content Expert <u>12/10/2021</u> Date

EASTERN KENTUCKY UNIVERSITY COLLEGE OF HEALTH SCIENCES DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

Certification

We hereby certify that this Capstone project, submitted by Christina Bretz, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the project requirement for the Doctor of Occupational Therapy degree.

Approved:

P. O'Beien IN.

Shirley O'Brien, PhD, OTR/L, FAOTA Program Coordinator, Doctor of Occupational Therapy

Dana Howell, PhD, OTD, OTR/L, FAOTA Chair, Department of Occupational Science and Occupational Therapy <u>12/10/2021</u> Date

12/10/2021_

Date

Copyright by Christina Bretz, MS, OTR/L, 2021 All Rights Reserved

Executive Summary

Background: Due to COVID 19, there has been an increase in opportunities for online learning due to the reduction of in-person trainings. As occupational therapist practitioners, we have a responsibility to complete our professional continuing education and maintain our skills proficiently, whether those trainings are in-person or virtually. Therefore, the effectiveness and quality of professional training should not decrease when the delivery system is switched from in person to online.

Purpose: This study addressed professional continuing education for occupational therapists, occupational therapy assistants, and Pre-K thru 5th grade teachers in a virtual environment. The primary purpose of this study was to examine the cognitive, social, and teaching presence in virtual Learning Without Tears professional development workshops. The second objective was to discover if there was any statistical difference between the demographic variables and the cognitive, social, and teaching presences of the Community of Inquiry (CoI) in the Learning Without Tears virtual continuing education workshops.

Theoretical Framework: The study was guided by the Community of Inquiry framework which assists with evaluating instructional design, learning experiences, and interaction in online and distance education. It was also guided by Social Constructivism which is the way groups of people make meaning of learning experiences and interactions.

Methods: A cross sectional quantitative, post course survey design was used in this research project. The community of inquiry survey was used to evaluate the cognitive, social, and teaching presences during a continuing education experience. The survey plus demographic questions were emailed to all participants of Learning Without Tears virtual workshops at the conclusion of the workshops from April 2021 until September 2021.

Results: The post workshop survey was sent to approximately 2,000 people with a nine percent return rate. There were 141 participants that completed the entire survey. The results indicated that teaching presence was the highest presence promoted in the Learning Without Tears virtual two-and half-hour workshop with a mean of 4.23/5.00. The lowest presence was indicated by participants as the social presence with a mean of 3.59/5.00.

Conclusion: Online professional development for teachers and OT practitioners is here to stay long after COVID-19 departs, as technology continues to be part of our daily lives. Developing strong cognitive, teaching, and especially social presence, is key to participant engagement in online professional continuing education offerings. The findings from this study can be utilized by those teaching future workshops for Learning Without Tears and can be used by other educational programs and higher education settings to enhance and support learning.

Acknowledgements

I would like to thank my mentor and committee chair, Dr. Cindy Hayden, D.H. Ed., OTR/L, for her time and feedback with this project. It was a privilege to learn from her and to collaborate with her throughout this project. I am extremely grateful to my committee member, Dr. Shirley O'Brien, PhD., OTR/L, FAOTA, Program Director, Doctor of Occupational Therapy, for her valuable insight. Her expertise and leadership inspired me each and every day. I would also like to thank Laura Bray, MS, OTR/L, for all of her time and recommendations and for being a listening ear personally and professionally. I am grateful to all faculty members at Eastern Kentucky University in the Department of Occupational Therapy and Occupational Science who were supportive and generous with their time to answer questions and provide encouragement.

I would like to thank all of my colleagues at Learning Without Tears, especially Jan Olsen. I am deeply grateful to her for the knowledge and guidance she has provided me over the years as a mentor and dear friend. I would like to thank my closest friends who have provided encouragement, understanding, and continual support.

I am grateful to my parents for being my cheerleaders as I was going through this journey. I want to thank my mom for being my editor and my friend during this entire process.

I would like to thank my children, Mary Elizabeth, Olivia and Bella, who have understood the juggling act and have helped in many ways when it was needed. I hope that one day you will look back on this and realize that you can achieve your dreams at any age. Lastly, my husband, Todd, who has been my rock. I am extremely grateful for his love and support and all the little and big things he has done to make my life easier during this time.

EASTERN KENTUCKY UNIVERSITY **COLLEGE OF HEALTH SCIENCES** DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY **CERTIFICATION OF AUTHORSHIP**

Submitted to (Faculty Mentor's Name): Dr. Cindy Hayden

Student's Name: Christina Bretz

Title of Submission: Examining Cognitive, Social and Teaching Presence in a Virtual Professional Continuing Education Workshop

Certification of Authorship: I hereby certify that I am the author of this document and that any assistance I received in its preparation is fully acknowledged and disclosed in the document. I have also cited all sources from which I obtained data, ideas, or words that are copied directly or paraphrased in the document. Sources are properly credited according to accepted standards for professional publications. I also certify that this paper was prepared by me for this purpose.

Student's Signature: ____ Christina Butz, MS, OTRIL

Date of Submission: ______11.30.21_____

Table of Contents

	1
Community of Inquiry	2
Cognitive Presence	3
Social Presence	4
Teaching Presence	5
Problem Statement	6
Purpose of the Project	6
Project Objectives	8
Theoretical Frameworks	8
Significance of the Study	9
Summary	10
Section II: Review of Literature	11
Community of Inquiry	12
Cognitive Presence	13
Social Presence	15
Teaching Presence	17
Higher Education Online Teaching and Learning	19
Online Allied Health Programs at the University Level	22
Occupational Therapy Online Learning Courses	24
Professional Development Online Teaching and Learning	27
Online Continuing Education Professional Development for Educators	29
Online Continuing Education Professional Development for OT Practitioners	31
Learning Without Tears Continuing Professional Development for Educators and OT Practitioners	32
Conclusion	35
Section III: Methods	36
Section III: Methods Project Design	36
Section III: Methods Project Design Setting	36 36 36
Section III: Methods Project Design Setting Identification of Participants	36 36 36 37
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants	36 36 36 37 37 38
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment	36 36 36 37 38 38 38
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods	36 36 36 37 38 38 38 38 38
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used	36 36 37 38 38 38 38 38 38 38
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis.	36 36 37 38 38 38 38 39 41
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations	36 36 37 38 38 38 38 39 41 42
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations Timeline of Project Procedures.	36 36 37 38 38 38 38 38 39 41 41 42 43
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations Timeline of Project Procedures	36
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations Timeline of Project Procedures	36 36 36 37 38 38 38 38 39 41 41 42 43 43
Section III: Methods Project Design	36 36 36 37 38 38 38 38 39 41 41 42 43 45
Section III: Methods Project Design	36 36 36 37 38 38 38 38 38 39 41 41 42 43 45 45 45
Section III: Methods	36 36 36 37 38 38 38 38 38 39 41 41 42 43 43 45 45 45 45
Section III: Methods. Project Design Setting Identification of Participants Criteria for Participants. Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations Timeline of Project Procedures. Section IV: Results Introduction Quantitative Results. Teaching Presence Cognitive Presence	36 36 36 37 38 38 38 38 38 39 41 41 42 43 43 45 45 54 55
Section III: Methods. Project Design . Setting . Identification of Participants . Criteria for Participants . Recruitment . Project Methods . Instrument Used . Data Analysis . Ethical Considerations . Timeline of Project Procedures. Section IV: Results . Introduction . Quantitative Results. Teaching Presence . Cognitive Presence . Social Presence .	36 36 36 37 38 38 38 38 39 41 42 42 43 43 45 45 54 55 54
Section III: Methods	36 36 36 37 38 38 38 38 39 41 41 42 43 43 45 55 54 55 56 56 57
Section III: Methods Project Design Setting Identification of Participants Criteria for Participants Recruitment Project Methods Instrument Used Data Analysis Ethical Considerations Timeline of Project Procedures Section IV: Results Introduction Quantitative Results Teaching Presence Cognitive Presence Social Presence Social Presence Social Presence Social Presence Social Presence Limitations Future Research	
Section III: Methods Project Design	36 36 37 38 38 38 38 38 39 41 41 42 43 43 45 45 45 55 56 56 57 58 58 59
Section III: Methods Project Design	

Appendices	
Appendix A: Verbal Recruitment Script	73
Appendix B: Community of Inquiry Survey Instrument	74
Appendix C: Email Including Survey Link Sent to Participants	77

List of Tables

Table 1:	Databases and Terms Used	12
Table 2:	Project Timeline	44
Table 3:	Community of Inquiry Survey Results	48
Table 4:	Mean of subcategories and categories	50
Table 5:	Average Means by Demographic Question of Professions	51
Table 6:	Average Means by Demographic Question of Years of Experience	52
Table 7:	Average Means of Attendance of Previous Virtual Class	52
1 4010 / /		

List of Figures

Figure 1:	Gender	46
Figure 2:	Profession of Participants	46
Figure 3:	Years in Profession	47
Figure 4:	Attendance in an online virtual education course	47

Section One: Nature of the Problem and Problem Identification

Occupational therapy practitioners have an ethical responsibility to ensure practice competence and remain proficient in their knowledge and skills as it relates to the health care system (American Occupational Therapy Association [AOTA], 2015). Continuing education opportunities can foster the development of expertise and can provide an ability to integrate and apply evidence to their own personal workplace settings (Johnson-Coffelt & Gabriel, 2017). This aligns with AOTA's 2025 Vision by meeting society's occupational need to contribute to the profession's evidence base by promoting further research and collaborating with others to promote change in adult lifelong learning (AOTA, 2017).

In order to further the professional competence of occupational therapists, continuing education workshops need to provide efficient and competent instruction. During continuing education workshops, facilitators may diversify instruction with a variety of online offerings. There are few studies exploring professional online continuing education effectiveness. This research project explored the teaching and learning process in an online professional continuing education environment.

Due to COVID-19, many universities and professional continuing education courses had to transition to an online delivery platform (Martin et al., 2021). There has been incredible growth with online offerings as Lederman (2021) describes from the National Council for State Authorization Reciprocity Agreements and the Education Department's National Center for Education Statistics. The study showed 85% of the 2,200 colleges and universities transitioned in-person courses to forced remote online in the Fall of 2020 because of the COVID-19 pandemic. Many professional development options moved to online classes as they provided an individual the opportunity to further their professional training. Online courses provided a chance to extend professional learning which may not have occurred previously due to geographical or time restrictions. (Crawford-Ferre & Wiest, 2012).

Higher education online offerings increased significantly over the last several decades. Lederman (2021) stated that between 2019 and 2020, there was a 93% increase in distance education enrollments in higher education, with approximately 3 million individuals enrolled online in 2019 compared to over 5 million in 2020. At the same time, COVID-19 precipitated the online movement of professional development options for continuing education.

With the shift of professional development to a virtual context, there needs to be a measure of teaching and learning effectiveness of continuing education online courses. Reflection on individual participation and understanding the content that is delivered can serve as a measure of success for a continuing education professional development workshop. One way to capture the reflection and measure a successful professional learning opportunity is through a post-workshop survey, specifically the Community of Inquiry (CoI) questionnaire.

Community of Inquiry

The CoI was developed from a study by Garrison, Anderson, and Archer over twenty years ago (Garrison, 2020). Garrison wanted to develop an online master's program, but there were no guidelines on how to create and develop a master's program utilizing a virtual delivery. Garrison's doctoral research in 1983 focused on adult interactions and its importance in online learning. Garrison's background and expertise and belief in the power of collaboration helped develop the CoI. The framework focuses on collaboration and critically sharing thoughts and ideas through the three presences: cognitive presence, social presence, and teaching presence. These elements are interdependent on one another (Fiock, 2020). Cognitive presence is defined as the application of knowledge through sustained reflection and online discourse (Akyol, 2009).

Kumar and Ritzhaupt (2014) described social presence as the way in which learners online interact with others and think of themselves as "real people." Research indicates that social presence positively affects instructor and student satisfaction of the course (Richardson & Swan, 2003 as cited in Fiock, 2020). Teaching presence is described as "the design, facilitation and direction of cognitive and social processes to support learning" (Garrison, 2000, pg. 90).

The three presences form a foundation that help to understand how to teach online and the participant's experience in virtual learning. Interaction between students is a significant element in the online learning experience. In a true CoI, a deep level of learning can occur when the actions of the individuals create a synergy that leads to trusting relationships (Rubin, 2013). The way in which the cognitive, social, and teaching presence are utilized in a course design is critical to achieving satisfaction within the course environment. A greater understanding of these three elements in the CoI can address maintaining learner attention and satisfaction in an online environment, with both synchronous and asynchronous courses. Cognitive, social, and teaching presences are illustrated in greater detail by defining their subcomponents.

Cognitive Presence

Cognitive presence in an online course consists of four phases: triggering event, exploration, integration, and resolution (Holbeck & Hartman, 2018). The triggering event is defined as recognizing the problem and a sense of confusion with the given task. Exploration is using different sources to solve uncertainties and exchanging of information occurs here. During the integration phase, the learners reflect on the task and determine a solution. The final phase of resolution is applying the knowledge to new situations (Akyol et al., 2009). In an online course, learners have more time to contribute compared to an in-person traditional classroom as they have time to reflect, brainstorm, and edit their work before they share it to an online discussion forum. Reflection is key in cognitive presence as it enables those who are learning to validate understanding of the content (Redmond, 2014). As learners move through the four phases of cognitive presence, they develop critical thinking skills. There must be a strong social presence to establish cognitive presence among individuals.

Social Presence

Social presence is an important factor in online learning. Social presence is the degree of person-to-person awareness. It is the relationship between interactive use and personal satisfaction (Tu, 2002). Social presence refers to seeing individuals as "real people" and interacting with them (Garrison et al., 2000).

Each course can be different because of the strategies that are used that affect social presence. A feeling of belonging to the online course is a major part of social presence (Kumar & Ritzhaupt, 2014). Kumar and Ritzhaupt (2014) discovered that students felt faculty involvement influenced the sense of community or the degree of social presence. Students also stated that discussions from faculty helped them learn the subject matter and manage their program goals. This collaboration helped individuals have a sense of satisfaction and awareness. Dixson (2010) reported discussion forums can assist in developing a student's social presence.

Social presence is crucial among students as it can reflect student retention and connection to the university (Kumar and Ritzhaupt, 2014). Nasir (2020) reported a positive relationship between social presence and satisfaction in an online course. Students who described a high level of social presence in their online course were likely to describe a high level of satisfaction with the course. Individuals may need to feel social presence while participating in learning tasks. Collaboration between the learners and the instructor in social presence is key to finding meaning of the content being delivered in an online environment (Nasir, 2020). Social presence needs to be fostered by the instructor, which is also an element in the teaching presence of online learning.

Teaching Presence

For a strong teaching presence to occur, there must be both cognitive and social presence (Garrison et al., 2000). A strong teaching presence is considered the key element that enables the growth of social and cognitive processes (Tolu, 2013). An expanded definition of teaching presence is "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Deris et al., 2012, pg. 256). Teaching presence is the structure and process of the learning environment. It can lead to successful learning as it brings the teacher and learner together through their actions and a feeling of community.

Teaching presence begins with the organization and the instructional design of the course. This includes setting the curriculum, preparing course materials, designing methods, establishing schedules, and providing guidelines (Deris et al., 2012). The second aspect of teaching presence is facilitating discourse by instructors, motivating learners, encouraging participation, and guiding learners to a higher level of thinking. The third category of teaching presence is direct instruction, which is the knowledge the instructor shares, as well as their leadership of the class. Studies have identified that teaching presence has a strong correlation to student satisfaction, perceived learning, and sense of community (Akyol & Garrsion, 2008; Arbaugh, 2008; Shea & Bidjerano, 2009 as cited in Tolu, 2013). All three presences contribute to the interactions that occur online to provide optimal learning and build a community.

Problem Statement

This Capstone Project addressed the measurement of elements in a professional learning workshop in a virtual continuing education environment. This research study used the CoI framework to examine cognitive presence, social presence, and teaching presence during Learning Without Tears (LWT) online workshops. Due to the increase in online professional development workshops, there needs to be knowledge of strategies that will engage the professional adult learner to absorb course content in new ways in the virtual setting.

Purpose of the Project

Determining effective adult teaching and learning strategies can assist in the successful development of online continuing education workshops. Zariski and Styles (2000) described the lack of interaction during an online class. Most students felt learning was social and the online environment did not promote support for optimal learning. One element of the CoI is the social presence which includes a sense of community and engagement with others during the learning opportunity (Guo et al., 2021). Identification of appropriate and engaging teaching strategies for virtual learning will assist in improving knowledge and participation as an outcome of continued learning in an online environment.

A study from Abou-Khalil et al. (2021) described engagement strategies in online learning, including student-content, student-teacher, and student-student. These could be categorized as strategies to promote social and cognitive presence. The article states as students learned the content, they were more engaged with the work they were learning, and students perceived this to be the most effective interaction. When students were more engaged, their participation increased, and more optimal learning occurred. Abou-Khalil et al.'s (2021) study also identified the student-teacher relationship as important. Some strategies identified in the study as student-teacher relationship included calling students by name, providing positive feedback, posting reminders, and the instructor's presence during discussion posts. These actions by the instructor kept students engaged in learning and, therefore, students felt they were heard during the class. Having students feel more engaged to learn assisted the promotion of social presence within the learning opportunity.

The third relationship students see as significant is the student-student interactions during an online course (Abou-Khalil et al., 2021). Thinking of ways to boost student interactions may create more interactivity between the students within the course. This can increase social presence among peers. Akcaoglu and Lee (2016) increased student-student engagement by placing students in small discussion groups (as cited in Abou-Khalil et al., 2016). Students see each other as "real people" in small discussion groups, which is an element of social presence. The small groups from Akcaoglu and Lee's (2016) study stayed the same over time so peers could build a rapport between the members within the group.

By understanding the three elements of the CoI within a virtual professional development workshop, knowledge and overall satisfaction of the learning experience can be increased. Learning the effective ways to promote the three CoI presences may increase engagement, satisfaction, and promotion of community within professional online learning experiences. The scope of this Capstone Project was to discover the level of cognitive, social, and teaching presences in virtual professional development workshops. The results of this descriptive study can be utilized by university professors, curriculum designers, instructional designers, technology designers, and others working within professional continuing education creation and development teams. These outcomes can also assist in program development and occupational therapy education by discovering ways of implementing best practices within professional online continuing education offerings.

Project Objectives

- This study aimed to identify the level of teaching presence, social presence, and cognitive presence in the Learning Without Tears virtual continuing education workshops.
- This study aimed to discover if there is any statistical difference between the demographic variables and the cognitive, social, and teaching presences of the Community of Inquiry in the Learning Without Tears virtual continuing education workshops.

Theoretical Frameworks

The CoI is a theoretical framework to evaluate instructional design, learning experiences and interaction in online and distance education (Garrison, et al., 1999 as cited in Saadatmand et al., 2017). The CoI framework is useful in gaining an understanding of the pedagogical design of a course delivered in a virtual environment (Saadatmand et al., 2017). The CoI framework includes the three elements of cognitive, social, and teaching presence, which help to create a valuable continuing education experience (Garrison et al., 2000). The CoI has been used in Damm's (2016) study to determine student engagement in a large online course. The CoI was also used to determine if the course design and implementation provided a successful online experience in higher education. It can be a challenge to keep students motivated and engaged throughout an online course while learning the content. Damm's study showed that students had positive perceptions of teaching and cognitive presences. They had an ambivalent to negative

perception of social presence. These findings can help to guide the development of, and modify the implementation of, future online courses.

Social constructivism is another theory that was used in this research study. Social constructivism is the theory of knowledge in sociology and communication that examines the knowledge and understandings of the world (Walker, 2015). The important elements in this theory are the assumption that humans rationalize experience and the way it functions, and that language is essential. Walker (2015) states that social constructivism is the way groups of people make meaning of experiences and interactions. In social constructivism, learning is a social process. The Learning Without Tears workshops implement both of these frameworks during their learning experiences to create an optimal environment of community and social interactions among participants.

Significance of the Study

The significance of this study is twofold. First, the Capstone Project identified the three presences from the CoI within a virtual continuing education workshop. By assessing the depth of these presences within a virtual professional development workshop, we can determine the ways in which the CoI can be improved to provide an engaging and quality experience for participants.

Secondly, this project was designed to support occupational therapy practitioners who teach online learning courses. Results of this research project can help OT educators and practitioners provide successful implementation of online content to facilitate learning in professional continuing education workshops. By gaining the knowledge of how to facilitate learning in an online environment, course instructors can improve attention and satisfaction among the participants of the professional development workshops. Instructional activities and

course design may be modified based on information obtained from this study. This study's results, discussion, and conclusion can be important to those who teach in higher education courses and continuing education environments.

Summary

Online learning environments are increasingly prevalent in today's technological world. Professional continuing education course designers and presenters can improve opportunities for learning and support individuals remotely by understanding how to remain engaging and motivating to the adult learner online. This Capstone Project helped to minimize the gap in research of continuing education online learning and its impact on professional adult learners.

Section II: Review of Literature

A review of the peer reviewed literature identified several studies focusing on the CoI in online courses. Computerized searches including databases and search terms that were used for this project are in Table 1. After conducting a thorough search, no articles were found regarding the presence of CoI in virtual continuing education workshops. Using a more expansive search, the literature confirmed that the three presences of the CoI are important to be included in learning opportunities for students to have an engaging and educational experience for both inperson and virtual environments.

Databases Used	Search Terms Used
Google Scholar	Community of Inquiry
	• Teaching Presence in Online Learning
	Cognitive Presence in Online
	Learning
	Social Presence in Online Learning
	Professional Online Continuing
	Education
EBSCOHost Web	• Community of Inquiry
	Professional Development
	• Allied Health
	Social Presence Online
Databases Used	Search Terms Used
• Eric.ed.gov	• Community of inquiry online
	Social Constructivism
	• Online teaching and learning
	······8
• American Journal of Occupational	 Online teaching and learning
• American Journal of Occupational Therapy	Online teaching and learningOnline teaching
• American Journal of Occupational Therapy	Online teaching and learningOnline teaching
 American Journal of Occupational Therapy Journal of Occupational Therapy 	 Online teaching and learning Online teaching Online teaching and learning
 American Journal of Occupational Therapy Journal of Occupational Therapy Education 	 Online teaching and learning Online teaching Online teaching and learning Online teaching

Table 1: Databases and Terms Used

Community of Inquiry

A review of literature identified several studies focusing on the CoI related to higher education, especially within online course delivery. It is important to understand the level of the three presences of the CoI during learning opportunities. The CoI framework includes cognitive, social, and teaching presence which "represents a process of creating a deep and meaningful learning experience" (Garrison et al., 2000, pg. 92). Cognitive presence includes the ability to construct meaning through sustained communication. Social presence embodies the expression of emotion and projecting personal characteristics. Teaching presence includes the responsibility of the instructor to design the course and facilitate the information to the class. Together the three presences create interactive learning experiences for participants in the online educational environment (Garrison et al., 2000). Each of these areas will be further explored as they are developed and implemented within online educational institutional offerings.

Cognitive Presence

Cognitive presence is the first of three elements that promotes development of community in online courses. In higher education, critical thinking skills are imperative and cognitive presence is a significant component in these skills. A study by Rubin (2013) hypothesized that "there will be a strong agreement between members of a class section on perceptions of cognitive presence and that the class sections will differ in their community-level cognitive presence" (pg. 11). There were 875 university students enrolled in 124 sections of 33 courses in five different colleges participating in this study (Rubin, 2013). All classes but two were designed to create a CoI, which included active engagement in discussions and webinar meetings. The results indicated that 97.6% of all sections had a "very strong or strong agreement" of cognitive presence. The results found a strong support for existence of cognitive presence within each class and significant student satisfaction within the online environment. Therefore, having a strong cognitive presence in a CoI can deepen the engagement and learning in an online setting.

Katernyak and Loboda (2016) describe virtual learning experiences as a positive, learnercentric way to disseminate information to others. Their study included 30 e-courses with an average of 328 learners in each e-course. Approximately 70% of the individuals who started the course, finished the course, and 60% of the individuals passed the course. The study aimed to help participants become active learners through cognitive presence by developing new skills and sharing experiences with others. Among the learners, 40% of them were actively involved in the learning opportunities that were created and designed by the instructors. In the Katernyak & Loboda study (2016), cognitive presence was prevalent, and educators elicited student participation so that the students could achieve success with their own learning.

As previously stated, cognitive presence is defined as the ability "to construct meaning through sustained communication" (Garrison, et al., 2000, pg. 89). To foster communication, Holbeck and Hartman (2018) describe gamification as a way to foster communication between peers and facilitators. One tool or strategy that is noted to promote cognitive presence is use of Flipgrid, which is a platform for video discussions. Flipgrid is a tool to create short videos with a maximum length of ten minutes (Ruelas, 2019). Other tools to increase cognitive presence online are use of a digital breakout room/escape room; Remind, a communication tool, using text messages; or Loom, an alternate communication tool, using video (Holbeck & Hartman, 2018). Digital breakout rooms/escape rooms includes teachers providing clues or codes for students to decode solving a particular concept which can help to increase participation due to the gamification. Remind is a text reminder that instructors can utilize to send text messages to students without having to give out their cell phone number. Loom is a recording tool which includes sharing your screen with audio, a screen with audio and the instructor, or just audio (Ruelas, 2019). Students can leave comments and utilize emojis for feedback with videos. These

tools provided ways to communicate effectively with others, thus minimizing the gap of feeling distance between others, increasing communication and understanding of concepts, and ultimately promoting cognitive presence (Holbeck & Hartman, 2018).

Social Presence

The second element to consider in online courses is social presence. According to Munir et al. (2021), individuals learn best when they can interact with one another as learning is a social process. Social presence has been reported as a strong influence of student satisfaction (Alsadoon, 2018). Saadatmand et al. (2017) described the subcategory within social presence of affective expression, a place where individuals can engage in the discussions occurring within the course and be able to express themselves. Another subcategory in social presence is open communication. Open communication can provide a safe place to express ideas and experiences. Lastly, group cohesion binds the participants together and helps to provide an outcome of the group development process (Yoo & Alavi, 2001).

In a study by Alsadoon (2018), an online survey was sent to 200 males and 400 females in three virtual courses to determine the measure of social presence with learner satisfaction. Students participated in these online courses through their mobile devices and used applications on their phones to engage in the courses. Previous experience affected the satisfaction level in online learning (Alsadoon, 2018). Gender also played a significant role in the satisfaction level in the mobile course delivery. Females reported more satisfaction with the online course. Social presence did affect learners' satisfaction in the course (Alsadoon, 2018). Therefore, individuals designing the content for online learning need to take into consideration the experience of participating in an online course, gender, and social presence in a virtual setting. According to Stankovska et al. (2021), there needs to be collaboration between students and experiences that will peak students' interest so that they are motivated to learn and will be satisfied with their learning. The need for connection, even in an online setting, is a significant part of learning (Stankovska et al., 2021). In Stankovska's study (2021), there were 280 students with the majority (78%) being female students. The students were given three questionnaires including the Distance Education Learning Environment Survey, the Social Presence Scale, and the Satisfaction Scale to determine instructor support, social presence (collaboration) relationship, and participant satisfaction in the learning experience. The results of this study indicated that students felt there was support and collaboration during their online experiences. Students felt more organized during online courses and thought this was a good way to learn the content. There was a positive relationship between social presence, online learning, motivation, and satisfaction of the courses. Additionally, instructors kept their office hours available to ensure the connection between students and faculty.

In a 2019 study, 91 students in the Department of Medical Documentary and Secretary at a well-known university participated in a computer course that taught basic office software (Kilis & Yildirim). The fundamentals of computer literacy course lasted 16 weeks and included 100 minutes of synchronous online learning each week. It was taught 100 percent online through Moodle, which is a learning management system. There were also a Facebook page and WhatsApp to help promote social presence. Students participated in six online discussions in the class through Moodle. The highest reflected subcategory of social presence noted in this study was affective/personal. The lowest subcategory was in group cohesion, but it improved over the semester. Social presence was high in this study, which may have been influenced by the participation in the Facebook group or WhatsApp group that was utilized during this course. Students indicated they liked Facebook over Moodle and this may be due to the social media site being easier to use. By promoting social presence through Facebook and Moodle, student satisfaction was high in this study as group cohesion improved and there was room for affective/personal growth. According to Kilis and Yildirim (2019), social presence is a bridge between cognitive presence and teaching presence.

Teaching Presence

The third element in CoI is teaching presence, which helps to improve cognitive and social presence by providing opportunities for student discussion and actively thinking about the content that one is learning. According to Stone and Springer (2019), the role of teacher presence is vital in engaging students online. The researchers interviewed approximately 150 students thru in-person and phone interviews to discover the tools students found most engaging during online instruction. Through the interviews, researchers determined improvements were needed to better engage and support online students. The results indicated a need for the entire institution to improve quality of online design and delivery, which is part of teacher presence. The interviews discussed the need for student connection and communication with teachers and peers during the course. Teacher presence is crucial, especially during a virtual environment when facilitation of student connectedness can be challenging.

The CoI survey was used in a study by McClannon et al. (2018) with 1,053 graduate students enrolled in various online graduate programs in a department within a college of education. This took place over a seven-year period with master's, education specialists, and doctoral students. There were two different settings in the McClannon et al. (2018) study as the graduate programs were hybrid and 100 percent online. The findings showed a greater sense of presences in the fully online courses. This was not surprising to the faculty as they had put time, energy, and dedication into the teacher presence when designing and organizing the courses. Time was a factor as it was found that those who were in the program longer scored higher for overall CoI presence (McClannon et al., 2018). Therefore, students communicate well together when they are fully online and in a program for an extended amount of time. The length of time can be a factor when examining CoI, especially teacher presence in a virtual learning environment.

Gurley (2018) examined the relationship between the perceived teaching presence and the preparation to teach. The results indicated a statistically significant relationship between perceived teaching presence and completion of a certification course in online instruction as compared to those receiving on-the-job training only. These results indicate that the preparation of instructors had an impact on their ability to facilitate the learning experience. Those who took certification courses felt more confident in their abilities to facilitate and thus promoted teaching presence more effectively.

There is a need for online courses as well as online continuing education workshops to be more effective socially and engaging online. According to Yildirim and Seferoglu (2021), learners come to an online course with different e-presences and therefore may experience the three presences of the CoI differently. The characteristics of the student can affect the perception of the three presences that are included in the learning experience.

CoI can be promoted in all learning experiences, especially online higher education opportunities. Universities are beginning to see the significance of active learning classrooms (Stover & Ziswiler, 2017). Students need to be active learners and collaborate with peers and faculty to gain understanding of the curriculum and content. Stover and Ziswiler (2017) discussed the importance of students' critical thinking and understanding which can occur in higher education when the CoI is implemented into the classroom. The CoI can be examined in many different learning opportunities including higher education, allied health, and professional development for educators and occupational therapists.

Higher Education Online Teaching and Learning

In this section, articles pertaining to instructor as motivator, existing technology use, tutoring presence, and student role in online teaching and learning are reviewed in the context of higher education online. Satisfaction with online experiences can be more problematic than in a physical classroom as building rapport and relationships can be more difficult. According to Bolliger and Martindale (2004), the instructor of the class is the motivator for the student. To assess student satisfaction, Bollinger and Martindale (2004) described the Telecourse Evaluation Questionnaire (TEQ) which was modified (with permission) to address online learning environment issues and student satisfaction. The TEQ addressed the instructor, technology, course management, course website, interactivity, and general issues. Results indicated that the instructor variables were most important and the other two important factors to satisfaction were with technology and interactivity. Teaching presence, including instructor's facilitation within the course, was a significant part of students' satisfaction in online courses. The instructor's understanding of strategies to assist in maintaining attention and satisfaction of the learner in a virtual environment was also important. To promote successful engagement in online learning experiences, the CoI framework can increase the levels of presences in a virtual context.

In higher education, virtual learning can be more effective with high quality delivery of courses. The virtual class should use existing technology and the instructor be open to future use of technology without decreasing the integrity of the higher education class. Barr and Miller (2013) described how phones can be a collaborative tool in online learning environments. They

noted that we are living in a technology driven world and this can encourage connectedness in a virtual learning environment among students. By using phones, social and teaching presence can increase as peers, faculty, and students form connections. Therefore, in a higher education class when measurable learning objectives, appropriate instructional, and learning activities occur, students can experience optimal learning in a virtual environment. Teaching presence, including the design and structure of the online course, should be organized, understood, and ready for implementation well in advance of the actual class starting for the semester. The design of the course can help to address students' critical thinking and skill development which are key areas when applying what they have learned in the course.

Students may look at course design differently depending on the learning styles. According to Peacock and Cowan (2019), a sense of belonging can promote online learning. Peacock and Cowan used the CoI framework in their online learning but replaced Garrison's term of teaching presence with tutoring presence. Peacock and Cowan felt this was compatible with student-centered learning. Additionally, the researchers felt the influences on these presences were meaning making, trusting, and deepening understandings in the students' educational experiences. With meaning-making, collaboration helps to promote cognitive and social presences (Peacock & Cowan, 2019). This collaboration and a feeling of connection with others increased a sense of belonging. When students developed feelings of trust and inclusion, felt welcomed, and accepted, a sense of belonging was created. Collaboration and connection improved social presence and teaching presence in online courses (Peacock & Cowan, 2019). The combination of teaching and cognitive presence included reflection to deepen understanding in the course. Reflective activities included simple recall of deeper reflections of the curriculum. The feedback given by the instructor helped to create a sense of belonging as to how the students could improve their work. The CoI promoted a sense of belonging to students, as the facilitators were motivated to make changes and adapt to providing ways to boost learning skills.

Honig and Salmon (2021) noted that not only is instructor facilitation important, but the student's role is significant in effective online learning. Honig and Salmon proposed the need for a fourth presence in the CoI, learner presence. Learner presence was described as having the qualities of intentions, metacognition. and peer monitoring. Honig and Salmon's (2021) study included 21 MBA students participating in the CoI survey and a 30-minute interview. The results of the CoI survey from this study showed that the respondents felt the CoI was apparent in the MBA course. The interviews with the participants showed the students agreed with predictable organization of the course, which was teaching presence. Social presence was thought of as feeling safe with communication, but online communication was not optimal. The interviews suggested that learner presence was evident by connections with cognitive presence, teacher presence and social presence. Honig and Salmon (2021) replaced educational experience in the CoI with learner presence, as the researchers believed this was the center of the CoI. Further research needs to be conducted to determine the significance of learner presence in specific environments.

Additionally, there needs to be an understanding of the learning strategies from the perspective of the adult learner. Semradova and Hubackova (2013) described learning strategies as a way to facilitate the acquisition, memory, processing, recalling and application of information. One way for students to transfer the knowledge they have learned is through quizzing, which could be seen as facilitating cognitive presence (Griswold et al., 2017). Other active learning strategies that were noted in research were promotion of social presences through peer interaction, interaction with instructors, and group chats online, as well as recorded

information students can access, and frequent breaks (Abou-Khalil, et al., 2021). There are many environments in which the CoI framework can guide students to optimal learning, including professional allied health programs.

Online Allied Health Programs at the University Level

In this section, articles pertaining to the CoI in allied health sciences courses and the ways to increase engagement while promoting social presence are reviewed. Allied Health programs in higher education must make sure to meet the learning outcomes when presenting content in a virtual environment. In allied health, faculty need to utilize best practices in teaching and learning to create an environment of optimal success for student learning. Two articles pertaining to nursing and one article regarding a public health program were explored.

Smadi et al. (2019) examined the CoI framework in nursing education to determine the participants' attitudes on the pertinence of the CoI framework to the online nursing courses. This study sent 1,200 surveys to nursing educators in Australia and received 138 completed surveys. Descriptive statistics were utilized for the multiple-choice questions included in the survey. The demographic data showed 90% of nursing educator respondents were involved in curriculum design, which is a subcategory of teaching presence. More than 48% had more than six years' curriculum design experience. In the nursing higher education courses, 46% of the respondents agreed that their institution offered the necessary support while 37% disagreed. Also, 85% of the nursing educators felt that social presence needed to be created by the student by a demonstration of motivation and willingness to engage in the courses. For cognitive presence, 84% of the educators felt that cognitive presence was created by the students constructing meaning which would occur during the exploration phase. A total of 83% of the educators felt that teaching presence was significant because of the facilitation that occurred by faculty asking questions,

providing feedback, and giving support to the nursing students. This study reiterates the need for course development training for all faculty so that CoI can be embedded in course offerings.

The CoI can be utilized in allied health programs along with technological advancements to increase cognitive, social, and teaching presences in a virtual student learning experience. One advancement in use in higher education is VoiceThread (Merriam & Hobba-Glose, 2020). VoiceThread is a cloud-based social media tool to capture video conversations and was used to post discussions online. In this study, 163 nursing students enrolled in the RN-BS bridge of education were given the CoI and the IDEA surveys. In this undergraduate leadership course, VoiceThread was used to facilitate collaboration and communication. The control group (n=66) used a narrated PowerPoint while the intervention group (n=97) utilized VoiceThread. The results indicated that the students and faculty identified teaching presence in this course. In addition to the surveys, Merriam and Hobba-Glose (2020) asked open ended responses. These responses included positive feedback regarding VoiceThread and how it brought connectedness to the group. Determining what form of social media and technology that can be utilized in a learning environment can help to promote the use of the CoI framework online.

Ruelas (2019) taught in a Master of Public Health program for graduate students and found that many students were not engaged in the online format. Ruelas investigated ways to increase the level of engagement and promote social presence in these online courses. The tools that Ruelas implemented in class were Loom and Flipgrid. Ruelas (2019) determined from her study that there were challenges for students to learn the technology tools that were required in each online class. These challenges were a hinderance but did aid in promote social presence in the classes. Next, online learning in occupational therapy programs will be discussed.

Occupational Therapy Online Learning Courses

In this section, articles pertaining to online learning tools and strategies, kinesthetic learners transitioning to online learning, and activities online when pursing a master's degree in occupational therapy are discussed. Student engagement is the priority when facilitating a course online for acquisition of knowledge and skills. Faculty and student engagement influence social, teaching, and cognitive presence within a course. The strategies that were ranked highest can be used by not only allied health courses, but also in occupational therapy and occupational therapy assistant courses.

Benaroya et al. (2021) stated that there is limited research of the impact of online learning in OT and OTA education. This study examined active learning tools and strategies that can be implemented in an online environment and the effectiveness of the use of these tools with students in the course. Twenty students completed a 10-item survey at the end of the course. The strategies that were used in the synchronous virtual occupational therapy assistant classroom environment included flipped classroom, breakout rooms, chat boxes, lab kits, discussion forums, polling and student responses, and student generated videos. Flipped classroom are designed for students to complete assignments prior to class so that application to content can occur in the class session. Students were divided into breakout rooms to complete activities (Benaroya et al., 2021). The breakout rooms included the think-pair-share activity which involves the instructor providing an open-ended question and students thinking of their answer and then pairing with another peer to share their ideas. Breakout rooms were a way to promote social presence as students were able to communicate synchronously with peers and faculty. Chat boxes were a way that students could communicate using text with faculty if they were not fully understanding the content or needed to communicate with the instructor. Chat boxes helped

increase teacher presence within the course. Lab kits were used for students to experience handson involvement to increase clinical skills by taking supplies home (Benaroya et al., 2021). Student-generated videos were another way for faculty to observe students demonstrating clinical skills by practicing talking to a parent about the child's follow-up care. Studentgenerated videos promoted cognitive and teacher presence in the course curriculum. These active teaching strategies were viewed by students as moderately effective. The strategies that were ranked highest included the breakout rooms and chat box, followed by the lab kits. The least helpful were the student-generated kits.

Different strategies were used to teach students with different learning styles in various educational environments. Stamm et al. (2021) examined occupational therapy doctoral (OTD) students as kinesthetic learners and how they were able to transition to online learning during the pandemic. There were nineteen students that identified themselves as kinesthetic learners through the Visual, Aural, Read/Write, Kinesthetic (VARK) model. From the nineteen students at the beginning of the study, only six participated in the focus group (Stamm et al., 2021). The results indicated that students ranked understanding the content the highest with the average mean of 3.74/4.00. This indicated that the exploration of cognitive presence was high in the elearning course. The lowest was feeling confident with the ability to perform clinical skills in the lab setting. Therefore, resolution was low in this course, which was being able to apply knowledge to new situations (Akyol et al., 2009). Due to the quick transition to online learning, many faculty members did not have the opportunity to promote cognitive, social, and teaching presences in an optimal way. Therefore, universities need to include training for allied health and occupational therapy faculty for successful facilitation in online learning.

Many individuals have decided to go back to school to get their master's degree or doctorate in occupational therapy. The post-professional degree can be achieved online, which promotes flexibility to continue working while going back to school. The purpose of Richardson et al.'s study (2008) was to examine the activities and program benefits of obtaining a master's degree in occupational therapy online. A survey was created by faculty to determine if the program outcomes were met while occupational therapists took classes online and what improvements could be made online. The participants felt very satisfied that they understood the profession and were excited that they chose the profession of OT. The majority felt the courses assisted in their professional growth as an occupational therapist. Most respondents did not have suggestions on ways to improve the online courses. However, some participants discussed better timely feedback from an instructor, which is an area of social presence. Some respondents did not feel these courses renewed their love of learning. Therefore, increasing social presence, may, in fact, increase satisfaction within the courses.

Since many universities have parts of the OT curriculum online, it is important to understand the learning strategies that can be effective in the virtual environment. Pucillo et al. (2020) examined the Learning and Study Strategies Inventory (LASSI) in the neuroscience course taught to OT and physical therapy (PT) students. From this study, there were thirty-four students that participated, including 14 OT students and 20 PT students. The LASSI's ten categories include Anxiety, Attitude, Concentration, Information Processing, Motivation, Selecting Main Ideas, Self-testing, Test Strategies, Time Management and Using Academic Resources (Pucillo et al, 2020). The results indicated that only one component of the LASSI that was positively related to academic performance was Test Strategies. This included the actions and behaviors that influence performance on exams. The findings of this study conflicted with
previous studies using the LASSI. However, understanding the presences can help to positively impact the information processing, which is how a student absorbs the content, as this can be considered cognitive presence.

Professional Development Online Teaching and Learning

As occupational therapy and occupational therapy assistant students graduate, they will become professionals that will continue their learning through professional education conferences and workshops. Due to the tremendous growth of online learning, there is a need for research on the effectiveness of virtual teaching in professional development education. Mohr and Shelton (2017) investigated the best practices of professional development and identifying strategies for supporting faculty teaching online. This study was completed over four rounds of surveys given to experts from centers for teaching and learning. It was essential that the participants in this study had a background in online education. The surveys indicated a variety of best practices and a need for further research on its effectiveness. Some of the best practices included establishing a welcoming environment online, fostering online relationships with students, and guiding student learning by promoting social and teaching presences. The study did not reveal the effective timing of these best practices to be implemented in an online course to provide the best learning experience for students. This area of research needs to continue being updated as technology is ever evolving. Then best practices can be implemented into ongoing virtual professional development instruction to provide quality online learning.

Professional continuing education is not just about the individual attending the course and receiving their continuing education. The professional needs to take what they have learned and apply it to practice. Continuing education educators need to ensure that professionals learn and grow through workshops delivered in an online learning environment. However, there has been a

gap in opportunities to target professional skills while learning in an online environment (Gauvreau et al., 2016). In Gauvreau et al.'s study (2016), they examined online professional skills training workshops for graduate students to assist in their work environment. There were three synchronous online workshops which were approximately three hours in length. During the workshops, there was active participation, audio, and video throughout the learning experience. Students were given a survey to complete at the end of these professional development experiences. One individual felt they were in a "real classroom" as they were interacting online with others. However, most of the individuals did not feel the rapport with instructors or fellow students when participating online. Some of the individuals felt the online workshops provided an opportunity for them to learn about themselves and it was a great learning experience.

Online experiences can be a great learning experience for professional participants. Online courses are convenient for faculty to attend and provide time for reflection as faculty can go at their own pace to learn the content. Wynants and Dennis (2018) interviewed ten faculty members about their experience of taking an online continuing education disability program. The researchers wanted to discover how well the online disability program fit into the CoI model from the perspective of faculty members. The advantages noted by the faculty were the pace of the program and the well-designed course with diverse tools and strategies used during the online learning experience. The design and organization reflect the high teaching presence. Also noted was the self-reflection that took place during the course which promoted cognitive presence. The challenges that were noted by the faculty members included the lack of social presence, as there needed to be more collaboration and social connectivity within the online course.

Online Continuing Education Professional Development for Educators

In this section, articles pertaining to the need for online professional development, online video coaching, building community online, and educators' attitudes towards online courses are reviewed. Due to Covid-19, online professional development for educators increased as social distance was required, restricting in-person learning. Lesiak et al. (2021) used surveys from a series of eight online professional development trainings from 43 educators to understand feedback and support the need of online professional development. The educators included high school teachers from Washington, Indiana, California, and Missouri. The professional development was to understand curricula material on Type 2 diabetes for use by high school Health/Family and Consumer Science and Biology teachers. The responses from the survey showed that the majority of educators felt prepared to teach the curriculum that was being taught in the virtual professional development trainings. The post workshop survey included openended questions regarding the organization of the course. This provided mixed opinions and twenty percent of the comments regarding technology were negative and needed improvement. This study discussed the changing role of the instructor in a virtual environment to become more of a discussion facilitator. The use of videos was developed to be a tool to show how hands-on activities were demonstrated to the students This strategy helped to improve and reinforce social presence within the group.

Amador et al. (2019) describes how online professional learning has evolved with ways to provide face-to-face coaching and online video coaching. The online course from Amador et al.'s study (2019) involved facilitating participants to increase mathematically productive classroom discussions. The use of online video coaching included the coach helping the educator identify materials to understand how students are thinking and make connections with the student approaches. This facilitated a discussion for the specific lesson that was being taught. The online coaching experience included asynchronous and synchronous teaching components. There was also feedback and reflection after collaboration time which occurred asynchronously. Professional development online was an effective way to keep educators engaged and provided a sense of inclusion during instruction time, which promoted social presence.

Another way of providing inclusion and community was through professional development conferences. The three-day Margaret Sue Copenhaver Institute for Teaching and Learning (MSCI) was moved from in-person to online due to the pandemic. The workshops began with a keynote speaker and continued with 30-minute sessions on Zoom. There were 475 individuals registered for the online event, which was a much higher attendance than previous years, which had averaged150 participants. Yearly conferences are a way for people to network, socialize and learn new and upcoming information. Murrill et al. (2021) wanted to discover the participants' feedback regarding the engagement during the virtual sessions compared to the past-in person MSCI conferences. Attendees received an email with a link to a survey to respond to 5 open-ended questions regarding the conference. From this, 151 people completed the post conference survey. Individuals found the keynote speakers to be a positive aspect in this online format and an example of teaching presence. Murrill et al. (2021) described a theme that appeared four times more than anything else was the inability to see others face-to-face, which implied that social presence was limited in this online conference environment. CoI can be difficult online especially when a conference was converted from in-person to virtual quickly, forced remote learning) due to the pandemic. As more research becomes available, faculty will use research results to design professional development experiences to increase the cognitive, teaching, and social presences during virtual conferences and workshops.

Professional development opportunities will continue to grow online. Educators' attitudes towards this growth is essential with the trend of virtual professional development offerings. Wasserman and Migdal (2019) explored teacher's attitude with online professional development versus the traditional in-person setting. The survey was completed by 469 teachers which included two sections of attitudes towards the training and demographic questions. The independent variable for this study was the type of instruction, either virtual or in-person (Wasserman & Migdal, 2019). The results showed that individuals were positive about online learning. They stated there was communication between the learner and instructor. In this study, the respondents felt that social presence was increased and there was opportunity for feedback and building self-confidence. However, when there was a lack of immediate response noted, and this decreased the effectiveness of the learning environment (Wasserman & Migdal, 2019). This study showed that social presence can be promoted in an online environment. The study had a strong teaching presence and a well-organized and knowledgeable facilitator, which increased social presence in the online environment.

Online Continuing Education Professional Development for OT Practitioners

Occupational therapist practitioners now, more than ever, have opportunities to utilize continuing education online. A study by Suman and Provident (2018) explored if online modules focusing on fieldwork education were effective for school-based therapists. Seventeen school-based therapists participated in this study. Both qualitative and quantitative data was collected from this study. Participants completed an online survey and made statements on discussion boards. The online professional development included a video narrated slideshow, access to resources, and a link to Padlet (Suman & Provident, 2018). Padlet is an interactive online tool which allows participants to comment on posts, link resources to guiding questions and create

collaboration among others. Padlet can help to promote social presence as participants can see the instructor delivering the information and get immediate feedback on comments. The results indicated that participants demonstrated improvements in self-efficacy related to fieldwork education after attending the series of modules. Therefore, the teaching presence was high and the technology tools used in the course were viewed as positive by respondents. Using different engagement tools online increased CoI presences, which increased self-efficacy and learning in the virtual environment (Suman & Provident, 2018). There are many opportunities for occupational therapy practitioners to increase their professional growth, especially in the area of school-based occupational therapy. One of those experiences is attending professional development on the occupation of handwriting. LWT workshops address this occupation for pediatric occupational therapy practitioners.

Learning Without Tears Continuing Professional Development for Educators and OT Practitioners

Learning Without Tears (LWT) was founded by Jan Olsen, an occupational therapist. LWT was formerly known as Handwriting Without Tears and was created in 1975. Olsen created this curriculum for her son who was experiencing difficulties with handwriting. Ms. Olsen used task analysis and broke down the task of handwriting in a developmental and multisensory way. The result was the Handwriting Without Tears program.

Currently, LWT employs 186 individuals (Learning Without Tears, n.d.) working remotely across the world. LWT is based in Cabin John, Maryland and has a satellite office for the workshop department in Omaha, Nebraska. Prior to Covid-19, professional development was offered in person at a school or hotel. LWT organizes approximately 820 workshops per year. These were all in-person workshops across the United States and internationally. There were very few virtual workshops given prior to the pandemic. Due to the pandemic, LWT transitioned all of the in-person workshops to an online format. In the past year, LWT held 820 virtual workshops. Trainings organized by the Professional Learning Team at LWT were provided to the 29 LWT presenters to understand how to facilitate workshops online using the ON24 platform. The majority of the 29 LWT presenters are occupational therapists and understand the significance of providing professional development to other occupational therapists and the need to provide high quality instruction. There have been no studies on the online delivery of LWT workshops after this increase in online service delivery. This research study examines the online delivery of the virtual LWT print, cursive, and emerging writing workshops. Each virtual continuing education workshop at LWT designs workshops for participants to achieve a set of learning outcomes. The Emergent Writing for Pre-K learning outcomes are as follows (Emergent writing, 2021):

- Plan your instruction based on the developmental stages of writing readiness
- Understand the importance of multisensory, readiness activities and identify developmentally appropriate ways to introduce Wood Pieces Set for Capital Letters and Mat Man
- Learn age-appropriate ways to teach crayon grip and a developmental approach to grow coloring skills
- Learn how to integrate the Pre-K Interactive Teaching Tool with your students to enhance and support your lessons
- Understand the importance of the child-friendly progression from letter play, to tracing capitals, to introducing lowercase letters and name writing in title case.
 (https://shopping.lwtears.com/LWTstore/s/workshopdetails?recordId=a3o4V0000001VJe QAM)

The print K-2nd grade workshop learning outcomes are as follows (Print, 2021):

- Learn the importance of implementing the handwriting process and physical approach to building the skill of print handwriting in students
- Identify a multisensory, child-friendly teaching order to teach capital letters, number, and lowercase letters
- Understand how double lines lead to student writing success and learn simple teaching tips to help students write on any type of lined paper
- Learn how to integrate the Handwriting Interactive Teaching Tools with your students to enhance and support your lessons
- Explore engaging ways to build student sentence skills and how to incorporate writing activities and Building Writing into your daily instruction
- Locate additional resources to support your year-long handwriting instruction, including the Screener of Handwriting Proficiency

(https://shopping.lwtears.com/LWTstore/s/workshopdetails?recordId=a3o4V0000001VK

<u>hQAM</u>)

The Cursive 2nd through 5th grade workshop learning outcomes includes the following (Cursive, 2021):

- Learn the importance of teaching cursive handwriting to boost academic success in your students
- Identify a multisensory, child-friendly teaching order to teach cursive connections, lowercase, and capital letters
- Learn how to integrate the Handwriting Interactive Teaching Tools with your students to enhance and support your lessons
- Explore engaging ways to incorporate writing activities and Building Writing into your daily instruction

 Locate additional resources to support your year-long handwriting instruction, including the Screener of Handwriting Proficiency (https://shopping.lwtears.com/LWTstore/s/product/cursive-ondemandworkshop/01t4V000008hOT3QAM)

The LWT company made the decision that the emergent writing, print, and cursive workshops will continue to be offered virtually, even after the pandemic has lifted and it is safe to return to in-person workshops. Therefore, it is vital to identify the cognitive, social, and teaching presences in the virtual workshops at LWT as these have been found to correlate with effective and engaged learning of the professional participants, which include both teachers and occupational therapy practitioners.

Conclusion

To provide quality instruction, there needs to be effective teaching and learning strategies that will maintain an adult's attention, satisfaction, and provide a sense of community. Many of articles in this literature review stated that social presence was low in online offerings and participants did not feel a sense of belonging. Not only do facilitators have to be motivated to make changes to online offerings, but learners must be driven to participate and learn during the online event. The investigation of peer reviewed articles available revealed a gap in the literature of cognitive presence, social presence, and teaching presence in online professional continuing education courses. This Capstone focused on identifying the cognitive presence, social presence and teaching presence in virtual continuing education workshops hosted by LWT.

Section III: Methods

Project Design

The project design for this research study used a cross sectional quantitative, post course survey design (Creswell & Creswell, 2018). Utilizing this particular approach allowed the researcher to obtain numerical data to show the level of teaching presence, social presence, and cognitive presence identified by participants in the LWT continuing education workshops. **Setting**

LWT is a handwriting, keyboarding, and early literacy curricula company. They provide continuing education professional development with offerings designed to teach preschool through fifth grade teachers, occupational therapy practitioners, and parents a developmentally based curriculum. The curriculum assists kindergarten through fifth grade students with written production. LWT includes emergent writing, printing, cursive, and keyboarding programs (LWT, n.d.). The printing and cursive programs, known as Handwriting Without Tears, is a developmentally appropriate curriculum that uses multisensory strategies to teach children from kindergarten through fifth grade (LWT, 2018). The methods taught in the Handwriting Without Tears program help enable children to master handwriting as an automatic and natural skill (Research Review, retrieved from lwtears.com).

Handwriting Without Tears began with in-person workshops starting in the 1990s. The LWT company hired instructors from across the United States and Canada to present workshops nationally and internationally. The presenters included occupational therapists, elementary teachers, and administrators with education backgrounds. The presenters' biographies can be found on the LWT website (Workshop Presenters, <u>https://www.lwtears.com/professional-learning/trainers</u>). During the pandemic, LWT was forced to transition from in-person workshops

36

to online professional learning. These virtual workshops occurred approximately two times per month.

The continuing education workshops were synchronous online workshops which were housed on the ON24 online platform. The ON24 online platform is a cloud-based platform that promotes engaging webinars and multi-media experiences. Customers of ON24 can produce live and on-demand webinar offerings (ON24, n.d.). The ON24 online platform contains widgets to interact and experience the online platform as the participant can customize their own screen while viewing the workshop (ON24, n.d.). Participants were able to view the Learning Without Tears (LWT) workshop from remote settings for the synchronous two-and-a-half hour learning experience. The workshops were offered approximately two to three times a month at varying times to accommodate individuals around the world. Data was collected from the two-and-halfhour virtual workshops from March 2021 until the end of September 2021.

Identification of Participants

The participants for this study included preschool through fifth grade teachers, occupational therapists, occupational therapy assistants, school administrators, and parents who signed up for the workshop from March 2021 to the end of September 2021. They were given a link to watch the synchronous workshop after registering for this learning experience. This continuing education workshop was available for participants to observe from their home or other settings remotely. Access was limited to those who paid and registered for the LWT workshop. The link for this workshop is usually active for up to thirty days after the workshop for the attendee to replay any sections that they may want to review again.

Criteria for Participants

The participants met the inclusion criteria of being over 20 years of age and were able to speak English. Gender, ethnicity, and health status were not considered in the subject selection of this study. At the end of the two-and-a-half hour workshops, participants were asked to voluntarily complete a survey through a pre-recorded uploaded video. Participants were then emailed the CoI survey (Arbaugh et al., 2008) through Eastern Kentucky University Qualtrics (an online survey tool) at the conclusion of the workshop.

Recruitment

A convenience sample was used for the recruitment of participants (Creswell & Creswell, 2018). At the end of the synchronous LWT workshop, those who attended watched a short video of the verbal description of the research project (Appendix A). After the workshop, an employee from LWT collected the emails from those who were registered and attended the workshop and sent an email to the primary researcher. The primary researcher sent an email with the CoI survey (Appendix B) and a follow up email one week later as a reminder to complete the survey.

Project Methods

The Institutional Review Board (IRB) application was approved on April 12, 2021. The primary researcher was responsible for the data collection in this study. Informed consent was embedded within the post-workshop email and sent to participants with the link to the survey through Qualtrics. By opening the link embedded in the email, they were giving their informed consent (Appendix C) to be voluntary participants in the study. Data was collected using the CoI survey at the conclusion of the workshop. The CoI (Appendix B) is a valid measure of teaching, social and cognitive presence. It has been valid and standardized (Arbaugh et al., 2008). This study used version 14 of the CoI survey (Appendix B). The quantitative data was collected to

examine cognitive presence, social presence, and teaching presence in the LWT virtual continuing education workshops. Additionally, at the end of the survey, participants were asked to answer demographic questions including their identified gender, profession, years in practice and if they have ever attended a virtual continuing education course before they attended a LWT course.

Instrument Used

The CoI Survey (Appendix B) was developed and validated by an eight-person collaborative research team (Arbaugh et al., 2008). In 2008, the research team presented their results at the Sloan-C conference in Orlando, Florida. The results from these studies demonstrated that the CoI survey is a stable instrument that could be used in a variety of studies (Arbaugh et al., 2008). The Abraugh et al. study (2008) discussed the CoI survey as an instrument that is valid and reliable. The questionnaire is an efficient measure of the three presences of teaching, social and cognitive. The data supports construct validity of these three presences as measured by the CoI (Arbaugh et al., 2008). There are additional factors to measure teaching presence which were found in studies by Arbaugh et al (2007, as cited in Arbaugh et al., 2008). This study discussed the use of pre-course activities of the design and organization of the course and the in-course activities including facilitation and direct instruction. It was found that the timing of these activities can have an influence in the teaching presence and the processes of the framework.

The CoI Survey Instrument (Appendix B) includes thirty-four questions related to social presence, teaching presence, and cognitive presence. The CoI Survey Instrument (Appendix B) uses a 5-point Likert-type scale with the responses including 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. This survey contained the categories of teaching presence, social presence, and cognitive presence. Within teaching presence, 13 statements are organized by design and organization, facilitation, and direct instruction.

- a) Design and organization of the course includes building the curriculum such as lecture notes, personal insights, views, and group activities as well as student projects. The student participation in the class needs to meet the learning outcomes which is a part of the design and organization of the class.
- b) Facilitation includes assessing the efficacy of the process by ensuring effective and efficient use of time during the course. Anderson et al (2001) states that facilitation of discourse is integrated within direct instruction.
- c) Direct instruction includes providing knowledge to others about the subject matter through intellectual and scholarly leadership. This can be demonstrated through the teacher's knowledge of the content, interest, and passion for the subject matter. Confirming understanding and providing feedback is a way that direct instruction can be seen during a course (Anderson et al, 2001).

In the survey, social presence includes nine statements divided into the three subcategories of affective expression, open communication, and group cohesion.

- a) Saadatmand et al (2017) described the subcategory within social presence of affective expression as a place where individuals can engage in the discussions occurring within the course and being able to express themselves in a safe environment.
- b) Open communication is where communication is risk free (Garrison, 2000).
- c) Group cohesion binds the participants together and helps to provide an outcome of the group development process (Yoo & Alavi, 2001).

Cognitive presence is categorized with 11 statements capturing the triggering event, exploration, integration, and resolution phases within the survey.

a) The triggering event is an issue, event, or problem that emerges. This is the initiation stage (Chen et al., 2019).

- b) Within the phase of exploration, participants are brainstorming, questioning, and discussing information between peers. The participants understand the nature of the problem and reflect on the exploration of ideas (Chen et al., 2019).
- c) Integration is constructing meaning from the ideas that occurred in the exploration. The integration of ideas requires active teaching presence to help to probe and ask questions and provide additional knowledge to ensure critical thinking (Chen et al., 2019).
- d) Chen et al (2019) described the phase of resolution to apply the solution to the real world and use experiences to test and defend the solution. All the subcategories of the three elements of the CoI are located in the CoI survey (Appendix B).

Data Analysis

Data was analyzed with the use of the online tool of Qualtrics and Excel version 16. The Eastern Kentucky University Qualtrics filtered the information from the survey to display different appropriate data. Descriptive statistics were used to analyze collected data. Descriptive statistics included the number of participants, identified gender of participants, the professions of the participants, the participants' years of experience, and the participants' experience with online continuing education. Qualtrics displayed descriptive statistics, such as sample size, median, average, confidence interval of average, standard deviation and the number of participants who completed each question. Qualtrics provided output for each variable individually. It looked at the relationship between two different columns of data. Qualtrics provided various charts and graphs including a bar chart with confidence intervals. Data was exported as an Excel document. The average means were calculated for each subcategory for each of the three presences of the CoI. Then, the total average was calculated for each presence of the CoI. The average means of the demographic groups which included professions, years of experience, and attended a previous virtual class were examined and compared and contrasted.

Ethical Considerations

This exempt study with IRB was approved by Eastern Kentucky University on April 12th, 2021. An ethical consideration for this study was that the participation was voluntary. The verbal recruitment script (Appendix A) included describing the purpose of the study, expectations, and that there were no risks involved with this study. The verbal recruitment script was completed at the conclusion of the workshop through a pre-recorded video. At the beginning of the survey, participants were informed of the consent to participate in this study. Participants were informed that there were no consequences if they did not complete the survey. The surveys were anonymous and ordinal numbers for each participant were used to maintain privacy of the participants during the study. Qualtrics, which is housed at Eastern Kentucky University's secure website, was used to collect the data, and protected the participants' information.

Creswell and Creswell (2018) stressed the importance of choosing a site without a vested interest in the outcome of the study. As a member of the Professional Learning team at LWT, this author was interested in the results of this project as it can be utilized to help assist in the instructional design and facilitation of future workshops with LWT. However, the primary researcher of this project did not facilitate any of the LWT two- and half-hour workshops that occurred during April through September 2021.

During the reporting of the data collected, there were potential ethical issues that needed to be considered. The researcher was honest with the reporting of all data from the CoI survey. The primary researcher did not plagiarize and reported all work of others by crediting their work. Additionally, the primary researcher used language throughout the Capstone Project that was clear, unbiased, and appropriate language that is sensitive to labels (Creswell & Creswell, 2018). All the data was collected and stored on the Committee chair's password protected laptop. The surveys were anonymous as numbers were used for names. Only Christina Bretz, primary researcher, Dr. Cindy Hayden, research mentor, Dr. Shirley O'Brien, research committee member and Laura Bray, content expert, had access to the de-identified data. LWT will have access to de-identified aggregate data at the completion of the study.

Timeline of Project Procedures

The timeline presented in Table 2 provides an outline of the steps of this Capstone Project from the submission of the IRB through the final completion of the Capstone Project and presentation of the Capstone.

Steps of Capstone Project	Start Date	Date of Completion
Submission and Approval of IRB	January 2021	March 2021
Recruit participants for study	March 2021	September 2021
Data Collection	April 2021	September 2021
Analysis of data	September 2021	October 2021
Presentation of capstone	March 2021	November 2021
Complete and submit Final Capstone Report	January 2021	December 2021

Section IV: Results

Introduction

The purpose of this quantitative, cross-sectional study was to identify the presence of teaching, cognitive and social presence in a virtual professional development workshop. As occupational therapy practitioners, we must participate in continuing education workshops to continue to increase our professional knowledge and skills to remain licensed and certified to deliver occupational therapy services. Virtual continuing education needs to have the same effectiveness and quality as in-person workshops.

Quantitative Results

A total of approximately 2,000 individuals were sent the post workshop survey. The survey sample size included those who participated in a LWT two-and-a-half-hour virtual workshop, which included emergent writing, print, and cursive from April 2021 until September 2021. There were 178 participants that began the survey, but 141 completed the survey in its entirety. This was a 9% response rate (n=141).

Of received responses, 97% of the participants identified themselves as female (n=136) and the remaining identified as male 2% (n=3), nonbinary 0% (n=0), and those who preferred not to say 1% (n=1) (Figure 1). The participants' professions ranged from educator, including special education teacher 8.5% (n=12), pre-kindergarten teacher 23% (n=32), teacher 28% (n=39) and other (n=97); occupational therapist included 21% (n=30) and occupational therapy assistants 10% (n=14) (Figure 2). The participants' years of experience were collected with the majority 52% (n=74) having 1-10 years of experience in their profession and the remaining 48% (n=67) having 10 or more years of experience (Figure 3). Of the participants, the majority 84% (n=118) identified that they had attended a virtual continuing education course prior to attending the

LWT virtual workshop. The remaining amount 16% (n=23) had not attended a virtual course prior to this experience (Figure 4). Figures 1, 2, 3 and 4 represent the participants' demographics which include gender, professions, years in profession and if they had ever attended a virtual course before attending the LWT virtual course.

Figure 1: Gender



Figure 2: Profession of Participants







Figure 4: Attendance in an online virtual education course



The survey results for each question of the CoI survey included the minimum and maximum value for each question along with the mean, standard deviation, variance, and count (Table 3). The minimum possible score for each item was 1 with the maximum possible score of 5. The mean for each question from the survey indicates the central point from the collected responses from 1.00-5.00. The standard deviation is

the measure of the amount of variation within the participants' responses from the mean. The variance is the statistical measurement of the spread between numbers in a data set (Kielhofner & Taylor, 2017). The count indicates how many individuals responded to the specific question in the CoI survey. Within the category of teaching presence, the first statement of "clearly communicated important course topics" was the highest scored statement. At the beginning of the workshop, the instructor discussed the learning outcomes of the workshop which was reflected in the scoring of the statement. In question 12 of the CoI survey, participants scored this statement the lowest with a 3.8 out of 5.0 as this statement discussed providing feedback of strengths and weakness related to the course's objectives.

Category	Sub- category	Question	Min.	Max	Mean	Std Dev	Variance	Count
Teaching Presence	Design & Organ- ization	Q1	1	5	4.47	0.91	0.83	178
		Q2	1	5	4.43	0.86	0.74	178
		Q3	1	5	4.47	0.86	0.74	178
		Q4	1	5	4.16	0.95	0.91	177
	Facilitat ion	Q5	1	5	4.04	0.9	0.81	161
		<u>Q6</u>	1	5	4.36	0.78	0.62	161
		<u>Q7</u>	1	5	4.30	0.85	0.73	161
		<u>Q8</u>	1	5	4.33	0.79	0.63	161
		Q9	1	5	4.27	0.83	0.69	161
		<u>Q10</u>	1	5	4.14	0.90	0.81	161
	Direct Instructi on	<u>Q11</u>	1	5	4.26	0.81	0.66	156
		Q12	1	5	3.80	1.0	1.01	156
		<u>Q13</u>	1	5	4.19	0.86	0.74	156

Table 3: Community of Inquiry Survey Results

Category	Subcate	Question	Min.	Max	Mean	Std Dev	Variance	Count
	gory							
Social	Affect-	<u>Q14</u>	1	5	3.45	1.02	1.04	154
Presence	ive							
	Express-							
	10n	015	1	5	2.12	1.2	1 4 4	154
		<u>Q15</u>		5	3.12	1.2	1.44	154
		<u>Q16</u>		5	3.36	1.13	1.28	154
	Open Comm.	<u>Q17</u>	1	5	3.94	0.91	0.83	154
		<u>Q18</u>	2	5	4.04	0.83	0.68	152
		<u>Q19</u>	1	5	3.75	0.88	0.77	153
	Group Cohes- ion	<u>Q20</u>	2	5	3.44	0.83	0.68	152
		<u>Q21</u>	1	5	3.57	0.82	0.67	152
		Q22	1	5	3.65	.99	.98	151
Cognitive Presence	Trigger- ing Event	<u>Q23</u>	2	5	3.78	0.85	0.72	150
		<u>Q24</u>	1	5	4.19	0.73	0.53	150
		<u>Q25</u>	1	5	4.18	0.83	0.68	150
	Explor- ation	<u>Q26</u>	1	5	3.70	0.95	0.9	147
		Q27	1	5	3.79	0.85	0.72	147
		Q28	1	5	3.74	.98	.97	147
	Integra- tion	<u>Q29</u>	1	5	4.05	0.77	0.59	143
		Q30	1	5	4.15	0.73	0.53	143
		Q31	1	5	4.20	0.76	0.59	142
	Resol- ution	<u>Q32</u>	1	5	4.24	0.69	0.48	141
		033	1	5	4.13	0.81	0.65	141
		Q34	1	5	4.40	0.65	0.43	141

While each question was scored, the subcategories of each presence were also examined for the average mean and total average for the three presences (see Table 4). Teaching presence was the highest presence scored among the three presences with an average mean of 4.23 out of 5.00. In the subcategory of teaching presence, direct instruction was scored the highest with 4.38. Social presence was scored the lowest of the three presences with a score of 3.59 out of 5.00. The subcategory, affective expression, was the lowest in this presence with 3.31. Cognitive presence was scored in the middle of the three presences with an average mean of 4.05. The subcategory in cognitive presence, resolution, was scored the highest in this presence with an average mean of 4.26 out of 5.00.

Table 4: Mean of subcategories and categories

Category	Subcategory	Question	Mean
Teaching Presence	Design &	Q 1-4	4.38
	Organization		
	Facilitation	Q 5-10	4.24
	Direct Instruction	Q 11-13	4.08
Teaching Presence	Total Average	Q1-13	4.23
Social Presence	Affective Expression	Q 14-16	3.31
	Open Communication	Q 17-19	3.91
	Group Cohesion	Q 20-22	3.55
Social Presence	Total Average	Q 14-22	3.59
Cognitive Presence	Triggering Event	Q 23-25	4.05
	Exploration	Q 26-28	3.74
	Integration	Q 29-31	4.13
	Resolution	Q32-34	4.26
Cognitive Presence	Total Average	Q23-34	4.05

Comparing Demographic Data with Average Mean Scores

The average means of the following demographic data were examined for this study. The professions were placed into two groups, occupational therapy practitioners (OTPs) and non-occupational therapy practitioners (Non-OTPs). The OTP group included occupational therapists and occupational therapy assistants and the Non-OTP group included teachers, PreK teachers, special education teachers and others (Table 5). The highest presence scored was teaching

presence and between the two groups, the average mean was 4.33 out of 5.00 for OTs and non-OTs scored this presence as 4.30. The total average for OTPs was 4.03 as compared to non-OTPs at 3.96.

Presences	Professions	Average Means
Cognitive Presence	OTPs	4.22
	Non-OTPs	3.96
		1.00
Teaching Presence	OTPs	4.33
	Non-OTPs	4.30
		0.55
Social Presence	OIPs	3.55
	Non-OTPs	3 63
		5.05
Total Average	OTPs	4 03
1 our 11 ; or ugo		
	Non-OTPs	3.96
		5.70

Table 5: Average Means by Demographic Question of Professions

The average means for years of experience within the profession was examined within two groups of 1-9 years of experience and 10 plus years of experience (Table 6). There was no statistically significant relationship between the variables. Social presence had the closest average means between the two groups,1-9 years of experience with 3.61 and 10 plus years of experience had an average means of 3.58. The total average means for 1-9 years was 3.95 and 10 + years was 4.02.

Presences	Years of Experience	Average Means
Cognitive Presence	1-9 years	4.03 4.12
Teaching Presence	1-9 years	4.20
Social Prosonco	10+ years	4.37
Social Presence	10+ years	3.58
Total Average	1-9 years 10+ years	3.95 4.02

Table 6: Average Means by Demographic Question of Years of Experience

The average means for those who had attended a previous virtual class before attending the virtual LWT workshop was compared to those who had not attended a virtual class (see Table 7). The total average means for those who attended a previous virtual course before attending the LWT virtual workshop was 3.97 as compared to those who never attended a virtual course of 4.03.

Table 7: Average Means of Attendance of Previous Virtual Class

Category	Attendance in previous virtual class	Average Means
Cognitive	Yes	4.02
Presence	No	4.18
Teaching	Ves	4 28
Presence	No	4.37
Social	Yes	3.61
Presence	No	3.54
Total	Yes	3.97
Average	No	4.03

Discussion

The purpose of this study was to examine the levels of teaching, social, and cognitive presences in a virtual continuing education course. Cognitive presence was rated the highest in this study, followed by cognitive presence, and social presence. This is supported by the findings of Kyei-Blankson, Ntuli, & Donnelly, H. (2019). The data analysis from this research project indicated teaching presence was rated highest of all three presences by participants attending LWT virtual workshops. The highest subscore in teaching presence was noted as being the instructor clearly communicated course topics. In every LWT workshop, the facilitator did begin the learning experience discussing the course topics and the learning outcomes for the workshop. Within teaching presence, participants scored providing feedback of strengths and weakness related to the course's objectives the lowest. This is the lowest score as feedback was not actually provided during this workshop experience. Feedback to students is considered essential to students successfully completing an online course (Martin et al., 2019). Communicating with students clearly and providing feedback to students is imperative in teaching professional continuing education online courses. This is in agreement with the literature that students perceive instructor-learner interactions have the most influence on their learning in online courses (Kyei-Blankson et al., 2019).

Social presence scored the lowest of all three presences in this study of professional online continuing education for occupational practitioners and teachers. In fact, there were no interactions with others during the workshop as ON24 was limited in this feature during the time of the study. The only feature that ON24 provided was a chat box for participants to engage in during the workshop. Being able to form distinct impressions of some course participants yielded

the lowest subcategory average mean. Because of the lack of interactions between participants, those individuals were not able to participate with one another effectively and understand how one another felt regarding the content. The findings regarding social presence are supported in the literature where social presence is linked to increased student motivation, engagement, and perceived learning in a course (Mitchell, et al., 2021).

Cognitive presence was rated higher than social presence, but lower than teaching presence in this research. Within cognitive presence, in the current study participants noted discussions were valuable in helping appreciate different perspectives. The literature is mixed on using discussions in online courses. Use of small group discussions is most valued and can enhance student learning. Discussion in large groups can be intimidating to some participants but helps them understand underlying issues. Students are less satisfied with online discussion boards, especially if they are used in addition to a face-to-face class (Hamann, 2012). Suggestions for improving teaching, cognitive, and social presence in online professional continuing education conferences and workshops are offered in the discussion section.

Teaching Presence

The results of the CoI survey for this study indicated that design and organization within teaching presence scored a 4.38/5.00, which was the highest score in the subcategories for teaching presence. Garrison (2000) describes teaching presence as the creation and delivery of cognitive and social presence which will help to foster learning. The Professional Learning team at LWT was formed in January 2020 and recreated and redesigned learning experiences that could be delivered online for the Handwriting Without Tears curriculum. Learning outcomes were also redeveloped for the virtual workshop (lwtears.com, n.d.). For example, each virtual

workshop began with an agenda and learning outcomes, which clearly communicated important course topics. This was a subcomponent of design and instruction under teaching presence and was rated a 4.47/5.00 on this study's CoI survey. In the virtual LWT workshops, there are videos to break up the lecture and understand how to use the curriculum within a classroom environment. Stone and Springer's study (2019) discussed the importance of having a quality agenda in online delivery of content. Respondents commented that to make the online course design effective, there should be videos to make the course engaging for participants. Course design should include learning activities and assessment tasks to engage students in communication and peer collaboration. During the LWT virtual workshops, the chat box is used throughout the course to facilitate engagement. Additionally, there is a test at the end of the workshop to determine if the participants gained the content knowledge during the workshops. Berry (2017) explains an increase in sense of community online occurs when instructors use multimodal techniques such as chat rooms. These rooms can increase discussion and collaboration among peers and instructor. Therefore, teaching presence was scored highest along with course design and organization in the CoI survey because of the ways in which the workshops were created in a virtual environment.

Cognitive Presence

Cognitive presence was scored by respondents in the middle of the three presences. Respondents scored cognitive presence with a total average of 4.05/5.00. Cognitive presence focuses on higher order thinking processes, such as critical thinking and practical inquiry (Garrison et al, 2004). Cognitive presence requires reflection to understand and confirm meaning (Anderson et al, 2001). The cognitive presence score may be due to the virtual LWT continuing education course not providing time for reflection and understanding of content from others. For example, question 28 (online discussions were valuable in helping me appreciate different perspectives) yielded a low mean score of 3.74/5.00. With no breakout rooms included within the online platform of On24 at the time of this study, this may have influenced the score of the cognitive presence within LWT workshops. In the virtual LWT workshops, participants were unable to see and talk with one another and the facilitator, which may have decreased the cognitive presence in the workshops. The study from Holbeck and Hartman (2018) described the use of a digital breakout room to increase communication among participants and learning the content within the course. The digital breakout room served as a way for the students to participate in a game which facilitated motivation and provided a place for students to participate with one another to increase cognitive presence. Therefore, this literature validates that discussion among peers and instructors are key to promoting cognitive presence which is lacking in this study. In Chen et al, (2019) to evaluate understanding, the facilitator began by asking questions of how and why to draw from participants' own experiences. Participants were able to describe the problem and present their feelings of struggle during the online course (2019). As participants were describing the problems, they asked questions to help recognize and understand what was going on. Adding details to these answers and providing clarifications enhances the conversation among peers. This can occur in longer periods of time when it is in a course environment such as how it occurred in Chen et al's study. However, this study shows how cognitive presence may be more limited when a two-and- a half-hour workshop is presented due to the time constraints and it being a one-time workshop.

Social Presence

Social presence was scored the lowest of the three presences with a mean of 3.59/5.00. This may be due to the timeframe of the short workshop of two-and-half hours in length. Kumar and Ritzhaupt (2014) described social presence as the way in which learners online interact with others and think of themselves as "real people". At the time of the study, ON24 did not provide breakout rooms for peers to interact with one another. ON24 does attempt social presence through group chats, providing a tool for agreement or disagreement, and having the course designer facilitate polls that participants can engage in during the workshop. However, participants were not able to meet one another or have face-to-face conversations, which may have resulted in a lower score and not having a sense of community with one another. For example, question 14 (getting to know other course participants gave me a sense of belonging in the course) yielded a mean of 3.45. As presented in Table 4, social presence was indicated as the lowest by participants. This study indicates that LWT workshops has decreased social presence due to limited tools to provide discussion among others. However, literature supports that social presence is high when there is a sense of belonging in the community (Saadatmand et al., 2017). The online hangouts in Saadatmand's (2017) study helped peers get to know one another and they were able to participate online, promoting social presence, which increased learning engagement. ON24 has upgraded its services to include breakout rooms since the completion of the study, but it was not available at the time of this study. This feature may help to increase social presence with future LWT virtual workshops.

Limitations

A limitation of this study was the small sample size due to the low number of respondents to the survey. The survey was collected over a five-month period and was emailed to approximately 2,000 people. There were 178 people that started the survey but only 141 people completed the entire 38 question survey to provide valid results to each area of the CoI including teaching presence, cognitive presence and social presence as well as four demographic questions. There was a nine percent return rate with this survey.

Another limitation is the amount of time of the LWT workshop. Two-and-a-half-hours is a narrow timeframe to be able to develop the three presences of the CoI. Developing a sense of community takes time and providing a continuing education course for two-and-a-half-hours virtually may not be adequate time for this to develop. The difference in presences between a two-and-a-half-hour virtual workshop compared to an all-day workshop could be examined in further research.

Another limitation is that the primary investigator is an employee of LWT. Therefore, there may have been some respondent bias of knowing that the survey was distributed to the participants from a LWT employee. Also, there is no research examining user of the CoI based on a virtual professional continuing education class. There is research regarding online allied health courses, but not a one-day post professional workshop using the CoI framework.

Future Research

Online professional continuing education is here to stay. Therefore, understanding how to assist educators and developers to be successful with online teaching and design is imperative. Professional developers must follow Mohr and Shelton's best practices (2017) to respond to the challenges of online course delivery, especially for professional development. Operational support, peer support, course development support along with time and rewards for engagement are essential. Pedro and Kumar (2020) offer additional guidance, which is relevant in professional continuing education, as teachers are often "on their own", needing training related to teaching techniques such as those supported in the CoI and technology. Therefore, an

increase in opportunities to support the faculty with teaching and designing online learning courses can be beneficial with higher education professionals.

Additionally, it would be interesting to determine the differences with the CoI in a LWT virtual continuing education workshop compared to an in-person LWT continuing education workshop. It would be enlightening to discover if social presence improves due to the in-person setting. Future research on determining the differences of the delivery of content among online platforms to increase the presences of the CoI would be interesting to determine. By understanding the differences of the interactive tools used in online platforms such as Zoom and ON24, it can impact future workshops and increase the CoI.

Conclusion

The results of this Capstone Project provided insights into the three presences of cognitive, social and teaching presences in a virtual continuing education workshop. This study addressed professional continuing education for occupational therapist practitioners and Pre-Kindergarten through 5th grade educators in a virtual environment. Strategies and learning activities to promote teaching, cognitive, and especially social presence in professional learning opportunities can increase the effectiveness of teaching and student learning and motivation. The findings of this Capstone Project can be applied to future workshops for Learning Without Tears, and also benefit other providers of online continuing professional development for teachers and occupational therapy practitioners. This information can also be utilized with other companies and universities who use a Community of Inquiry approach to improve their course design, organization, and presence online.

References

- Abou-Khalil, V., Helou, S., Khalifé, E., Chen, M.A., Majumdar, R., & Ogata, H. (2021).
 Emergency online learning in low-resource settings: Effective student engagement strategies. *Educational Sciences*, *11*(24). https://doi.org/10.3390/ educsci11010024
- Akyol, Z., Garrison, D. R., & Ozden, M. Y. (2009). Development of a community of inquiry in online and blended learning contexts. *Procedia - Social and Behavioral Sciences*, 1(1), 1834–1838. <u>https://doi.org/10.1016/j.sbspro.2009.01.324</u>
- Alrashidi, O., Phan, H., Ngu, B. (2016). Academic engagement: An overview of its definitions, dimensions, and major conceptualizations. *International Education Studies*, 9(12), 41-52. <u>http://dx.doi.org/10.5539/ies.v9n12p41</u>
- Alsadoon, E. (2018). The impact of social presence on learner's satisfaction in mobile learning. <u>The Turkish Online Journal of Educational Technology</u>. 17(1) 226-233.
- Amador, J., Callard, C., Choppin, J., Carson, C., & Gillespie, R. (2019). Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. St Louis, MO: University of Missouri.

American Occupational Therapy Association. (2017). Vision 2025. *American Journal of Occupational Therapy*, *71*, 7103420010. <u>https://doi.org/10.5014/ajot.2017.713002</u>

American Occupational Therapy Association. (2015). Standards for continuing competence.
 American Journal of Occupational Therapy, 69(Suppl. 3), 6913410055p1 6913410055p3.

- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing environment. *Journal of Asynchronous Learning Networks*, 5 (2).
- Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. *The Internet and Higher Education*, 11(3-4), 133-136.
- Barr, B. A., & Miller, S. F. (2013). *Higher education: The online teaching and learning experience*. Phoenix, AZ: University of Phoenix Faculty School of Advanced Studies.
- Benaroya, T. L., George, J. C., McKernan-Ace, D., & Swarbrick, M. (2021). Application of active learning strategies for online delivery in an occupational therapy assistant program. *Journal of Occupational Therapy Education*, 5(2). https://doi.org/10.26681/jote.2021.050210
- Berry, S. (2019). Teaching to connect: Community-building strategies for the virtual classroom. *Online Learning*, 23(1), 164-183. doi:10.24059/olj.v23i1.1425
- Bolliger, D., and Martindale, T. (2004). Key factors for determining student satisfaction in online courses. *International Journal of E-Learning, January-March*, 61-67.
- Crawford-Ferre, H. G., & Wiest, L. R. (2012). Effective online instruction in higher education. *The Quarterly Review of Distance Education*, *13*(1), 11–14.

- Chen, Y., Lei, J., & Cheng, J. (2019). What if online students take on the responsibility:
 Students' cognitive presence and peer facilitation techniques. *Online Learning*, 23(1), 37-61. doi:10.24059/olj.v23i1.1348
- Cobb, S. (2009). Social presence and online learning: A current view from a research perspective. *Journal of Interactive Online Learning*, 8(3), 241-254. <u>www.ncolr.org/jiol</u>.
- Crawford-Ferre, H., & Weist, L. (2012). Effective online instruction in higher education. *The Quarterly Review of Distance Education*, *13*(1), 11-14.
- Creswell, J. W., & Creswell, J. D. (2018). Quantitative methods. In J. W. Creswell & J. D. Creswell (Eds.). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). 147-177. SAGE Publications, Inc.
- Cursive Virtual Workshop | Learning Without Tears. (n.d.). Retrieved November 21, 2021, from https://www.lwtears.com/professional-development/service/cursive-virtual-implementation.
- Czerkawski, B., & Lyman, E. (2016). An instructional design framework for fostering student engagement in online learning environments. *Tech Trends*, 60, 532-539. doi: 10.1007/s11528-016-0110-z
- Damm, Carol A.V. (2016). Applying a community of inquiry instrument to measure student engagement in large online courses. *Current Issues in Emerging eLearning*, 3(1), Article 9. <u>https://scholarworks.umb.edu/ciee/vol3/iss1/9</u>
- Deris, F. D., Zakaria, M. H., & Mansor, W. F. (2012). Teaching presence in online course for part-time undergraduates. *Procedia - Social and Behavioral Sciences*, 66, 255–266. <u>https://doi.org/10.1016/j.sbspro.2012.11.268</u>
- Dhilla, S. J. (2017). The role of online faculty in supporting successful online learning enterprises: A literature review. *Higher Education Politics & Economics*, 3(1), 136–155. https://doi.org/10.32674/hepe.v3i1.12
- Dixon, M. (2010). Creating effective student engagement in online courses: What do students find engaging? *Journal of the Scholarship of Teaching and Learning*, *10*(2), 1-13.
- Emergent Writing for Pre-K Workshop | Learning Without Tears. (n.d.). Retrieved November 21, 2021, from <u>https://www.lwtears.com/professional-development/service/emergent-writing-workshop</u>.
- 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
- Garrison, D., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment:
 Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3),
 87–105. doi:10.1016/S1096-7516(00)00016-6
- Garrison, D. R. (Host). (2020, October 18). Using the community of inquiry to rethink online teaching. (Season 1, Episode 3) [Audio podcast episode]. *Reflective teaching in a digital age*. https://reflectiveteaching.buzzsprout.com/1384834/5950516-dr-randy-garrisoncommunity-of-inquiry-coi-framework-and-online-teaching?play=true

- Gauvreau, H., Hurst, D., Cleveland-Innes, M., & Hawranik, P. (2016). Online professional skills workshops: Perspectives from distance education graduate students. *International Review* of Research in Open and Distributed Learning, 17(5), 91-100.
- Gray, J., & DiLoreto, M. (2016). The effects of student engagement, student satisfaction and perceived learning in online learning environments. *International Journal of Educational Leadership Preparation*, 11, 1-20.
- Griswold, L., Overson, C., & Benassi, V. (2017). Embedding questions during online lecture capture to promote learning and transfer of knowledge. *American Journal of Occupational Therapy*, 71, 7103230010. https://doi.org/ 10.5014/ajot.2017.023374
- Guo, P., Saab, N., Wu, L., & Admiraal, W. (2021). The community of inquiry perspective on students' social presence, cognitive presence, and academic performance in Online project-based learning. *Journal of Computer Assisted Learning*, *37*(5), 1479–1493. https://doi.org/10.1111/jcal.12586
- Gupta, M. M., Jankie, S., Pancholi, S. S., Talukdar, D., Sahu, P. K., & Sa, B. (2020).
 Asynchronous environment assessment: A pertinent option for medical and Allied Health
 Profession Education during the COVID-19 pandemic. *Education Sciences*, *10*(12), 352.
 https://doi.org/10.3390/educsci10120352
- Gurley, L. E. (2018). Educators' preparation to teach, perceived teaching presence, and perceived teaching presence behaviors in blended and online learning environments. *Online Learning*, 22(2), 197-220. doi:10.24059/olj.v22i2.1255

- Hamann, K., Pollock, P. H., & Wilson, B. M. (2012). Assessing student perceptions of the benefits of discussions in small-group, large-class, and online learning contexts. *College Teaching*, 60(2), 65–75. <u>https://doi.org/10.1080/87567555.2011.633407</u>
- Holbeck, R., & Hartman, J. (2018). Efficient strategies for maximizing online student satisfaction: Applying technologies to increase cognitive presence, social presence, and teaching presence. *Journal of Educators Online*, *15*(3).
 https://doi.org/10.9743/jeo.2018.15.3.6
- Honig, C. A., & Salmon, D. (2021). Learner presence matters: A learner-centered exploration into the community of inquiry framework. *Online Learning*, 25(2), 95-119. <u>https://doi.org/10.24059/olj.v25i2.2237</u>
- Johnson Coffelt, K., & Gabriel, L. S. (2017). Continuing competence trends of occupational therapy practitioners. *The Open Journal of Occupational Therapy*, 5(1). <u>https://doi.org/10.15453/2168-6408.1268</u>
- Katernyak, I., & Loboda, V. (2016). Cognitive presence and effect of immersion in virtual learning environment. Universal Journal of Educational Research, 4(11), 2568–2573. https://doi.org/10.13189/ujer.2016.041109
- Karge, B., Phillips, K., Dodson, T., McCabe, M. (2011). Effective strategies for engaging adult learners. *Journal of College Teaching & Learning*, 8(12), 53-56. doi: 10.19030/tlc.v8i12.6621

Kielhofner, G., & Taylor Renée, R. (2017). Research in occupational therapy: Methods of

inquiry for enhancing practice. F.A. Davis Company.

- Kilis, S., & Yıldırım, Z. (2019). Posting patterns of students' social presence, cognitive presence, and teaching presence in online learning. *Online Learning*, 23(2). https://doi.org/10.24059/olj.v23i2.1460
- Kizilcec, R. F., & Halawa, S. (2015). Attrition and achievement gaps in online learning. ACM
 Conference on Learning @ Scale L@S '15. doi:10.1145/2724660.2724680
- Kumar, S., & Ritzhaupt, A. D. (2014). Adapting the Community of Inquiry survey for an online graduate program: Implications for online programs. *E-Learning and Digital Media*, 11(1), 59–71. <u>https://doi.org/10.2304/elea.2014.11.1.59</u>
- Kyei-Blankson, L., Ntuli, E., & Donnelly, H. (2019). Establishing the importance of interaction and presence to student learning in online environments. *Journal of Interactive Learning Research*, 30(4), 539-560. <u>https://www.learntechlib.org/primary/p/161956/</u>

Learning Without Tears (n.d.) Teams. https://lwtears.namely.com/teams

Learning Without Tears (n.d.). Workshop presenters.

https://www.lwtears.com/search?s=presenters

Learning Without Tears (2018). Research review.

https://www.lwtears.com/sites/default/files/HWTEfficacy_1.17.19_web.pdf

Lederman, D. (2021, September 6). *Detailing last fall's online enrollment surge*. Inside higher ed. <u>https://www.insidehighered.com/news/2021/09/16/new-data-offer-sense-how-covidexpanded-online-learning</u>

- Lesiak, A. J., Griswold, J. C., & Starks, H. (2021). Turning towards greater equity and access with online teacher professional development. *The Journal of STEM Outreach*, 4(3). https://doi.org/10.15695/jstem/v4i3.05
- Martin, C., Acal, C., El Honrani, M., & Estrada, A. (2021). Impact on the virtual learning environment due to COVID-19. *Sustainability*, *13*, 582. https://doi.org/10.3390/su13020582
- Martin, F., & Bolliger, D. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning*, 22(1), 202-222. doi:10.24059/olj.v22i1.1092
- Martin, F., Budhrani, K., Kumar, S., & Ritzhaupt, A. (2019). Award-winning faculty online teaching practices: Roles and competencies. *Online Learning*, 23(1), 184-205.
 doi:10.24059/olj.v23i1.1329
- Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, 42, 34–43. https://doi.org/10.1016/j.iheduc.2019.04.001
- McClannon, T. W., Cheney, A., Bolt, L., & Terry, K. (2018). Predicting sense of presence and sense of community in immersive online learning environments. *Online Learning*, 22(4). https://doi.org/10.24059/olj.v22i4.1510

- Merriam, D., & Hobba-Glose, J. (2020). Using VoiceThread to build a community of inquiry in blended RN-to-BSN education. *Nursing Education Perspectives*, 42(1), 44–45. <u>https://doi.org/10.1097/01.nep.00000000000655</u>
- Metz, A., Boling, D., DeVore, A., Holladay, H., Fu Liao, J., & Vlutch, K. (2019). Dunn's model of sensory processing: An investigation of the axes of the four-quadrant model in healthy adults. *Brain Sciences*, 9, 35-50. http://dx.doi.org/10.3390/brainsci9020035
- Mitchell, C., Cours Anderson, K., Laverie, D., & Hass, A. (2021). Distance be damned: The importance of social presence in a pandemic constrained environment. *Marketing Education Review*, 31(4), 294–310. <u>https://doi.org/10.1080/10528008.2021.1936561</u>
- Mohr, S., & Shelton, K. (2017). Best practices framework for online faculty professional development: A Delphi study. *Online Learning*, 21(4), 123-140. doi: 10.24059/olj.v21i4.1273
- Murrill, L., Thomas, T., & Earp, L. (2021). Cultivating community in virtual professional development: A familiar goal/a new frontier. *Teacher Educators' Journal, 14*, 126-148.
- Nasir, M. (2020). The influence of social presence on students' satisfaction toward online course. *Open Praxis*, *12*(4), 485-493. <u>http://dx.doi.org/10.5944/openpraxis.12.4.1141</u>
- Newberry, B. (2001). Raising student social presence in online classes. *World Conference on the WWW and Internet Proceedings*.
- Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *Journal of Online Learning and Teaching*, *11*(1), 309-319.

ON24. (2021, October 20). Retrieved November 21, 2021, from https://www.ON24.com/.

- Peacock, S., & Cowan, J. (2019). Promoting sense of belonging in online learning communities of inquiry at accredited courses. *Online Learning*, 23(2), 67-81.
 doi:10.24059/olj.v23i2.1488
- Pedro, N. S., & Kumar, S. (2020). Institutional support for online teaching in Quality Assurance Frameworks. *Online Learning*, 24(3). https://doi.org/10.24059/olj.v24i3.2309
- Prasannakumar, S. (2018). Improving working memory in science learning through effective multisensory integration approach. *International Journal of Mind, Brain & Cognition*, 9(1), 84-93.
- Print Virtual Workshop | Learning Without Tears. (n.d.). Retrieved November 21, 2021, from https://www.lwtears.com/professional-development/service/print-virtual-implementation.
- Redmond, P. (2014). Reflection as an indicator of cognitive presence. *E-Learning and Digital Media*, *11*(1), 46–58. <u>https://doi.org/10.2304/elea.2014.11.1.46</u>
- Richardson, P. K., MacRae, A., Schwartz, K., Bankston, L., & Kosten, C. (2008). Student outcomes in a postprofessional online master's-degree program. *American Journal of Occupational Therapy*, 62, 600–610.
- Robinson, H., Kilgore, W., & Warren, S. (2017). Care, communication, learner support:
 Designing meaningful online collaborative learning. *Online Learning*, 21(4), 29-51. doi: 10.24059/olj.v21i4.1240

- Rubin, B. (2013). Measuring the community in online classes. *Online Learning*, *17*(3). https://doi.org/10.24059/olj.v17i3.344
- Ruelas, D. (2019). Enhancing online learning for public health graduate students. *Journal of Instructional Research*, 8(2). <u>https://doi.org/10.9743/jir.2019.8.2.12</u>
- Saadatmand, M., Uhlin, L., Hedberg, M., Åbjörnsson, L., & Kvarnström, M. (2017). Examining learners' interaction in an open online course through the Community of Inquiry
 Framework. *European Journal of Open, Distance and E-Learning*, 20(1), 61–79.
 https://doi.org/10.1515/eurodl-2017-0004
- Sellers, R. (2001). Learning to teach in a virtual environment: A case study of the Louisiana virtual classroom teachers. (Doctoral dissertation). <u>https://digitalcommons.lsu.edu/gradschool_disstheses/315</u>
- Semradova, I., & Hubackova, S. (2013). Learning strategies and the possibilities of virtual learning environment. *Procedia - Social and Behavioral Sciences*, 83, 313-317. doi:10.1016/j.sbspro.2013.06.061
- Silva, L., Shuttlesworth, M., & Ice, P. (2021). Moderating relationships: Non-designer instructor's teaching presence and distance learners' cognitive presence. *Online Learning*, 25(2). <u>https://doi.org/10.24059/olj.v25i2.2222</u>
- Smadi, O., Parker, S., Gillham, D., & Müller, A. (2019). The applicability of community of inquiry framework to online nursing education: A cross-sectional study. *Nurse Education in Practice*, 34, 17–24. https://doi.org/10.1016/j.nepr.2018.10.003

- Stamm, M., Francetic, K., Reilly, R., Tharp, A., Thompson, N., & Weidenhamer, R. (2021). Kinesthetic learners during the COVID-19 pandemic: Occupational therapy students' perspective on e-learning. *Journal of Occupational Therapy Education*, 5(2). https://doi.org/10.26681/jote.2021.050203
- Stone, C., & Springer, M. (2019). Interactivity, connectedness and "teacher-presence": Engaging and retaining students online. *Australian Journal of Adult Learning*, *59*(2), 146-169.
- Stover, S., & Ziswiler, K. (2017). Impact of active learning environments on Community of Inquiry. *Journal of Teaching and Learning in Higher Education*, 29(3). 458-470.
- Suman, M., & Provident, I. (2018). Using online professional development to increase selfefficacy in school-based occupational therapy fieldwork educators. *Journal of Occupational Therapy Education*, 2(1). https://doi.org/10.26681/jote.2018.020106
- Terosky, A. L. P., & Heasley, C. (2014). Supporting online faculty through a sense of community and collegiality. *Online Learning*, 19(3). <u>https://doi.org/10.24059/olj.v19i3.673</u>
- Tolu, A. T. (2013). Creating effective communities of inquiry in online courses. *Procedia Social and Behavioral Sciences*, 70, 1049–1055.

https://doi.org/10.1016/j.sbspro.2013.01.157

- Tu, C. (2002). The measurement of social presence in an online learning environment.*International Journal of E-learning, April-June*, 34-45. doi: 10.17471/2499-4324/42
- Walker, C. (2015). Social constructionism and qualitative research. *The Journal of Theory Construction & Testing*, *19*(2), 37-38.

- Wang, M., & Degol, J. (2014). Staying engaged: Knowledge and research needs in student engagement. *Child Development Perspective*, 8(3), 137-143. doi:10.1111/cdep.12073
- Wynants, S., & Dennis, J. (2018). Professional development in an online context: Opportunities and challenges from the voices of college faculty. *Journal of Educators Online*, 15(1). <u>https://doi.org/10.9743/jeo2018.15.1.2</u>
- Yildirim, D., & Seferoglu, S. S. (2021). Evaluation of the effectiveness of online courses based on the community of inquiry model. *Turkish Online Journal of Distance Education*, 147– 163. <u>https://doi.org/10.17718/tojde.906834</u>
- Yoo, Y., & Alavi, M. (2001). Media and group cohesion: Relative influences on social presence, task participation, and group consensus. *MIS Quarterly*, 25(3), 371. <u>https://doi.org/10.2307/3250922</u>
- Zariski, A., & Styles, I. (2000). *Enhancing student strategies for online learning*. Flexible Future in Tertiary Teaching. <u>https://clt.curtin.edu.au/events/conferences/tlf/tlf2000/zariski.html</u>.

Appendices Appendix A: Verbal Recruitment Script

Examining Cognitive, Social and Teaching Presence in a Virtual Continuing Education Workshop

Thank you for attending the Learning Without Tears workshop. My name is Christina Bretz and I am part of the Professional learning team. Before you dismiss, I would like to take this opportunity to inform you of a study I am completing. I am attending Eastern Kentucky University in pursuit of my post professional doctorate in Occupational Therapy. I am completing a study to examine the teaching and learning strategies that are effective in a virtual continuing education workshop. To discover this information, I am requesting that attendees complete a survey. This survey should take approximately 10 minutes. This is voluntary. If you are interested, please complete this survey as it will be emailed to you in the next couple of days. I will send out a reminder email as a follow up. My email address will be on the top of the survey if you have any questions. Again, this is voluntary, and I appreciate your time and feedback. Thank you.

Appendix B: Community of Inquiry Survey Instrument

Teaching Presence

Design & Organization

1. The instructor clearly communicated important course topics.

2. The instructor clearly communicated important course goals.

3. The instructor provided clear instructions on how to participate in course learning activities.

4. The instructor clearly communicated important due dates/time frames for learning activities.

Facilitation

5. The instructor was helpful in identifying areas of agreement and disagreement on course topics that helped me to learn.

6. The instructor was helpful in guiding the class towards understanding course topics in a way that helped me clarify my thinking.

7. The instructor helped to keep course participants engaged and participating in productive dialogue.

8. The instructor helped keep the course participants on task in a way that helped me to learn.

9. The instructor encouraged course participants to explore new concepts in this course.

10. Instructor actions reinforced the development of a sense of community among course participants.

Direct Instruction

11. The instructor helped to focus discussion on relevant issues in a way that helped me to learn.

12. The instructor provided feedback that helped me understand my strengths and weaknesses relative to the course's goals and objectives.

13. The instructor provided feedback in a timely fashion.

Social Presence

Affective expression

14. Getting to know other course participants gave me a sense of belonging in the course.

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

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

Open communication

17. I felt comfortable conversing through the online medium.

18. I felt comfortable participating in the course discussions.

19. I felt comfortable interacting with other course participants.

Group cohesion

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

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

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

Cognitive Presence

Triggering event

23. Problems posed increased my interest in course issues.

24. Course activities piqued my curiosity.

25. I felt motivated to explore content related questions.

Exploration

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

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

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

Integration

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

30. Learning activities helped me construct explanations/solutions.

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

Resolution

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

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

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

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

The Community of Inquiry Survey is posted on Creative Commons and therefore is able to be used in this study without permission.

Additional demographic questions added to the end of the survey:

- 1) What is your gender?
- 2) What is your profession?
- 3) How many years have you been with this profession? (Check which response best describes you).
 - _____ this is my first year
 - _____ 2-4 years
 - _____ 5-9 years
 - _____ 10+ years
- 4) Have you ever attended a virtual continuing education course before this one?

Appendix C: Email Including Survey Link Sent to Participants

Examining Cognitive, Social and Teaching Presence in a Virtual Continuing Education Workshop

By completing this survey, you have voluntarily consented to participate in a research study. This project is being conducted as part of earning my occupational therapy doctorate from Eastern Kentucky University. The study aims to identify the effective teaching presence, social presence, and cognitive presence in the Learning Without Tears virtual continuing education workshop. The purpose of this study is to identify appropriate and engaging teaching strategies for improving participation and satisfaction with learning in an online environment. If you would like to print the survey out and scan it, please email Christina Bretz at christina_bretz@mymail.eku.edu for this alternate procedure. The survey takes less than 10 minutes to complete. You may discontinue your involvement with this study at any time. Thank you in advance for participating in this research study!

Please click on this link to begin the survey. Password is LWT

https://eku.co1.qualtrics.com/jfe/form/SV_3wl5A1lnItUEkn4